

UHPH_14: LANDSCAPES AND ECOLOGIES OF URBAN AND PLANNING HISTORY

*PROCEEDINGS OF THE 12TH AUSTRALASIAN
URBAN HISTORY PLANNING HISTORY CONFERENCE*

PROCEEDINGS

**UHPH
_14**



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EDITORS

UHPH_14: Landscapes and Ecologies of Urban and Planning History

Proceedings of the 12th Australasian Urban History Planning History Conference

Published by the Australasian Urban History / Planning History Group and Victoria University of Wellington, Wellington, 2014

Editors: Morten Gjerde and Emina Petrović

Each paper in this volume has been blind refereed by two members of a panel of academic peers appointed by the Conference Committee. The Conference Committee would like to thank all those peers of the society who have their time and expertise to the refereeing of papers.

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ISBN: 978-0-475-12413-5



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Cover design: Oscar Pipson

The Organising Committee wishes to acknowledge financial support provided by the Faculty of Architecture & Design, Victoria University of Wellington; Wellington City Council and New Zealand Historic Places Trust

Contents

-
- 7** **Morten Gjerde**
Introduction
-
- 11** Keynote Speakers Abstracts:
Jacky Bowring
Bill Gammage
Kevin Prime
-
- 15** **Charles Barrie**
The Emergence of Collective Dreams: An exploration of community development based collaborative landscape design
-
- 31** **Vaughan Bones and Stephen Loo**
Sound Interpretation: Acoustic ecologies and urban history
-
- 47** **Caryl Bosman and Jessica Strickland**
The Value of Place: Development conflicts on the Southport Spit, Gold Coast
-
- 61** **Diane Brand**
Foreign Bodies: The role of overseas agencies in New Zealand hydro-electricity development 1940-1970
-
- 75** **Diane Brand and Ngoc Minh Nguyen**
Revisiting the Form of Chinese Traditional Capital Cities
-
- 91** **Anthony Butz and David Jones**
The Gardens of *Anlaby* – a Utopian Dream
-
- 105** **Stephen Curham**
Off Grid in 1900: Some generalities, and a short discussion of the demolition of unreinforced brick chimneys
-
- 115** **Ursula de Jong, Robert Fuller and Fiona Gray**
A Tale of Two Victorian Historic Coastal Towns: Dilemmas of planning and conservation in Queenscliff and Sorrento
-
- 135** **Michael Fagence**
The “Spoils of History” as a Mediated Product: an Australian folklore-based example
-
- 147** **Robert Freestone**
The Contributions of R.T. Kennedy to New Zealand Planning
-
- 163** **Robert Freestone and Marco Amati**
Town Planning on Display: A timeline of Australian planning exhibitions 1912-1951
-
- 179** **Rasmus Frisk, Jennifer Louie and Jeanette Frisk**
Temporary Use 2.0: A tool for planning and developing the new urban context
-
- 195** **Nicole Gardner and Stephen Harfield**
Great Expectations: Mobilising histories and transforming the city through mobile technology practices
-
- 213** **Julia Gatley**
Group-cum-Townscape?: Bruce Rotherham at Llewelyn-Davies Weeks Forestier-Walker & Bor
-
- 229** **Ensiyeh Ghavampour and Brenda Vale**
The social life of public space in theory and practice: study of a small urban space in Wellington
-

245 Laura Goh

Regulation Challenges Hindering the Revitalisation of Commonwealth Land

255 Jane Grant, Paul Walker and David Nichols

What's It All About, Monarto?: John Andrews, Boris Kazanski and the centre of South Australia's unbuilt second "new town"

271 Murray Herron, David Jones and John Rollo

"Learn from yesterday, live for today, hope for tomorrow": Attempting to plan for coastal change in South West Victoria

291 Michael Hromek and Stephen Harfield

Looking From Within, What Comes Out?: An indigenous perspective on community and urbanism

307 Richard Hu

Redefining Migration in Global Sydney

325 Fiona Johnson and Jillian Walliss

Defining a 'New Civic': Redesigning Adelaide's Victoria Square / Tarndanyangga within an era of reconciliation

341 Louise Johnson and David Jones

Incorporating Indigenous Australian Knowledge and Perspectives into Planning Practice: past, present and future

361 David Johnston, Wendy Saunders, Graham Leonard, James Beban, Kim Wright and Stuart Fraser

History of Tsunami Planning in New Zealand: 1960 to the present

373 Adele Leah, Brenda Vale and Nigel Isaacs

The Tarikaka Settlement: 85 years of change

393 Maryam Lesan and Morten Gjerde

Design and Management of Street in Multicultural Societies: A case study in New Zealand

409 Cameron Logan

From Old Rooty Hill to Barangaroo: Landscape preservation as urban heritage in Sydney

421 Andrew MacKenzie and Gay Williamson

Reconciling Urban Landscape Values: A case study of Ottawa and Canberra's urban open space systems

433 Kendra Manning

Indigenous Heritage in Cities: Representing Wellington's Past

445 Robert McClean

Making Wellington: Earthquakes, survivors and creating heritage in the town

463 Christopher McDonald

Soldiers and School Children: Military performances and national identity during the Prince of Wales' 1920 visit to Wellington.

483 John Minnery

Cooperation and Canals: Beacons for a 'good life' in Queensland

499 Roy Montgomery

Absolutely Positively Not the First Plan for Wellington: Unravelling popular misconceptions about the process of planning New Zealand's capital city

517 Roy Montgomery

Bringing Natural Hazard and Disaster Management Planning Into Mainstream Urban and Regional Planning: A difficult journey

535 Muhammad Imran, Lee Matthews and Jane Pearce

Political Path Dependence in Public Transport in Auckland: An historical analysis

553 Galen Newman

Comparing Neglect Rates in Historic Cities: Agricultural preservation as potential remedy

573 David Nichols, Kate Darian Smith and Elanna Nolan

"It's Easier to be Yourself in the City:" The regional city, the metropolis, and youth experience

587 Stefan Petrow

Catalyst for Change?: R.A. McInnis and town planning in Launceston 1945 to 1956

603 Lauren Pikó

Milton Keynes and the Liquid Landscape, 1967-1978

617 Gary Presland

A Boggy Question: Differing views of wetlands in 19th century Melbourne

631 Paul Rappoport

Incentivising the Regeneration and Maintenance of Cultural Built Heritage in NSW

649 Phillip Roös

Design with Nature: A proposed model for coastal settlements in Australia adapting to climate change and extreme weather events

665 Phillip Roös

Landscapes in Transition: Local perceptions of indigenous and European settlement changes along the Victorian Coast

683 Joanna Ross and Rachel Summers

Infill Development: Planning for a sustainable suburbia

699 Saren Rousseau

Haptic Experiences of the Perth Foreshore: Case studies in sensory history

715 Andrew Saniga

Cranks, Caves and Campfires: Ellis Stones' utopian vision for a suburban landscape architecture

729 Wendy Saunders and James Beban

Lessons Learned or Still Learning?: A historical overview of how planning for natural hazards in New Zealand has influenced urban development

749 Ben Schrader

The Origins of Urban Sprawl in New Zealand

759 Rosemary Shield and Stephen Loo

Contemporary Aboriginal Art and the Cultural Landscapes of Urban Australia

771 Peter Spearritt

Why Melbourne Kept its Trams

781 Quentin Stevens

Shaping Moral Landscapes: Comparing the regulation of public memorials in democratic capitals

797 Amelia Thorpe and Lee Stickells

Beyond Protest: Activism and participation in 1970s Sydney

815 Peter Williams and Neil Foley

Preserving Green Urban Landscapes: Regional public land acquisition in Perth and Sydney

829 Ross Wissing

A Framework to Determine if Australia's Suburbs Have Ever Been Sustainable

851 Nasim Yazdani and Mirjana Lozanovska

Representation of Multiculturalism in Urban Green Spaces: A review of immigrants' experiences in Australia

Introduction

Welcome to *UHPH_14: Landscapes and Ecologies of Urban and Planning History*, the 12th Conference of the Australasian Urban History Planning History Group. This group aims to facilitate exchanges of knowledge of urban and planning histories between people working in scholarly and public spheres and a sharing of resources relevant to the activities of researchers and teachers in the field. The 2014 conference was set out to create an expansive and inclusive forum in which topical issues related to Australian and New Zealand urban and planning history could be discussed. In particular the committee sought to highlight relationships between cities and their settings. We think each of these aims has been achieved, with some 55 papers, written by scholars, practitioners and regulators presented in these proceedings. The papers discuss original research drawn from studies of particular places, initiatives, projects, institutions and individuals.

The theme of the conference is *Landscapes and Ecologies of Urban and Planning History*. Urbanisation is the result of a dynamic flux of social histories and natural ecologies, woven together across time. The interaction between settlement and landscape is told through conflict, discovery, heroism, failure, imagination and policy at different scales. There are many well-known stories of human efforts to tame or exploit nature, using the engineering capabilities of the day to mitigate and overcome risks. Such efforts have certainly helped to advance human knowledge, but at what cost? These dynamic relationships provide a rich lode for histories to be told, informed by an environmental perspective.

There are also many rich examples of the built environment being developed in synergistic tandem with natural systems to create visually, socially, environmentally and culturally stimulating places. Few would argue that cities like San Francisco or interventions such as the Sydney Harbour Bridge do not work in harmony with their settings to generate places of special meaning and beauty. This conference affords the opportunity to explore relationships such as these, particularly those related to urban and planning history in Australia and New Zealand.

Within the overall theme, the call for papers described five subthemes and most papers are aligned with one or more of these. The first subtheme is *Hard and soft infrastructures*, which envisages examination of the relationships between systems designed to enable transportation, waste disposal and water management with ecological systems at different scales. Design, construction and management of hard infrastructures have traditionally been driven by their potential to enhance the lives of humans, but at what cost to other ecological systems? Are there ways of managing production and use of hard infrastructures that not only limit potentially negative effects but actually lead to positive outcomes?

Twelve authors responded to the second subtheme, *Conservation and regeneration in response to external or internal pressures*. Contemporary pressures on built heritage in New Zealand include those linked to life safety during and after a seismic event. Increasing knowledge of other natural forces leads to similar concerns the world over. Social pressures are also exerted, whether because of concerns about ongoing wasteful practices or in response to changing fashions. Tensions can arise between public expectations for heritage protection and safety with the real costs of improving the performance of older buildings and structures. This subtheme presents research looking at why and how existing urban areas can be repurposed and regenerated in response to pressures such as these.

The third theme is *Experimental or utopian cities*, looking at communities and landscapes that respond innovatively to social and political imperatives, that implement new theories for building and managing the built environment or that adopt new ways of practice. What can we learn from the ways such environments are created and used? How have planning and urban design practices changed over time? The *Disaster management and urban resilience* subtheme links closely with the earlier theme of *Conservation and regeneration*. Responses to and failures arising from natural disasters, climate change and extreme weather are considered by authors addressing this theme.

Finally, authors were encouraged to develop papers analysing *Indigenous and immigrant environments* in Australasian landscapes and cities. Along with the overarching interest in relationships between cities and their settings, this theme is one the organisers have sought to focus attention on during this conference. With increasing homogenisation of places around the world through globalisation comes corresponding interest in how places might otherwise be different and distinct. What is the background and outcome of earlier ways of settling the land, based on indigenous cultures and local responses? Do such practices continue to have relevance and if not, how can they be adapted to contemporary conditions? Conversely, with increasing immigration as a dimension of globalisation, how can imported practices become a catalyst for positive changes in the built environment? Different cultural approaches provide rich material for research in the field of urban and planning history.

With an interest in cultural approaches to land management the organisers invited three keynote speakers to address the topic from both sides of the Tasman. Kevin Prime, of Ngati Hine heritage, discusses the landscape from a Māori perspective, using the phrase “I am the river, the river is me “ to highlight that iwi have close and personal relationships with the land. Drawing on strong sensorial and spiritual methods of perception, Māori view natural resources quite different to later settlers. In a very timely message, Bill Gammage offers an analysis of the way Aboriginal people used fire to manage their resources, purposefully using it to move and organise flora and fauna. He argues that the vast landscape of Australia was not natural at the time of European settlement but was instead made through hard work and a universal understanding amongst the first peoples of these methods were to be used. In her talk titled ‘Looking Backward’, Jacky Bowring discusses how Christchurch’s past is playing a role as the city is rebuilt following the 2010-11 earthquakes. Her paper illuminates some of the utopian thinking that lay behind the original plan for Christchurch and how this highly ordered plan helped in the emergency relief responses. She concludes her talk by exploring the tensions between ecological concerns and long established aesthetic interests in plans for the rebuild.

We are pleased to present this collection of papers presented to the UHPH_14 Conference. The paper authors and keynote speakers have provided interesting and insightful views on the nature of urban and rural settlements, how they have come to be and how they may be made in the future. We are certain that these papers will inspire delegates to the conference and provide useful reference material for researchers long into the future. We thank each author and keynote speaker for their efforts in preparing their manuscripts and the many anonymous referees who gave their time and expertise to review them.

Morten Gjerde
Chair, Conference Organising Committee

Keynote Speaker Abstract

Looking Backward

How the legacy of Christchurch's past is playing a role in its future

Jacky Bowring
Lincoln University

As Christchurch begins rebuilding after the devastating earthquakes of 2010 and 2011, the city's past lingers in a range of ways. This presentation explores three key legacies from the 19th century, when the city of Christchurch was established by English settlers, and reflects on how these factors might influence the future. First, utopian thinking was an underpinning motivation for the city's establishment and design. This is apparent in the urban form, as well as the comments from the time from influential individuals like John Robert Godley, the city's founder. Arguably the current 'blueprint' for the central city rebuild echoes utopian dreaming from the past, and physically repeats some of the design moves of the first city plans. Second, the structuring devices put in place by these early plans remain relevant in unexpected ways in the context of disaster resilience. While motifs such as the grid and Victorian park design might have been targets for critique by those seeking a more organic and 'natural' city form, interviews with emergency personnel reveal that it is precisely these devices which became valuable tools for disaster response. And third, the aesthetic convention of the Picturesque shaped the ways in which the settlers both appreciated and modified the landscape they encounter. In turn, the Picturesque remains an ambivalent factor in the visions for the future, as ecological concerns are balanced against entrenched ideals.

Christchurch's earthquakes have provided a unique opportunity for a city to re-imagine itself, and the resonances with its past provide insight into the persistence of some aspects of history and the transformation of others.



Indicative image of the Avon River/Otakaro. Image source: Draft Central City Plan for Christchurch.

Keynote Speaker Abstract

Aboriginal land management in 1788

Bill Gammage
Australian National University

This talk sketches how Aboriginal people used fire and no fire to manage land at the time Europeans arrived (“1788”). Across the continent people allied with fire to locate and distribute plants and therefore animals, making their resources abundant, convenient and predictable. The landscape was not natural in 1788, but made. It was maintained by a strict and universal Law, and by hard, constant work.



“Aborigines using fire to hunt kangaroos”, Joseph Lycett, c1820.
Watercolour and gouache on paper. Image source: National Library of Australia

Keynote Speaker Abstract

Maori Cultural Landscapes

Kevin Prime

Ngati Hine and New Zealand Environment Court

The paper compares how Maori view particular landscapes with the views of Pakeha academics. Issues discussed in the presentation include:

Identity - Cultural landscapes are the focus for iwi identities; sometimes with an ancestor associated with that place or location; a mountain; or a river. Very often these landscapes are encapsulated in our whakatauki (proverbs) and pepeha (aphorisms). “Ko au te awa, ko te awa ko au (I am the river, the river is me)

Mauri - Mauri is discussed in relation to Maori views of landscapes and how the senses of hearing, smell, taste, visual and feeling influence these perceptions. Mauri has been described as, life essence, life ethos, life principle; perhaps if there is such a word as “sensorial” which encapsulates all of what our physical senses perceive – plus what our taha wairua (spiritual senses) “feel”

Comparisons are also made between the ways a landscape architect, an ecologist or a planner might view a range of natural resources (mountains, rivers, forests, trees, mudflats, etc) with the ways Maori would view the same resource. It is anticipated that Maori and Pakeha will each gain insight and understanding of how another culture may perceive some of our natural resources through this presentation.



Ruapehu. Image source: author.

The Emergence of Collective Dreams

An exploration of community development based collaborative landscape design

Charles Barrie
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This paper explores the nature of a landscape design and planning process that could ensure the resilience and sustainability of suburban public space, and presents an argument that:

- public landscapes must be seen as multi-dimensional complex systems emerging from the coevolution of different players in the landscape community with the dynamics of their wider ecosystem; and
- the resilience of these spaces is dependent on collaborative decision-making, the engagement and empowerment of the local community, and an on-going responsive interaction with the site.

This approach is referred to as 'deep landscape design' and is expanded through the presentation of a number of guiding principles, which it is hoped will support designers, council staff and community leaders to explore it further. These guiding principles describe a facilitated, nested and iterative theory of design in which:

- the physical, ecological and cultural dimensions of landscape can be integrated holistically;
- multiple engagement methods are established enabling the inclusion of a large range of community partners; and
- those engaged in the design of the space are able to reflect on the impacts of their decisions and make changes accordingly.

The paper suggests that through the inclusion of deep design principles, small projects with a specific focus can initiate a process of increasing community knowledge, skill, and ownership in the design and maintenance of landscapes. A process that is necessary for the sustainability and resilience of public spaces.

Keywords: Landscape design, collaborative process, sustainability, resilience

In our rapidly developing world human manipulation of the landscape is occurring faster and at a larger scale than ever before (Resilience Alliance 2010, 4), with serious consequences including increased habitat fragmentation, resource decline, and social and cultural upheaval. The present paper argues that if the planning, design, and maintenance of suburban and urban landscapes is to support both healthy ecological systems and resilient liveable communities, it must occur in a fashion that honours underlying ecological and social processes equally, and strengthens the relationships between communities and their local landscapes. This paper also seeks to explore what this could look like in practice.

The key to understanding such a methodology is the understanding that when we are dealing with living systems they must be engaged with as *“a process, not as a catalogue of fixed structures”*. Bloch (1984,1). This process which we call landscape does not just include the dynamics of the geological, hydrological and biological realms, but also includes all the artifacts and phenomena of human society, culture and spirituality; physical and non-physical. Human beings are animals, which are as much a part of the human ecosystem as any other organism; as consciousness and mental faculties are part of being human, they are also part of the ecosystem. As ecosystems evolve through the interaction of the countless behaviours and qualities of the organisms of which they are composed, it follows that human inhabited landscapes evolve through the interaction of their bio-physical aspects with the behaviours, systems and structures generated by human consciousness, thought and emotion.

Taking this approach, Buchecker et al. (2003, 30) have argued that the static view of society in which landscape is seen as a resource (to be either exploited or protected) is outdated and suggest instead a dynamic model of society-landscape interaction. Their co-development view of landscape and society is based on a more dialectical approach in which the landscape, society and individuals are seen to coevolve through on-going interaction.

The work of the Resilience Alliance (2010, 4–10) defines landscapes as complex *“social-ecological systems”* and describes their coevolution as a *“panarchy”* of nested sub-systems which, while possessing their own internal dynamics or *“adaptive cycles”*, also influence the states and dynamics of the systems 'above' and 'below' them. Each subsystem of the panarchy can be defined by social-ecological boundaries that are both spatial and temporal, but will not be seen in their full context unless *“cross-scale system interactions”* are also considered. Managing a social-ecological system thus *“requires an understanding of what is happening at multiple scales”* (Resilience Alliance 2010, 8).

The theory of Holistic Landscape Ecology also reflects this view and describes landscape as a *“single interactive system in which each species adapts to and affects others in a constant process of community evolution”* (Naveh, 2000, 16). Borrowing from the Santiago Theory of Cognition of Maturana and Varela (1992, 75), this intimate, interconnected relationship between people and the wider landscape is referred to as *“structural-coupling”* (Naveh, 2000, 7-26).

This definition of landscape, in which the subjective, social, cultural aspects of human existence are seen to be interconnected with the biosphere and geosphere in one holistic co-evolving system, and where the subjective human being is a part of the natural landscape from which it has emerged, rather than at its center, could be described as a 'deep ecology' perspective. The term 'deep ecology' was first used in 1972 by Norwegian philosopher Arne Naess (Katz et al. 2000, xi) and can be

contrasted against the dualistic 'shallow ecology' perspective in which the workings of the human mind are seen as separate from the workings of nature. Katz et al. (2000, xiii) describe the deep ecology perspective of landscape as "*ecocentric*":

"Ecocentrism is the idea that the ecosphere and ecological systems are the focus of value. It is a holistic view of value, for entire systems are thought to be valuable, rather than individual humans or individual natural entities (such as animals)."

In order to deal with landscapes from an ecocentric or 'deep ecological' perspective and adequately deal with the ecological and social realities of landscape discussed above, the present paper argues that design, planning and maintenance methodologies must treat landscapes as complex, multi-layered systems with geological, biological and cultural dimensions. They must be seen to be dynamic and co-evolving at multiple scales; living communities rather than static forms.

As discussed above, in the present understanding of landscape, human action, thought and emotion are *part* of the landscape. It then follows that the degree to which these actions, thoughts and emotions support the dynamics of coevolution, or continued structural-coupling can be seen to be a key sustainability/ecosystem health indicator. Sustainable design cannot refer only to the snap-shot integration of the physical aspects of human life into the landscape (in terms of water and energy conservation and waste reduction for example). It must also include the degree to which these subjective, behavioural, social, cultural and spiritual aspects are structurally-coupled to the rest of the landscape.

As a meeting point of human constructions and the rest of ecosystem, a 'ecocentrically' resilient landscape is then one in which the intrinsic value and self-organising properties of nature are respected, allowed to flourish and supported to coevolve in harmony with the continuing development of human spirituality, culture and society.

A design and planning process that would allow such coevolution to occur is termed in the present argument as 'deep landscape design'. In such a model the 're-coupling' of the on-going design of a space to its 'wild ecology'¹, or ensuring on-going responsiveness in the design process and governance, is more significant than the plants, materials or finishes that are specified in an initial design programme. Equally important is a re-engagement, or re-coupling of the inner and outer life of the landscape's community with the coevolution of the landscape to ensure a sense of place and ownership. This could also be described as 'ecological community restoration'. This is not the attempted restoration of a pre-human environment, but the creation of a coevolving recombinant ecosystem through the protection and nurturing of the ecological dynamics of the wild system and a restoration of the structural-coupling between the local community and that wild system. The degree to which the community is actively and effectively involved in the development and maintenance (or coevolution) of this system will be a key measure of its resilience.

This is a process in which supporting resident communities to deepen their understanding of, sensitivity towards and interaction with their bio-regional landscape is given as much importance as the initial minimisation of material eco-toxicity and the preservation of biodiversity and ecosystem services. This could be by way of, for example, increased ecological and geographical education,

support for active community landscape stewardship and increased support for creative expression in, about, and for local landscapes.

So what could deep landscape design look like in practice?

Deep landscape design is collaborative

As landscapes are complex systems, the flow on effects of change are ultimately unpredictable, and can take place over both short and long timescales. Taking this into account, complexity theory, as explored by the Resilience Alliance (2010) and Inspiring Communities (2010), therefore suggest that multiple viewpoints are necessary in order to ensure that any changes are made with as broad an understanding of the landscape system as possible. As landscapes develop through an ongoing interaction between society and their environment (Kallis 2007; Naveh and Lieberman 1994; Naveh 2000), the long-term health and resilience of a public landscape, and the ease with which it can be maintained, are inseparable from the attitudes and behaviours of the community who interact with it. So while this collaborative approach certainly includes the engagement of multiple expert opinions, and design or architectural experience, it must also include the on-going education and empowerment of the landscape community, the residents of the area. In order to empower and enable involvement for a wide range of individuals, effective collaboration requires a community development based approach. Community development principles such as those presented by Inspiring Communities (2010), Ife (2002) and Ricketts (2008) suggest that this approach should involve: developing a process that is accessible and inclusive, supporting the community to identify their own needs for the space, nurturing existing relationships with the landscape, attempting to break down unsupportive power structures, and in the terms used by Girard and Stark (2007), de-hierarchise decision making. In her work on communicative collaborative planning, Healy (1992, 9) has suggested that such a de-hierarchisation must include an acknowledgement of the “biases conveyed in various forms of communication” and efforts to ensure that scientific rationalisation is not automatically given higher status than other forms of knowing and communicating.

A key issue in aiming for collaboration is that of adequate representation, or how many participants constitute ‘community buy-in’. It can also be the case that strongly opinionated and vocal community members take part in the process, while shyer or more alienated community members do not. To ensure this collaboration process is inclusive and accessible, and thus to enable as many people as possible to participate in the design process, it is important to have a wide variety of engagement methods and to ensure that these different methods provide adequate support (O’Shaughnessy 2010) and shelter (Buchecker et al. 2003). Efforts must also be taken to ensure there are engagements that support the inclusion of often marginalised or alienated groups (whomever they may be in a given landscape community). Lunch time or evening meetings will each only attract a certain demographic of the community, while other individuals or groups may be better reached through, for example, social media, or through facilitated engagements at one of their own meetings. Targeted, personal communication can also be useful. This model of collaboration requires engaging different members of the community in the way most suited to them; supporting them to deepen their relationship with the landscape, and participate in its future. The literature on insurgent planning reminds us that for such a process to be genuinely collaborative and empowering for the wider community (rather than simply tokenistic efforts which in fact serve to further reinforce power structures) it is essential that engagement are not always by way of “sanctioned

spaces of invited citizenship [sic]" (Miraftab 2009, 41). As much as possible individuals and groups must be allowed to suggest and generate their own ways of engaging with the space and its design, and the efforts and passions of individuals and groups already working (or playing) in the area must be respected and nurtured.

To ensure that the different parties involved see the larger context within which they are participating, it is necessary to make genuine efforts to build bridges between different value systems and ways of knowing. Effective ways can then be sought to bring together different viewpoints, needs and visions into a holistic, multi-dimensional picture of the landscape from which decisions can be made. Healy (1993, 236) describes this process as the challenge of finding ways to acknowledge different ways of "experiencing and understanding while seeking to 'make sense together'."

Collaborative landscape design does not necessitate everybody involved in the process needing to be part of every decision being made, or that the knowledge and experience of designers, architects or other experts, whether professional or otherwise, is neglected. What is necessary is the transformation of a process solely directed by experts (Buchy and Hoverman 2000), who cannot be expected to possess all the solutions to the landscape issues (Ricketts 2008), into one in which everybody is valued as an integral part of the landscape, is encouraged towards active citizenship, and has the opportunity to engage genuinely in decisions that affect them. This is a process that Buchecker et al. (2003) have suggested will help to restore to the community a sense of responsiveness and responsibility for landscape issues. The scale and parameters of a project will help determine who should be involved, and what people need to be involved in what decisions. As landscapes can be viewed in a multitude of different ways the 'big picture' or conceptual levels of a project require wide ranging input. While still working within an overall collaborative context, details could be dealt with by smaller groups or individuals and with suitable individuals engaged in dealing with technical/engineering issues.

As Healey (1993, 236-244) has noted, it is unlikely, if not impossible that true consensus will be found, and that there won't be conflicts and disagreements. What is necessary is to encourage participants to "recognize [sic] each other's presence and negotiate their shared concerns" (Healey 1993, 244), to search for a level of "mutual understanding" that enables action to be taken whilst also accepting that another's perspective may never be fully comprehended. Healey (1993, 243) has also noted that through creating an environment where participants are supported to "articulate their interests" seemingly fixed view-points and polarisations may soften.

Deep landscape design is multi-layered and nested

As landscapes systems feature interconnected physical, ecological and cultural dimensions each of the 'layers' and the 'sub-layers' of which they are composed need to be explored and included in the design process. To ensure the maintenance of the structural-coupling between these different layers, the design process should involve the engagement of people working within, or who are passionate about, each layer (for example engineers, ecologists, artists and activists) and the development of effective methods of communication between them. As discussed above, not everyone needs to be actively involved in the exploration of every layer of the landscape, but

everybody involved in the process can be supported to acknowledge the significance of each layer and understand both its parameters, and the way it interacts with the landscape as a whole.

In practice this could result in a nested design process. In this nested structure specific groups or engagements could focus on exploring, maintaining, developing and advocating for particular layers or aspects of the landscape, while a representative 'core' group could ensure that these different groups are working within a holistic context. To do this the 'core group' could monitor the overall direction of the project, and support holistic development through ensuring that information flows between the different groups. Provided there are effective communication systems in place, this process could enable those best suited and most passionate about different dimensions of the landscape to have relative autonomy in different aspects of the design, without compromising the overall holism or collaborative nature of the design process. Depending on the nature of the project, there are different ways in which this structure could form. As in the example given in Fig. 1, the core group could form from representative members of other groups with specific interests or an existing connection to the landscape. Or an existing group could support the formation of new sub-groups, such as that working on the art project. In another scenario, these sub-groups, may in fact not actually be groups as such, but could refer to the individuals reached through each of the different engagement methods deployed during the project (as discussed above). The core group could then be charged with synthesising the output or learnings harvested from each engagement, and feeding them back to the different participants.

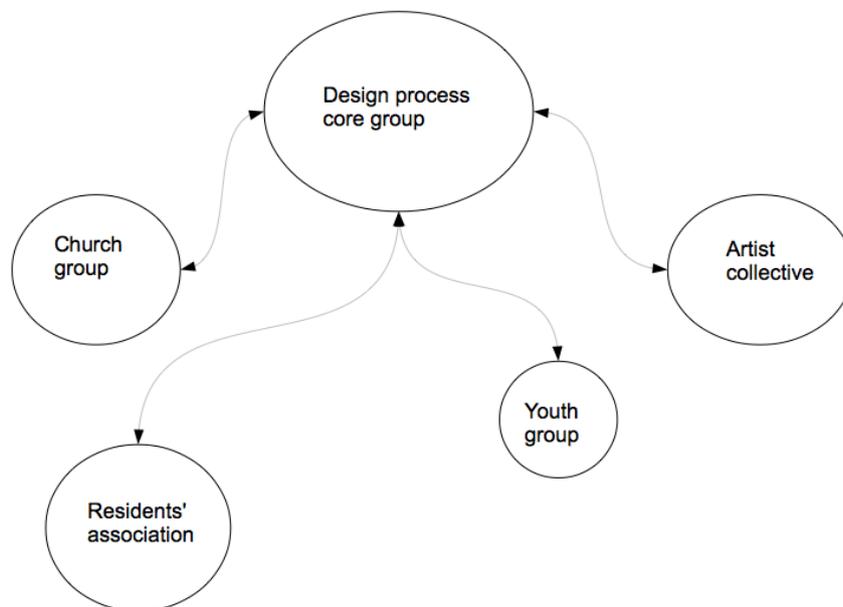


Fig. 1. A nested approach towards landscape design and management.

Different decision making methods will be better suited to different groups and engagements, as will different ways of communicating and connecting, and this model allows for this. Some groups may prefer to vote on decisions or rank priorities, while a more consensus-based structure may be better suited for other groups. Some groups may choose to interact continuously using online tools such as Facebook or Loomio, while others may opt for semi-regular formal or informal face-to-face meetings. Within this nested model, each sub-group can make decisions within its mandate in the way best suited to its constituents. A key factor however, will be ensuring that key information flows between the groups, or to and from the core group in a way that is manageable, intelligible and able to be collated.

Establishing a multi-layered or nested approach to design could be said to utilise both the facilitation and advocacy approaches towards engagement and participation discussed by Shirvani (1985). It involves facilitation in the sense that it requires supporting greater communication between different aspects of the community and landscape (a point which will be further discussed below). It could also be said to involve advocacy as it provides a mechanism through which aspects of the community or landscape, which may have been overlooked or neglected in the past, can be included in future landscape decision making.

Deep landscape design is continuous and iterative

To ensure responsiveness to the impact on the landscape of any changes made, the design process needs to be a continuous, iterative process, which is itself able to evolve. This means that the design of the site is an on-going process bigger than any individual person or group involved, and that there is no end product. This does not imply that a landscape is always left 'half-finished' or incomplete, but rather that the development occurs in phases or stages. After which, there is an opportunity for reflection on the impact of any changes made.

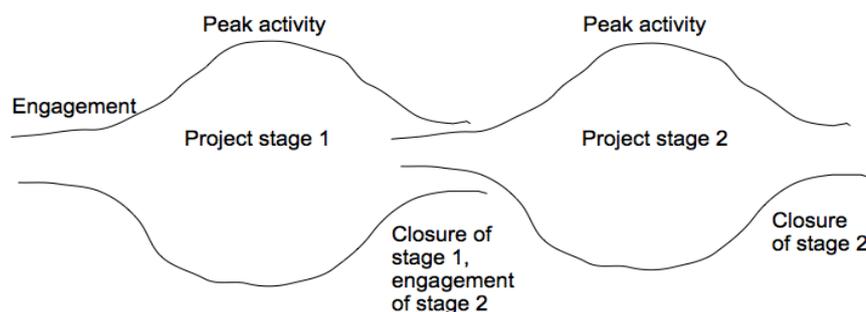


Fig. 2. The 'woven rope' model of landscape project management.

This aspect of deep landscape design can be visualised as a 'woven rope' – see Fig. 2. In this model each project phase begins with an engagement period (to form the collaborative structure described above) and has a period of peak activity in which ideas are explored and changes are made. The closure of each stage of the development then provides an opportunity for reflection on whether the proposed subsequent stages still serve an opportunity for individuals to pull back from the project and to engage new participants in the next stage, and also an opportunity to reflect on the nature of the engagement and design processes themselves. The process can thus be continuously handed down to new participants. This handing down process could be made easier through leaving an unfinished or unspecified aspect at each stage of the design, which could form the starting point for the next stage of design. The next stage may choose to deviate from this original plan, but this handing down process allows room for new creativity without losing the momentum or vision generated by the previous stage.

Having some way to record the current vision for the site in a way that is itself dynamic and iterative can be useful to avoid fixed maps or plans implying that the nature of site is itself fixed or static.

Deep landscape design gives nature a voice

While this paper has made a case for the importance of community development in sustainable landscape design, the ecocentric or deep ecology perspective argues that this empowerment of the community must not come at the expense of the conservation and preservation of the non-human ecosystem. Community development projects are often focused on marginalised or oppressed groups and their general empowerment, with flexibility about the way this manifests being a principle of the process. In shallow landscape design, the non-human ecosystem of the area could also be considered to be marginalised or oppressed. In addition to empowering the community to engage in the on-going design and maintenance of their local landscapes, the deep design process is also about ensuring that the 'voice of nature' is empowered and represented. Therefore, during the on-going design process, it is important to ensure that efforts are continuously made to honour and represent the intrinsic value and dynamics of the non-human parts of the landscape (which could be referred to as their rights and needs). The way that this is done will also depend on the nature of the project and the group currently engaged with it. It could mean including an ecologist in the core design group, ensuring adequate representation of traditional/indigenous landscape wisdom, having a restoration/conservation sub-group representing both scientific and traditional views as a key part of the nested structure, or ensuring that there is an adequate exploration of the ecological layer of the landscape, which is taken into account when any changes are proposed. In this process, care must be taken to ensure scientific knowledge is not further privileged over traditional or culturally unique ways of knowing and views of landscape value.

The principle of ecocentrism can also be supported through ensuring that at each closure/engagement stage of the woven process, the reflection on the impacts or flow on effects of any changes or developments gives *equal* weighting to the ecological and more human focused layers of the landscape. Ensuring this equal weighting will help to ensure that as changes are made to a landscape, the holistic health of a space, what Morgan (2006) would refer to as its 'mauri', is maintained.

Deep landscape design is self-facilitating and co-facilitated

This paper suggests that for the inception or nurturing of a deep landscape design process, facilitation is necessary. This facilitation may involve guiding a group through a specific stage of the design process, supporting on-going engagement or the linking together of different groups with the landscape of focus. This facilitation may come from within the existing community or may be engaged from without to support the process. It may be an individual person, or a group combining their skills to support the process.

In the case of guiding a group through a specific stage of the design process, the facilitator would require some degree of design experience and depending on the scale and complexity of the project, may need to be an architect: this is the approach towards design suggested by the School Landscape Project (Hunter et al. 1998). Alternatively, an experienced designer could be involved in the project, with the facilitator supporting them to include the rest of the group in the process. In any case, key to empowering the participants of the project is for the facilitation to ensure that decision-making is genuinely collaborative and not just the designer making decisions and seeking feedback. Similarly a key role of facilitation is to ensure that all parties participating in a process have an opportunity to be heard and that strong personalities, including their own, do not dominate the process.

Once the momentum of a project is going, communication structures are in place, and a responsive design process is established external facilitation may no longer be necessary. In any case, part of the role of facilitators should be to make themselves redundant through supporting the group or groups to find ways to maintain the project on their own, to self-facilitate. The power imbalance between the facilitator and the rest of the group can, as alluded to above, likewise be addressed through working towards a co-facilitation model, in which different members of the landscape community take responsibility for different aspects of the process.

Key challenges to the model

In any landscape project attempting to utilise the principles explored above, there will be numerous challenges.

Finding a balance between individual ideas and collective decisions

During the preparation of this paper a local artist observing the process commented that having so many people involved in the decision making around a creative endeavour such as landscape design risked a 'blanding' of the outcome; the potency and holism of an initial idea or concept could be lost by trying to cater to everybody's opinion. Further adding to the potential for this, Buchecker et al (2003, 31) have suggested that as people hand over the management of public space to authorities, they come to see their own private property as the only legitimate environment for their individuality. Buchecker et al (2003, 31) then claim that this has led to a sentimental notion that the collective always knows best which can prevent people from asserting their own thoughts and ideas when engaging in collaborative or participatory projects. Genuine collaboration or participation requires an empowered individual, someone who is confident enough to engage and offer their opinion. Therefore, while it could equally be argued that the collective manifestation of a brief could actually result in a stronger and richer development, and in many situations groups may welcome

the challenge to do this, it is important that individuals within the process feel empowered to argue for their individual opinion. Collaboration does not imply that every participant needs to have their input clearly visible in every decision. When dealing with a specific decision within a functioning collaborative process, a group may decide to use a modified form of one person's idea, combine a number of ideas into one solution or decide to utilise a single participant's idea in its entirety.

In other situations, a design group may be filled with so many strong ideas that there is no sense of collaboration at all as people compete to have their own ideas expressed in the design. Therefore in some cases it may suit the needs of a given project better to have individuals take responsibility for the specific interpretation of different parts of a brief. However this could then create the risk of having so many different ideas being represented in a space that the design becomes a 'hotch-potch' of elements with no real design unity. In any case, to ensure that strong ideas can be heard, avoid unnecessary 'blanding' and ensure there is a holism to the design; each collaborative project will need to find its own balance between individual empowerment and collective activity. Key to this will be working to generate a group rapport, nurturing an overall spirit of collaboration in the design process, and as much as possible, developing a clear design brief for each phase of the design in which everyone involved can feel a sense of ownership.

Time poverty and decision making fatigue

An on-going process such as that explored in this paper could appear to be a very time consuming process which presents another set of challenges.

In any community project, in which on-going input from non-paid individuals is required there is the issue of time poverty. Time poverty refers to the situation of individuals, who may feel passionate about a project and wish to be involved, not having the time to engage or maintain their engagement on top of other responsibilities.

Related to the issue of time poverty is that of decision making fatigue. In landscape projects there can be many details to deal with and expecting a voluntary community group to make decision after decision, on top of other commitments that they might have can easily drain energy and lead to rash or flippant choices.

To deal with these issues it is important as much as possible to build links between the landscape project and what engagements and activities are already occurring within the community, or to 'scaffold' off existing momentum. The awareness of time poverty and fatigue issues adds to the case for breaking the process into interlinked phases. While still forming an overall continuous process, people are then able to engage and pull out, without having to make long term commitments. Selecting the frequency and duration of sessions or engagements and the length of each design phase is also important, as is awareness of when decision making around details or technical issues can and should be delegated.

Funding structures

The alignment of community development and an on-going design process, with the project management procedures and/or funding criteria of any council partners or other funding agencies,

presents other challenges. An ideal model for the deep landscape design of a suburban landscape is to have the processes and developments take place through community resources and 'in-kind' support from council staff and other agencies, with external funding required only for specific elements. While this model may be possible from the outset in certain circumstances, or develop over time in others, it is not realistic for every project. In many projects it is likely that the process will be reliant on contestable funding, or on funding allocated by landscape managers for specific developments. While key to the model of design explored in this paper are flexibility, an ability to evolve, and an allowance for the emergence of unexpected outcomes, these funding sources are likely to have specific criteria, and require specified outcomes, measurables, and predictable timeframes. Thus supporting the growth of such a process may not fit naturally within a council or funder's structure, and trying to do so may induce a rush to get the project 'finished', force outcomes and disrupt the genuine community development. In some situations the council or funder may show flexibility around criteria, extend funding deadlines, or be able to 'roll funding over' into the next financial year, however this cannot necessarily be depended on.

In some cases, supporting continuous interaction between a community and its landscape could be made easier by applying for different funding streams for different phases of the project, or for developments taking place in different layers of the landscape. This could allow the project as a whole to change course over time, or for different aspects of the project to be matched to different funding criteria without having to limit the overall scope of the project. However, funding pools are limited and applying for funding can be a time consuming process. Thus the degree to which this is a viable option will depend on both the economic context of the given project, and the capacity of the individuals and groups involved in it.

Keeping the process alive in the face of change

A process such as this might work well in a small contained community in which it is easy to recruit new participants, maintain continuity of engagement and conserve the direction of a project. However in larger areas, areas prone to residential transience or faster rates of population change it is likely to be more difficult to do so.

To a certain degree divergence from initial ideas and plans is inevitable and is in fact expected. At the centre of this approach must be an acceptance of change and willingness to 'alter one's course', however this does not mean that the knowledge and decisions of previous participants needs to be lost.

Information, knowledge and concepts uncovered during the design process does not always have to be explicit in the physical landscape, however stories must be kept alive to ensure respect for the history, ancestors and precedents of an area, and that the knowledge and wisdom gleaned from earlier projects and/or mistakes is not lost.

A potential solution to both accepting change and maintaining continuity of process is through the nurturing and utilisation of diverse means of dynamic community story telling. Local theatre, history walks, creative documentation of previous projects and embracing the potential of new media and technology to ensure that information is retained in a way that is easily accessed and easily passed

through generations; allowing the history of a landscape and its development to be honoured and celebrated without expecting it to remain the same in the face of inevitable change.

Additional benefits of the model

A culture and process of on-going collaborative design such as that explored above may initially prove more complicated and difficult to implement than a more conventional designer driven approach. However, in addition to it being better suited to ensuring the resilience of landscape systems, there are additional benefits to this model, both directly to the site of focus and also to the participant community.

Through attempting to inform and engage as many people as possible, deep landscape projects can access a wide range of resources in the community, some of which may be unconventional and could potentially be over looked or under-valued in other approaches. These resources can include skills and knowledge, and materials and equipment. Accessing available or under-utilised community resources could reduce the cost of a given project, reduce waste and also add a unique vernacular aspect to the design, further grounding it within the local landscape.

Collaborative cross-cultural engagements could increase community networking and the relational capital of the community. Also, working with a design paradigm such as that explored in this paper could result in a greater degree of community ownership over the site of focus, and a subsequent decrease in vandalism.

Key questions to ask in supporting the development of a deep design process

As discussed above, the journey towards a deep design process in a given landscape will be dependent on numerous factors. In some cases attempts could be made by facilitators or landscape managers to engage the local community and establish such a process over time, while in other circumstances it may be a case of groups already working within different layers of the landscape nurturing its emergence through cooperating and communicating more effectively. In any case, Table 1 contains a series of key questions that may be of use to landscape managers, designers or community members wishing to establish, or nurture a deep process in the design and maintenance of a given public space.

Concluding remarks

This paper has explored the idea that in the journey towards holistic landscape resilience, the empowerment and education of the local community, and the development of an inclusive and ecologically responsive design process, are as important as the landscape plan that initially results. While maps and models are certainly useful to landscape design, public spaces are not objects. Landscapes are not static, they are dynamic and multidimensional, and their futures are utterly intertwined with the attitudes and behaviour of the communities who reside in and around them.

To ensure long-term landscape sustainability, the different stakeholders in a given space must work together to take into account the interrelated layers of a landscape, both physical and non-physical. It must be accepted that there are many ways in which people perceive and relate to landscapes, each important, each valuable. The design process utilised must support empowered

communicative relationships between the different members of the landscape community, whether they be council staff, design professionals, passionate locals or marginalised minorities. It must also support an evolving interaction with the ecology of the landscape itself.

Process Area	Key Questions
Project inception and identification of landscape focus	What is the landscape of focus?
	Who is instigating the present initiative? What are their intentions and what degree of control do they intend to have over any developments?
	Will there be a core group to oversee any changes to the landscape? How will this be composed?
	What layers of the landscape (e.g. geo-physical, hydrological, ecological, cultural) form the initial focus of the current project?
Identification of landscape community	Who can be identified as the landscape community?
	Who are the key stakeholders (individuals and groups) within each layer of the landscape?
	What relationships already exist between these groups, and between the groups and the landscape? How could these be strengthened? Are there any grievances or barriers that need to be acknowledged or addressed?
Engagement of community in a multi-layered approach	How can a wide range of people be included in the exploration and potential development of the different layers? What different tools and engagement processes can be used to access the ideas, opinions and creativity of people with different interests, time availability, and learning and expression styles?
	How can people be engaged in the exploration and development of any neglected layers of the landscape?
	In which layers is it necessary to involve 'external' experts?
	What are the key (internal) processes (physical, ecological or cultural) that function within each layer of the landscape?
	What (external) pressures or processes influence, limit or constrain each layer?
	How can the different individuals and groups engaged in the process be made aware of these internal and external processes and how they interact?
	What are the 'needs' of each layer of the landscape, and the individuals and groups engaged with each layer?
Project management	How will the needs, knowledge, ideas and information emerging from each layer or engagement type be linked together to generate a common pool of knowledge, collective design brief or vision? How can individuals or groups be supported to maintain their own autonomy while working within that vision?
	How can it be ensured that fundamental landscape, design or technical principles are acknowledged whilst still promoting an empowering and inclusive learning environment?
	How will decisions be made about any changes to occur in the landscape? Will different individuals or groups have a mandate within different layers? What will be the role of the project instigator or any core group in these decisions? How will disagreements be managed?
	How can opportunities for reflection and evaluation, and for iterations in the design process be created?
	How can the different individuals and groups involved in the landscape be kept up to date on decisions that have been made and changes that are occurring? How will the different groups communicate with each other?
	What is the timescale of each engagement, and where can opportunities be created for participants to leave or join?
	How can a budget for the different engagements of the project be sourced and how will it be managed?

Table 1. Key questions to ask in supporting the development of a deep design process.

However, turning these ideas into a reality is challenging. Among many other issues, such a process must deal with legislative boundaries, time and budget constraints, and human egos. The model of landscape design explored in this paper perhaps represents an ideal. Moving towards this ideal will require compromise and continuous bridge building between the different stakeholders operating within the landscape, to ensure that the process that emerges will meet their needs, limitations and availability.

In general it may be the case that for a truly continuous, collaborative and de-hierarchised form of landscape design to work, there needs to be an overall paradigm shift in society towards one which is itself more collaborative and de-hierarchised. Taking small steps towards such a culture of design and decision-making in suburban landscapes could prove to be a key factor in this shift. Participatory design leader Henry Sanoff (Sanoff 2007, 215) has suggested that:

“the idea of democratisation of decision-making within all local and private organisations...is...a necessary prerequisite for political democracy at the national level.”

It could likewise be argued that supporting the distribution of democracy and empowering active citizenship at a local landscape level, is an essential pre-requisite of doing the same at a regional and national landscape level.

It is hoped that the design paradigm explored in this paper will contribute not only to the on-going discussion on how to ensure the sustainability of local landscapes, but also to the discussion on how to inspire active citizenship in the evolution of a landscape which is adaptable, resilient and sustainable at every scale.

¹ It could be argued (especially in settler societies with millennia of human modification) that there is no ‘wild ecology’ or no ‘wild systems’. However, in the context of this paper the term ‘wild’ is used to refer to the fact that ecosystems and the organisms within them have their own dynamics and processes which are not designed or controlled by humans.

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Sound Interpretation

Acoustic ecologies and urban history

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This paper explores how sound artefacts within urban acoustic ecologies can inform our perceptions of place, engaging a new dialogue with the cultural and built histories of post-industrial Tasmanian urban environments.

Two modes of inquiry underpin this research. The first concerns sound as a cultural palimpsest that exists – often subliminally or beneath consciousness – across urban environments, which the paper argues can be materialised as sonic artefacts through various recording, production, playback and installation techniques to provide an interpretive window into the histories of place.

The second mode of inquiry critiques normative assumptions regarding definitions of heritage status and discusses the value of sonic artifacts and acoustic ecologies in the re-evaluation of cultural and historic assessments of urban heritage, thus furthering the field of conservation studies to include the identification and interpretation of the aural characteristics of place.

The research in this paper speculates that from these two modes of enquiry acoustics can foster new approaches to urban design that engage the histories and patterns of our built environment. Evidence for this is provided through a discussion on the changing soundscape condition of the Tasmanian post-industrial mining township of Zeehan, highlighting how the fundamental characteristics of place become engraved acoustically within the physical fabric of urban environments over time. A subsequent analysis of which enables an important recalibration of Tasmanian urban place heritage where past historic conditions can be acoustically contrasted against their current state, enabling an aural register based on the resonances and frequencies of historic urban environments to become a valued tool in not only our evaluation of

heritage status, but in determining appropriate responses when dealing with the conservation of urban environments.

Keywords: Soundscape, acoustic ecology, urban heritage, urban history, convolution reverb, indeterminacy.

The field of urban environments and urban heritage studies has typically lacked investigations into the aural dimensions of place, particularly regarding their cultural and historic values. Whilst acoustics exists in its own well-established field of engineering and research, there has been little discourse that concerns the conservation of sound, or analyses of how dynamic and interrelated soundscapes – or what we in this paper will call *acoustic ecologies* – may improve our understanding and appreciation of historically significant environments. The Tasmanian post-industrial urban landscape is the case in point in this paper.

Through relevant conceptual frameworks that underpin the connections between urban environments and issues of heritage through an acoustic lens, this paper aims to improve our understanding of the aural characteristics of place as a historical parameter. This argument is supported by an analysis of field recordings taken at the post-industrial urban sites in Zeehan and Launceston in Tasmania, facilitated by a speculative sound installation. The paper speculates on how acoustic characteristics of place may be re-contextualised within a contemporary context to facilitate the interpretation of urban environments and to determine their historical significance.

While the case study utilises different methods of recording, production, and playback they collectively demonstrate what R Murray Schafer has termed ‘sound imperialism,’ where an existing localised acoustic ecology has been overpopulated and transformed into a monotonous lo-fi industrial soundscape (Schafer 1977, p. 77). The paper discusses how a qualitative analysis, rather than quantitative measurements of such acoustic conditions can lead to new interpretations of our built environments and landscapes, not as fixed constructs but entities in constant flux. This leads into a discussion of temporality in urban and landscape heritage from the perspective of what Tim Ingold calls ‘taskscape’ which denotes a pattern of activity across time that consequently influences the construction of a landscape (Ingold, 1993, p. 174).

It can be argued here that acoustics provides not only a valuable register of change, but also a temporal record of cultural activity and occupation across urban environments. An acoustic ecology can act as a register for a particular spatial condition, or period in time, which can be repeated or replayed within new contexts to provide contemporary understandings of historical conditions. The paper concludes that acoustics is an integral component of urban heritage, through which it is possible to not only re-configure our understanding of heritage evaluation, but to also be used in planning appropriate responses for the conservation of urban environments.

The paper proceeds with a sketch of three conceptual frameworks that underpins the connections between acoustic ecology, urban history and heritage conservation:

- acoustic ecologies as creative performance;
- historical soundscapes through contemporary acoustic artefacts; and

- heritage conservation through compositional indeterminacy.

Acoustic Ecologies as Creative Performance:

Schafer called for a re-evaluation of the way in which we relate with the world by shifting our primary focus of perception away from culturally accepted visual norms, toward our marginalised aural perception (Schafer 1985, p. 88). As an environmentalist, Schafer was primarily interested in preserving the complex acoustic relationships between living beings and their natural environment, which he refers to as an ‘acoustic ecology’ (Westerkamp 2002, p. 52). An acoustic ecology is fundamentally a register of the historical, cultural and biological make-up of place, and their fluxian relationships, manifested as an audible (but at times inaudible) spatio-temporal soundscape.

Schafer identified the 3 key elements of a soundscape in his seminal 1977 text ‘The Tuning of the World’ as:

- (1) Keynote Sounds: Background sounds heard consciously and unconsciously
- (2) Sound Signals: Foreground sounds heard consciously
- (3) Soundmark: Similar to a landmark, a sound that is unique to a location

Acoustic ecologists such as Schafer are primarily concerned with preserving soundscapes as acoustic representations of present and past physical makeups of place. Noise pollution from our increasingly urbanised and industrial societies is the biggest threat to this conservation, which Schafer refers to as an inevitable consequence of our “transition from the rural to the urban landscape” (Schafer, 1977, p. 43). Schafer goes on to discuss how growing noise pollution is moving society away from the hi-fi soundscape represented by the sonically diverse rural setting, into a lo-fi soundscape represented by the sonically monotonous ambient drone of an urban setting (Schafer, 1977, p. 43). This debate reached its peak during the late 1960s with the World Soundscape Project led by Schafer, which sought to defend then hi-fi soundscape from impeding lo-fi urbanisation.

However, the problem with theories of acoustic ecology is that the debate is rooted within an idealised notion of how the world should be sonically composed, rather than interpretive analyses of actual acoustic conditions. Westerkamp summarises this argument when she compares the work of an acoustic ecologist to that of soundscape composer:

“The acoustic ecologist would rather do a noise level survey from different perspectives and conduct interviews with commuters. But the soundscape composer might discover, for example, the beauty within the Doppler effect of a passing Harley Davidson and enhance and descend the pitch.” (Westerkamp 2002, p. 54).

The acoustic ecologist will seek to investigate place through sound by quantitatively analysing what the key acoustic characteristics are, in the hope of being able to reconstruct a historic soundscape in the name of preservation. The soundscape composer on the other hand investigates qualitatively how sound affects our impressions of, and behaviour in everyday environments. The work of the composer accounts for the relational characteristics of acoustic ecologies in the sense that no ecology can be investigated as discreet from being affected by the investigator and investigation. In the article ‘*Discrete mapping of urban soundscapes*’, Olivier Balay highlights the necessity for a qualitative perceptual mode of soundscape mapping for its inherent potential to inform new

interpretations and identify new phenomena stating that “we have stopped describing sound and now only measure its quantity; instead of taking account of the perceptible effects of sound material we now study its acoustic impact” (Balay 2004, p. 1).

A re-calibration of the methods by which we analyse acoustic ecologies is necessary if we are to provide new sonic perspectives on the manner in which our environments have changed, and still are changing. From the perspective of qualitative experimentation through soundscape composition, acoustic ecologies involves the creative assemblage of both sounds recorded from the past, spatial and topographical dimensions of historic urban environments, as well as the sound playback contexts in the present and the participation of audiences through their performative engagement in receiving and interpreting the sound, which in turn affects the playback and reception of historical acoustic ecologies. Here we can speculate to what degree a soundscape composition as a creative work plays in our heritage evaluation of post-industrial landscapes and built heritage.

In contrast to Schafer and acoustic ecologists, sound artists O+A (Bruce Odland and Sam Auinger) propose the notion of a *Sonic Common*, “where many people share an acoustic environment and can hear the result of each other’s activities” (Odland and Auinger 2009, p. 64). At first this description seems to correlate with that of an acoustic ecology. It describes how the characteristics of place are represented by, and fundamentally engrained within, the acoustic context. However, unlike an acoustic ecologist, the primary interest in *Sonic Common* is not a measured analysis, but an investigation into the flux of a soundscape as produced by human activity. Through the process of translating urban sounds by tuning tubes into ‘overtones’ that are then played in harmony through loudspeakers O+A are able to speculate how urban occupations of space alter the acoustic field, which when translated creatively into a composition, creates an asymmetrical relation with the visual field. This experience is a construction of an urban environment which is imbricated with both human behaviour within it and interpretations of it.

Sonic Commons proposes that soundscapes are constantly shifting, with multiple perspectives, occupations, identities and influences. Tim Ingold in his article ‘*The Temporality of Landscape*’ argues for the introduction of the term ‘taskscape’ to denote patterns of dwelling, representative of active and perceptual engagement within landscapes (Ingold 1993, p. 174). Occupations of landscape, which may not be initially visible or which display no physical record, can nevertheless still exist perceptually through sound, accessible intuitively or subconsciously where the process is “neither mental, nor material, but a phenomenon of experience” (Ingold 2007, p. 1).

If we take on the one hand that landscape and the built environment are characterised by shifting soundscapes rather than a concrete and quantitatively definable set of acoustics variables, and we understand Ingold’s ‘taskscape’ to be fundamentally temporal and representative of habitation, then we may reasonably speculate that a qualitative mapping and subsequent creative composition of acoustic environments informs our understanding of the histories engrained within place. That is, acoustic ecologies, with the traces of temporalities and spatialities carried within them, can only become productive in practices of remembering and practices of historicising, only if they are performed. The performativity of acoustic ecologies, whether through amplification, mediation, feedback, or translation will trigger an experience in the listener that combines asymmetrically, sensation and interpretation. Such an approach to acoustic ecologies to inform the heritage

understanding, and this the conservation, of historic urban environments, moves away from a quantitative practice of sound measurement and recording, towards an essential multidisciplinary creative practice. After all, as Schafer himself says, “whenever one writes about sound or tries to graph it, he departs from its essential reality, often in absurd ways” (Schafer 1985, p. 88).

The theory in this topic compares methods of acoustic analysis and speculates how a qualitative study of soundscapes rather than a quantitative measurement can lead to an improved understanding of the temporal nature of sound, which will in turn assist in informing new interpretations on the histories of urban environments.

Historical Soundscapes through Contemporary Acoustic Artefacts

Following the concept that acoustic ecologies are performative, it follows that sound can be understood as an acoustic palimpsest of cultural and historical conditions and change within urban environments, only when it is materialised as an acoustic artefact that contains information on the conditions of place and traces of human settlement.

Robin Rimbaud, a prominent sound artist, describes the recording process for an early installation where he captured telephone calls via a police radio scanner as *intercepting the data stream* (Rimbaud 2001, p. 65). The title of the work metaphorically expresses the notion that sound waves exists beneath the subconscious level of everyday human experience, as a catalogue of data, which if intercepted reveals details on the history of its context. *Intercepting the data stream* is a process of sonic archaeology, uncovering a trail of acoustic resonances representing the history of activities and occupations across landscapes and the built environment. Rimbaud elaborates that when recorded these resonances capture a moment in sound, manifested into what he calls a *Sound Polaroid* (Rimbaud 2001, p. 65). Analogous to an artefact, a *Sound Polaroid* “seizes an image and immediately exposes it to the permanence of interception” (Rimbaud 2001, p. 65), suggesting that acoustic ecologies can be apprehended to form an acoustic experience with interpretive value. It is at the moment of apprehension that the past, inherent in the aural experience and the taking-form of the acoustic artefact, is made to appear and becomes part of active recollection. The acoustic artefact is a process of reactivation, which will always involve to some degree invention or creativity, that allows history to emerge as an experience that then triggers the processes of interpretation.

It has, for instance, been suggested that sound waves emitted during the construction of ancient pottery could have been captured and held within the grain of the material, theoretically enabling the acoustic condition to be replayed today. In this instance the physical object becomes an acoustic register capturing “the hidden resonances and meanings within memory and, in particular, the subtle traces that people and their actions leave behind” (Rimbaud 2001, p.69).

Sound therefore transgresses the passage of time. If like the ancient pottery we take a musical instrument made fifty years ago and play it today, we are actually playing a sound from the past. Sound will create and re-create perpetually. This means we have access to historic acoustic ecologies, assuming on one hand that we have the object, or access to the conditions responsible for producing it in the first place. On the other is the idea that implicit within certain contemporary soundscapes are traces of historical conditions already. Needless to say, any recreation of soundscapes will not be the same. Depending on the manner in which it is recreated we may

discover what Bender describes in relation to phenomenology as multiple sound interpretations, “measured in terms of human embodied experience of place and movement, of memory and expectation” (Bender 2002, p. 103). From this point it is interesting to consider how on the one hand the nature of a soundscape is altered by changes in the physical environment, on the other it is also itself capable of reconstructing the nature of the place itself. This relation between physical landscapes and acoustic ecologies offer up new possibilities for design practice where “the landscape architect might also assume the role of the soundscape architect” (Fowler 2012, p. 2).

Heritage Conservation through Compositional Indeterminacy

Penny O’Connor in *Turning a Deaf Ear: Acoustic Value in the Assessment of Heritage Landscapes*, states that:

“Acoustics, and other multi-sensory values, have been neglected because cultural heritage has not engaged with theoretical discourses on aesthetics beyond the visual paradigms that have traditionally dominated Western art and architecture” (O’Connor 2011, p. 269).

O’Connor goes on to suggest that the neglect of acoustics as a sensorial value has led to the acoustic properties of place becoming linked specifically with the visual sense and with aesthetics (O’Connor 2011, p. 269). It can be argued that our acoustic register requires independent sensory recognition, differentiated from other senses because it operates in an inherently different mode of comportment, which Pocock describes as:

“An event world, in contrast to that of vision which is an object world. It is a world of activities...It is dynamic: something is happening for sound to exist. It is therefore temporal, continually and perhaps unpredictably coming and going.” (Pocock 1989, p. 193)

For acoustics to be justifiably recognised as a component of heritage assessment in its own right, a conceptual framework is required that delineates its characteristics from other senses. In ‘compositional indeterminacy’, John Cage prioritises “chance-oriented events in which sounds and non-sounds, control and chaos, are placed on an even footing” (LaBalle 2006, p. 7). Rather than a prescribed or quantitative acoustic analysis of place, indeterminacy moves “away from compositional control and towards non-intention, where ‘something’ and ‘nothing’ are unopposed” (Shultis 1995, p. 345).

Cage, who after visiting an anechoic chamber in which he heard nothing but the sound of his own body, came to the realisation that there is no silence, there is always sound (Kahn 1999, p. 191). This discovery led Cage to understand that “what we have been in the habit of calling silence should be called what in reality it is, non-intentional sounds – that is, sounds not intended or prescribed by the composer” (Nyman 1974, p. 22). In Cage’s 4’33” composition, there is a deliberate absence of intentional instrumentation, often mistaken as silence, that directs the audience’s attention toward the non-intentional contextual sounds of the environment. (Figure 1) Cage rejected “the importance of whether a musical sound was present or absent within a composition and, in the process extending the field of artistic materiality to all the non-intentional sounds surrounding the performance” (Kahn 1999, p. 158).

Indeterminacy in this regard poses intriguing possibilities for heritage evaluation because it allows for a broad scope of inquiry that is capable of producing previously unexpected outcomes. However, to Cage there remains an intentional stance in indeterminacy owing to its compositional nature: while the final dimensions of the work may be indeterminate, the compositional effort is intention, even if the intension is not to do anything but to listen for a fixed period of time, or in a specific place. Indeterminacy here becomes purely acoustic discussion without recourse to the visible, leading to new compartments to place, and therefore possible new tools to heritage assessment.

Alvin Lucier's seminal work of 1969 'I am sitting in a room' provides a key illustration for compositional indeterminacy and its possible uses in heritage conservation practice. In the composition, Lucier records the sound of his own voice narrating a text, which he then plays back into a room and re-records. The process is repeated over and over, until finally the initial sound of his voice disappears, replaced by the "natural resonant frequencies of the room that have been articulated by the speech" (Nyman 1974, p. 92) (Figure 1). The composition investigates the acoustic qualities of place through a structure that allows the outcome to "'become' in processes rather than as fixed objects." (Shultis, 1995, p. 319). Compositional indeterminacy in this context provides a window into how a place may be 'listened' to, and how this process of listening can provide a framework for a new understanding of the physical configurations of place.

This is not to suggest that indeterminacy is random composition or the result of random experimentation. Indeterminacy must still exist within a determinate framework, rigid enough to delineate a sample range, but loose enough to ensure unexpected results. Compositional indeterminacy increases the potential for the historic spatial configurations, topological conditions and cultural practices held in the acoustic ecologies that are composed into natural resonant frequencies, to be expressed or encountered. Paterson describes this practice as "perceiving random events as occurring within the structure of time; and while the mind demands structure, form moves freely within it" (Paterson 2002, p. 245). In the context of heritage conservation practice, the determinate framework can be understood as the history of occupations and activities across landscapes and built heritage, and compositional indeterminacy allows access to acoustic relationships specific to place that we are yet to listen to.

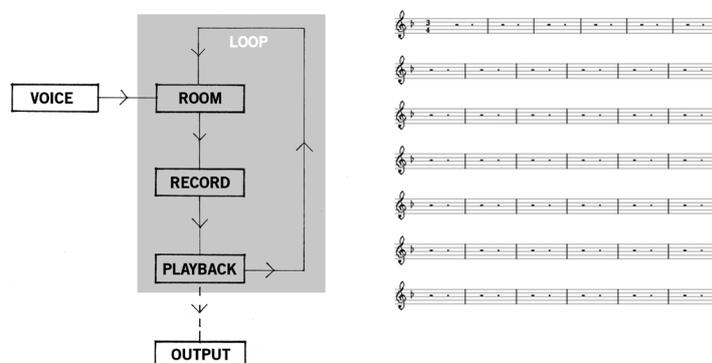


Figure 1: <http://thequietus.com/articles/05438-silence-why-john-cage-s-4-33-is-no-laughing>, viewed 05/06/13.

Qualitative sound mapping and performative engagement with designed acoustic artefact provides experiences of temporal changes due to settlement and activities that occurred across urban environments through sonic remnants. Creative works that apprehend past acoustic ecologies can provide historical evidence of previous habitations that remain within a place long after the physical traces have been removed. It also reinforces that urban environments are constantly shifting, both in response to the acoustic condition and because of the acoustic condition. Lastly, non-intentional sounds investigated through a process of compositional indeterminacy can be understood as an alternative process of exploring the acoustic makeup of place, allowing previously unrealised interpretations of place to be heard. These points provide a conceptual framework that underpins the inclusion of acoustics as a necessary component of heritage assessments.

Zeehan: The acoustic ecology of a post-industrial mining townscape

The final section of this paper focuses on a project that investigates the historical significance of the changing urban acoustic ecology and soundscape of the post-industrial mining township of Zeehan, located in Tasmania's remote northwest. Drawing from the previously outlined conceptual frameworks, this project, through design, enacts processes by which a previous urban acoustic condition or urban soundscape can be revived and subsequently re-interpreted using indeterminate recording techniques that draw parallels with the methodologies of John Cage and Alvin Lucier. The discussion which follows explores how various periods of Zeehan's mining history are immanent to the changing construction of its soundscape, which when investigated through an indeterminate acoustic compositional methodology can provide new interpretive approaches for the urban history of the township. On a larger scale, the investigation provides support for the future realisation of an acoustic method of urban heritage evaluation.

Zeehan began as a frontier township on the wild and rugged northwest region of Tasmania in the late 19th century. The geologically rich terrain soon encouraged large-scale mining activity and by 1914 Zeehan had a population of approximately 10,000 and was the "metropolis of the West and the third largest town in Tasmania." (Pink, 1975, p. 43). The township was the centre of silver and lead mining in the northwest of the State. It is therefore reasonable to assume that during this period, the soundscape of Zeehan would have been at its loudest.

The acoustic ecology of a townscape such as Zeehan during this period in its history refers directly to Ingold's discussion of taskscape; in particular the manner in which noise generated from the processes of industrial mining acted as a narrative for the evolution of the town, most notably the mine steam whistles that "echoed along the valley at the change of shift." (Pink, 1975, p. 44) The rhythmic whistles signaled the advance of an industrial age in Zeehan, which at the time would have drowned out all other elements which made up the complex acoustic ecology of the region.

However, the acoustic ecology at this industrial peak was short lived. As the mining boom slowed and Zeehan entered a steady period of decline from which it has never recovered economically. At the time of the 2011 Census, Zeehan had a population of 786, less than a tenth of that during its peak one hundred years prior. While the rise and fall of Zeehan as a consequence of mining has been well documented historically, there is little research on the changes to the soundscape as a result of the rise and fall of mining and the manner in which these acoustic ecologies are able to

provide a historical record of changes, and more importantly approaches to the heritage conservation of the place through its acoustic registers.

The acoustic ecology of Zeehan prior to the first days of mining and the subsequent post-industrial collapse would have been a characteristically hi-fi soundscape, comprising various flora, fauna and human habitation all influencing and composing a dynamic – perhaps symphonic – acoustic ecology. In contrast, the acoustic ecology of Zeehan's mining peak would have been typical of a lo-fi soundscape, where the repetitive drone of mining overwhelms the sounds of other alternate activities in the area, preventing them from being heard, experienced, understood or act as markers and backdrops which organized everyday life. This what Schafer has referred to as sound imperialism, where the dominance of a singular acoustic property overwhelms all other sonic eccentricities of place (Schafer 1977, p. 77). This is a condition that Schafer argues has been used both deliberately and as a result of other circumstances to propagate industrialisation at the detriment of cultural diversity (Schafer 1977, p. 78).

Interestingly the present day acoustic ecology of Zeehan, following the decline of mining, no longer comprises the lo-fi repetitive drones of an industrial lo-fi soundscape. Instead Zeehan has returned to its initial condition as a hi-fi soundscape, where a wide array of acoustic narratives are audible. The acoustic condition of Zeehan has oscillated back and forth between these two soundscape conditions over the course of its relatively short occupied history, with each change representing different and highly specific moments in time. As one soundscape ends and another begins, and the changes to the acoustic ecology of Zeehan fundamentally becomes a register of physical changes to its urban fabric.

To develop a project for Zeehan that investigates the manner in which an acoustic ecology represents the physical changes that have occurred across an urban environment, a prototype sound experiment was carried out in the context of a present day urban environment. In this prototype, the lo-fi soundscape of a busy inner-city highway was acoustically mapped in order to understand how traffic volume fluctuated, and to what effect that fluctuation had on the resultant acoustic ecology it produced. To achieve this, a condenser microphone placed underneath the entrance to a four-lane overpass recorded various resonances of traffic sound. As vehicles passed across the road surface, the sounds they emitted would travel down through the tarmac and into an industrial urban volume shaped by the highway network. This urban volume reverberated and morphed the traffic sounds with other urban noise, producing the lo-fi urban soundscape of road networks. Testing was conducted at various time intervals across a full day, acoustically capturing the flux of activity, and the registration of that activity by different materials and spatial volumes of the city.

In post-recording, the time interval samples from the highway were compressed into a single timeline, which was subsequently stretched and distorted so that when the final piece was heard it was no longer possible for the listener to discern precisely the source of what they were hearing. The recognisable acoustic characteristics of traffic had morphed together so much so that the reverberating sound of cars became nothing more than a pulsating drone, which slowly grew or decayed depending on the volume of traffic. Schafer suggests that in the lo-fi soundscape "there is so much acoustic information that little of it can emerge with clarity." (Schafer 1977, p.71) With this experiment the aim was to reduce the complexity of noise initially present during the field recording

to its bare essentials, revealing only the resonant qualities of traffic flow rather than the actual sound of passing vehicles.

The purpose of such a test is to depict acoustically how the physical conditions of an urban environment change, and how that change is inseparably linked to its soundscape; and how this finding can be applied to Zeehan's soundscape. Using this methodology, it is possible to expand the concept so that the sounds recorded and played were not just representative of a single day, but were in fact acoustic (re)productions relating of a much longer history. In the Zeehan project the aim was to recreate and re-interpret the juxtaposition between a diverse hi-fi soundscape, existing either side of an industrial lo-fi one. The project explored to what extent an audible difference in character between the two soundscapes can inform our understanding of the urban histories of place.

Beginning with a discussion on the lo-fi industrial soundscape of Zeehan's early 1900 mining boom. It is possible to speculate about the conditions of a lo-fi soundscape because of our established understanding of mining in industrial societies. The project uses a methodology based on Alvin Lucier's *'I am sitting in a room,'* to provide another interpretation of the seemingly undifferentiated lo-fi soundscape through compositional indeterminacy. As highlighted earlier, Lucier's seminal work explores how the physical construction of a space determines the manner in which a sound is produced in that space. Furthermore for each time that sound is played back throughout that same space it will change again, with each repetition creating a new and entirely individualistic representations of the exact moment of recording.

With Lucier's work and the highway soundscape experiment discussed previously there is a common thread where "sound and space are inextricably linked, interlocked in a dynamic through which each performs the other, bringing aurality into spatiality and space into aural definition" (LaBelle 2006, p.123). Recreating the aural condition of Zeehan at various points in its history give us an insight into its spatial composition, is an extension of this concept. However instead of recording within a space and listening to how the changes to that physical environment affect the resultant sound that is produced, we invert the equation so that changes within a sound gives us an insight into the spatial quality that brought the sound into existence (Figure 2)

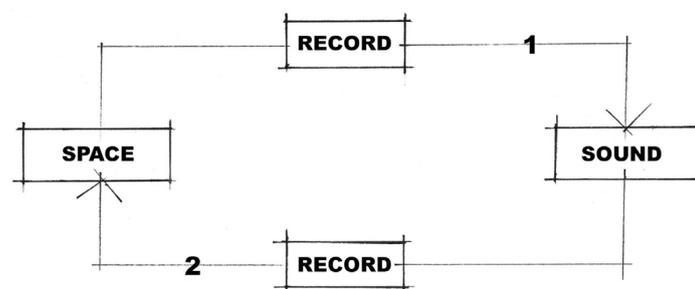


Figure 2:

The inversion of this strategy, so as to begin with a sound rather than a place is a necessary decision when dealing with the acoustic ecology of a past condition. The lo-fi industrial soundscape of Zeehan is a time period that we cannot physically occupy and record, which consequently means the only available option is recreate an aural condition from what we already know to have happened within the context of that space. In this scenario the aural must come before the spatial rather than the spatial leading to an understanding of the aural. This is a key point in understanding the relevance of acoustics to issues of urban heritage. In this scenario previously unknown interpretations of place have the potential to be uncovered because of an inversion in the way in which we investigate the histories of place. Beginning with the aural in order to create a picture of the visual that has yet to be determined.

In order to re-create the lo-fi soundscape of industrialised Zeehan a recording simulation method known as convolution reverb is required. This technique utilises the present day built fabric of Zeehan as an acoustic resonator, through which archival sound material, sourced from highly specific time periods in Zeehan's history can be played. The resulting affect is a simulation that aurally recreates a specific moment or event in time, enabling us to listen, understand and interpret exactly how that moment would have sounded live. The technique provides an alternative to hearing an archived sound played within a contemporary context because it enables the sound to re-interact with the spatial conditions that first created in, it is therefore not just the sound we are hearing but the actual physical contours and materiality of the space in which it was originally recorded. Re-iterating the words of LaBelle this method brings "aurality into spatiality and space into aural definition" (LaBelle 2006, p.123).

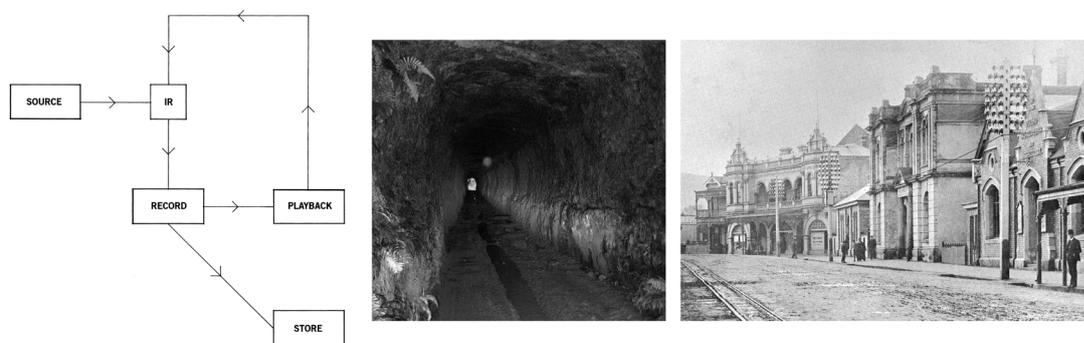


Figure 3: Pink, K 1975, '100 Years of Western Tasmanian Mining,' Published by the West Coast Pioneers' Memorial Museum, Zeehan, Tasmania, p. 42.

<http://wordsthatshine.com.au/wpcontent/uploads/2012/07/041009.42Spray-tunnel-2.2m-wide-3m-high-Zeehan-West-Tas.jpg>, viewed 09/06/13.

The site chosen to undertake this Convolution reverb field recording is the Zeehan Spray tunnel, a narrow railway passage originally carved through a hillside in 1901 for the transportation of mining goods. Impulse responses (IR) were conducted using a starter pistol fired at regular intervals along the length of tunnel, the decaying reverb of which was recorded as the sound absorbed into the

angular rock faces. The recorded impulse responses provides an acoustic template of the Spray Tunnels through which source archival mining sounds from Zeehan during the peak of mining could be played through. This process used computer simulation to create a convolution reverb that re-created the actual acoustic ecology of the spray tunnels during Zeehan's mining peak but played within the present time frame (fig.10.)

As a method of sonic reconstruction this process speculates with a high degree of accuracy how the Zeehan Spray Tunnels would have sounded during the peak days of mining in the town, providing a blueprint for the urban condition of the area during that time. Furthermore the process gives us an insight into how the urban condition of the town might have sounded today had its mining industry not collapsed. While these are interesting concepts the key outcome is that the process enabled a visual interpretation of place, stemming purely from an acoustic origin. The recording process investigated was composed within a specific determinate framework that stipulated exactly how sounds were to be captured and within what timeframe, however the visual interpretation imagined by the listener when these sounds are re-played is an entirely new condition.

The third phase of the project is to investigate the hi-fi soundscape of Zeehan and compare how the characteristics of that acoustic ecology are heard when juxtaposed against the previously discussed lo-fi soundscape. While the lo-fi industrial soundscape of Zeehan was contained within a relatively short period of time, the hi-fi condition on the other hand is in an ever-present soundscape capable of being heard and reheard perpetually outside of the boundaries of time. This is because the hi-fi soundscape of Zeehan is not attached to a particular moment in time or event – unlike the lo-fi soundscape which only existed during the era of mining. Instead the hi-fi soundscape is a perpetual acoustic representation of the physical structure of Zeehan, which cannot disappear from existence so long as there are physical objects to produce sound, but which can be interrupted and become inaudible as was the case during the peak mining boom of the area. key to interpreting the hi-fi soundscape of Zeehan consequently revolves around an investigation into which parts of the acoustic ecology were interrupted by the lo-fi industrial era, and to what extent those sounds are now audible again.

A simplified method of live recording is necessary to undertake this investigation. Using John Cage's *4'33"* and as precedent to determine how the construction of place informs the sounds which are heard, the reverse of what was previously explored in the lo-fi condition. In *4'33"* Cage utilised a deliberate absence of instrumentation in order to amplify the non-intentional contextual sounds of the performances location. The result was a condition where the audience was actually listening to a live composition representative of the specific environment they were in, as the place around them changed, the sounds they heard would change. Whether that be the wind blowing, or an audience member coughing, the affect is the same: the dynamics of the localised acoustic ecology becoming the performance piece.

Using the Zeehan Spray Tunnel again as the location of the experiment, a series of live field recordings were undertaken which sought to capture the indeterminate, non-intentional sounds of the hi-fi Zeehan soundscape - an acoustic ecology comprised of sounds that are audible now, but would not necessarily have been during the period of lo-fi industrialism. The recording technique was much looser in structure than previous experiments, microphones were left at various intervals throughout the tunnel for an unmonitored period of time, whilst other recordings were done while

walking through the space of the Spray Tunnel. The recorded sounds would subsequently be replayed against the recreated lo-fi soundscape in order to contrast and audibly compare exactly what has changed to the soundscape, and therefore the physical condition of Zeehan between these two periods.

With the Zeehan recordings, the effect of listening live to the contextual sounds as with Cage's 4'33" only occurs during the initial phase of recording. During subsequent playback, the sounds are no longer heard live, instead they become representative sound bites of a past condition because they have been dislocated from the original spatial context that produced them. Unlike the convolution reverb recording of Zeehan, this methodology no longer has a pre-determined link between a sound and the physical space which produced it, the intricacies of that connection will instead come down entirely to the listener's own interpretations. It is this re-interpretation that occurs post recording during the moment of listening that contains the critical moment of indeterminacy, a by-product of the recording process rather than the process of recording itself. Whilst the recordings are composed live, and are therefore unpredictable, they are not random producers of sound and are therefore not in themselves indeterminate.

Rather than a production of arbitrary or unconnected sounds, indeterminacy amplifies the non-intentional sounds of an environment. The elements of a hi-fi soundscape can only be heard in their original condition live. When recorded and played back within a new condition will inevitably lead to a re-contextualisation of that acoustic condition within a contemporary space. For instance, the sounds of the wind blowing through the Spray Tunnel or the rain dripping over the stone surface have not changed across the history of Zeehan, but the ways in which we hear these sounds have. Such sounds have been audible on location for a just over a century, but during Zeehan's period of industrialisation they may have been completely inaudible beneath the noise of the lo-fi mining ecology. Listening to the current condition of Zeehan's hi-fi soundscape reveals the likelihood of a past condition, but more importantly it allows an interpretation of the extent to which the urban condition was altered during the mining boom.

Only with an exploration into changing soundscape conditions can we begin to delve deeper into interpreting the physical disruptions to the urban fabric of Zeehan and begin to strengthen a discussion on heritage characteristics. The processes explored here offer an insight into the heritage value of Zeehan's Spray Tunnel as an acoustic resonator of cultural change by investigating how historic conditions of Zeehan are actually contained aurally within the material and form of its physical fabric. Furthermore the process opens a discussion on how the attenuation of the various components within acoustic ecologies, altered primarily by the changing spatial conditions in the urban fabric that are the result of industrial mining activity, can lead back to a interpretation on the physical conditions which produced it. Using the same conceptual frameworks and recording techniques explored here as a basis for further research, it is possible to speculate on the manner in which much larger issues of urban heritage may be explored through acoustic ecologies, providing new interpretations on historic narratives and cultural changes across entire urban environments.

Note: All diagrams by author.

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The Value of Place

Development conflicts on the Southport Spit, Gold Coast

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Development conflicts can emerge as a result of different meanings, values and attachments to places. This paper will review the on-going (2005–2013) development conflict on the Southport Spit, one of the last significant undeveloped public green spaces on the Gold Coast. Our aim is to examine how competing place values have been constructed over time, between pro-development State and Local Governments at one level and local residents/users at the local scale. Proponents for development often see opportunities to create new spaces and associated economic development opportunities while locals may have personal, historical and emotional attachments to place. An important contributing factor to the development conflict on the Southport Spit is derived from the evolution of historically significant local leisure and recreation spaces, to spaces that focus (sometimes exclusively) on the production and consumption of tourism experiences and services. In this instance the displacement of local communities and the marginalisation of local interests has meant community values of place are placed at risk. In this paper we adopt a social constructionist view of the landscape to examine how different place values and meanings have been and continue to be generated and embodied in the Southport Spit conflict. In doing so we seek to better understand how place values and meanings are generated, interpreted, voiced, empowered and/or marginalised in development discourses.

Introduction

The landscapes of the Gold Coast City have been subject to continual reinvention, change and transformation (Wise & Breen 2004; Wise 2006; Griffin 2006). Patricia Wise (2006 pp177) writes: “The City of the Gold Coast is largely a product of the second half of the twentieth century, continually remaking itself physically, and refusing to settle as an idea.” Histories of the Gold Coast City suggest it is a hyper neoliberal touristed city characterised by rapidly changing spatial, social, economic and environmental landscapes. Urban growth on the Gold Coast has developed rapidly, largely in response to economic agendas. Because of the rapid growth and neoliberal agendas that have dominated the cities development, the city is often seen “as a symbol of excess, extravagance, tackiness, and placelessness” (Weaver and Lawton 2004 pp286); a city without a ‘real/meaningful’ history or heritage (Griffin 2006).

Development conflicts frequently emerge as a result of change, and as meanings, values and attachments to places alter. This paper will review the on-going (2005–2013) development conflict on the Southport Spit. The Spit (see image 1) is a permanent landform that separates the Southport Broadwater and the Pacific Ocean and it is one of the last significant undeveloped public green spaces (see image 2) on Queensland’s Gold Coast. The past nine years have seen on-going conflicts surrounding a proposal to develop this piece of public land into a private cruise ship terminal and tourist facilities. The idea, initially proposed in 2005 by the State Beattie Labor Government, was strongly opposed by many in surrounding local communities. The proposed development of the Southport Spit instigated a phase in a long chain of development conflicts that have come to characterise the relationship between large scale, government led development projects and community concerns about significant public open space on the Gold Coast. It is the natural environment, more so than the built landscape, that establishes the Gold Coast’s essential value as a place or *Genius Loci* (Norberg-Schulz, 1979; Griffin 2002).

Our aim is to examine how competing place values have been constructed over time, between pro-development State and Local Governments at one level and local residents/users at the local scale. Proponents for development often see opportunities to create new spaces and associated economic development opportunities while locals may have personal, historical and emotional attachments to place. An important contributing factor to the development conflict on the Southport Spit is derived from the evolution of historically significant local leisure and recreation spaces, to spaces that focus (sometimes exclusively) on the production and consumption of tourism experiences and services. In this instance the displacement of local communities and the marginalisation of local interests has meant community values of place are placed at risk. We begin our story with a brief discussion on some of the literature on place value and the role of planners. We then discuss the history of development conflict on the Gold Coast generally and on the Southport Spit more specifically. We adopt a social constructionist view of the landscape to examine how different place values and meanings have been and continue to be generated and embodied in the Southport Spit conflict. In doing so we seek to better understand how place values and meanings are generated, interpreted, voiced, empowered and/or marginalised in development discourses.



Image 1: Aerial photo of the Southport Spit looking north. Sea World is to the bottom left. The Pacific Ocean is to the right and the Nerang River/Southport Broadwater is to the left of the Spit. Source: Image courtesy of Dianne Dredge, 2008.



Image 2: Images depicting the quality of green and open space on the Southport Spit. Apart from (privately owned) tourism development on the southern part of the Southport Spit, the northern end consists of revegetated dunes and public open green spaces. Source: Images courtesy of the authors, 2013.

Value of place

The process of constructing place meanings, values and attachments is the result of a multitude of influences and factors (Dovey 1999; Creswell 2004; Massey 1994; Carter, Dyer and Sharma 2007; Vanclay, Higgins and Blackshaw 2008). Place meaning and values emerge out of everyday activities and are produced through and by global and societal influences. Place is also read and understood as a physical site in relation to both built and natural environments, as well as through written, verbal, visual and non-verbal media and marketing. Language, and in particular advertising, is a key constructor of place, especially with regard to touristed places. For touristed areas such as the Gold

Coast City, place is not simply a location — it is a culmination of social processes along with tourist perceptions, or an “intersection of various *global* flows, not just of money or capital, but of visitors” (Urry 1995 pp435).

Donning the social constructionist goggles allows us to observe the built and natural landscape as a social-spatial framework within which people, from different cultural, social and economic groups, interact and create a shared sense of place (Greider and Garkovich 1994; Mangun et al. 2009). The feeling of attachment that is produced from knowing a place comes from *living that place*. Lynda Schneekloth and Robert Shibley (2000 pp1) suggest that “[p]lace making is the way all of us as human beings transform the places in which we find ourselves into places in which we live”. In doing this, however, different people, or different groups of people, often come to value places in different ways to one another (Cheng et al. 2003). Previous research has identified the importance of understanding the way in which people interact with the landscape and how they develop place-based values (Jorgensen and Stedman 2001; Cheng et al. 2003; Yung et al. 2003).

The failure, by planners and urban designers, to take into account local everyday meanings and values can result in the alienation of residential subjects “from each other and from their own place” (Cartier and Lew 2005 pp183). The result is a ‘risky’ place that holds little meaning for local people and fails to capture and hold the interest of tourists. Essentially the place becomes vulnerable as local everyday activity nodes move elsewhere and tourists do not return. Gordon Holden (2011) writes:

While having a strong ‘sense of place’ may be seen as a lower priority than safe drinking water or sewerage systems for the health of a city it is widely accepted that a holistic approach to city planning includes encouraging a recognisable ‘sense of place’. ‘Sense of place’ strengthening is key objective for contemporary planning strategies in Australia.

One challenge for planners is to find the balance between fostering new development for a rapidly growing population and preserving the heritage and character of the existing urban realm. Dekker et al. (1992) recognise that conflict often arises due to the differing interests of the ‘new’, pro-development, growth-oriented players and the ‘old’ players who value the urban environment in its current and historic context, and who seek to preserve these characteristics. Planners often, unwittingly and unconsciously, play the role of mediators in this conflict, striving to realise the interests of the various groups, ‘new’ and ‘old’. The challenge many planners face is to go beyond the role of the mediator, and ensure that the balance of power between different players does not sway decision makers. We argue that it is imperative to acknowledge the interests and place values of all stakeholders in decisions to develop significant public green spaces like the Southport Spit.

A story of development conflict

The constantly evolving urban landscape on the Gold Coast has come about through a pattern of conflict, change and adjustment to a new ‘norm’. This recurring cycle is initiated by the arrival of new players into the development arena. New players invariably bring with them new ideas, concepts, beliefs and place values. Conflict then potentially occurs as a result of the difference in place values between the ‘new’ and ‘old’ players/community members. This pattern is immersed

within the history of Southport as discussed below and the Gold Coast as a whole (see for example Whelan 2006). The cycle can be broken up into five, often difficult to define, phases (see figure 1).

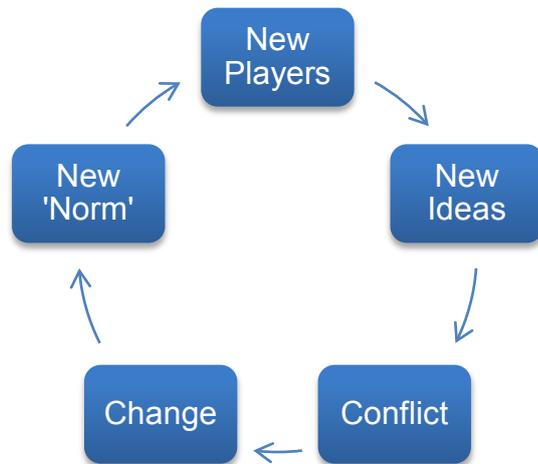


Figure 1: Cycle of conflict that frames a pattern of development and rapid urban growth on the Gold Coast.

A number of significant conflict cycles are evident in the history of Southport, and the wider area of the Gold Coast. The first of which was the conflict that followed the arrival of European settlement in the region leading up to the mid-1820s. During this time the 'old' players were the Aboriginal groups in the area, collectively known as the Yugambeh people, whose place values revolved around the land being sacred, rather than a resource to be exploited. On the other hand, the 'new' players, the European settlers, saw the region as one of plentiful resources, and good farming potential. This resulted in the region's most horrific and infamous development conflict, a conflict that was mirrored in nearly all regions across Australia throughout the 18th and 19th Centuries. Much of the literature on the history of Aboriginal-European conflict in Australia is written with a Euro-centric perspective (Anderson 1983; Best 1994). For example, Taylor (1967) assumes the conflict in South East Queensland arose from the Aborigines seeking to control European resources, to "share in the superabundance of goods and stock that had suddenly descended upon them" (pp135). Best (1994) offers a somewhat less Euro-centric, perspective, stating "it could be argued that Aborigines were fighting to save their economic resources, that is, the water-holes, demanding that the land and the people be respected" (Best 1994 pp87). No matter which perspective is more accurate, the fact remains that this conflict of interests resulted in Aborigines dying in large numbers, some shot by Native Police, some poisoned by settlers (Moore 1990). As with most serious development conflicts, this remains unresolved, although it has taken on a very different form, moving from physical altercations into the political realm. Best recognises that the Yugambeh people, the traditional owners of much of South East Queensland, "continue to fight a battle for both social and environmental, to ensure that their cultural heritage is respected and not exploited" (Best 1994 pp87).

Throughout the late-1940s, 1950s, and 1960s the Gold Coast underwent many significant changes as the region experienced significant post-war population growth. The rapid growth, in Southport specifically (from 8,400 in 1947 to 15,208 in 1964, then 19,579 in 1968), can be attributed to two key things: the growing affordability and ownership of cars and the 'catch up' period that followed World War II (Gold Coast City Council 2010). The rapid population growth and the increased

ownership of cars resulted in urban sprawl and the conversion of farmland to housing subdivisions. This resulted in conflicts between farmers, existing landowners and the pro-development government of the time (See Kijas 2008, Wear 2002, Burchill 2005). Between 1961-1991 the largest sector of the population growth pie were between 15-44 years of age with the majority of residents born in Australia. This growth was fed by and fuelled processes of change which were instrumental in making the city we see today. The most recent Australian census data (2011) suggests that the Gold Coast population count in 2011 was 494,496 (GCCC Community Profile). The Gold Coast City Council indicates that the population will increase to 683,568 by 2021 (GCCC Fact Sheet). It is estimated that one third of the Gold Coast population is currently (2013) over 55 and that the over 55 cohort will increase by 68% by 2021. This means many Gold Coast residential areas will have more than double the current number of residents within this cohort. The aging of the population coupled with the predicted growth rates suggest strong real estate markets. Together these factors highlight the urgent need for understanding the social, environmental and economic landscapes on the Gold Coast and in particular the histories informing these landscapes. The cycle of conflict is potentially refuelled as the population profile grows and changes.

Southport Spit Conflict

In the late 1800s the sand dune at the mouth of the Nerang River in Southport was reconfigured by a series of storms and the Southport Spit was formed (see GCCM 2006). The Spit is at the northern end of the Gold Coast City, across the Broadwater from the early (1880s) settlement of Southport. Southport began its life as a holiday destination for well-to-do inland residents. By 1918 the population of the town had grown significantly and the State Government declared the area a municipality. The Southport Spit is an important place within the rapidly changing landscapes of the Gold Coast City. It is "land that constitutes the last genuine ocean-side parcel of undeveloped real estate on the Gold Coast" (Condon 2006) and it has significant social and cultural meanings and attachments for many Gold Coast residents (see SOSA a; Condon 2003; Lazarow and Tomlinson 2009).

Between February and September 2007 we carried out 88 intercept surveys on the Spit to determine what place values, meanings and attachments users of the Spit held. The surveys were done at various times of the day and on different days of the week through out the survey period. While we acknowledge that survey data is problematic (Hay 2000; Law 2006) nonetheless the data collected offers some important insights into the meanings and value the Spit has for many local users (people who live, work and recreate in the local vicinity). The majority of survey respondents were employed (non professional) Australian males aged between 25-54, which corresponds with the major activities associated with the Spit: surfing and diving. An analysis of the survey data (using SPSS) indicated that 73 percent of the respondents had been visiting the Spit for three or more years, with 28 percent of respondents visiting the Spit for over 16 years. Not surprisingly most respondents indicated that they spent over three hours at the Spit at any one time. The major activities respondents engaged with were surfing, diving, fishing and dog walking; the four primary everyday activities that take place on the Spit. It is important to note that the Spit is one of three (and it is the primary) off-leash dog exercise beach. Given the population figures of the City and the number of dog owners, these beaches are highly valued by the users thereof. Importantly, the survey data

indicated that the Spit environs were perceived as a 'safe' and valuable community asset. Memories and frequency of visits contributed to the high value attributed to these two indicators.

Despite the community values attached to the Southport Spit, it has nonetheless been dogged with development proposals since the early 1960s. One of the first to object to development on this prime beachfront dune was the local National Party Member of Parliament at the time, Doug Jennings (the son of Sir Albert Jennings who was the founder of the national housing construction corporation, A. V. Jennings). Jennings's last fight to save the Spit was instigated in 1979 when the Queensland National/Liberal State Government, under the Premiership of Sir Jon Bjelke-Petersen (see Wear 2002; Whitton 1989), established the Gold Coast Waterways Authority to address tidal inundation and the impacts of storm surges in the Broadwater and the erosion of the Spit. As a result, by the 1980s the Broadwater and the Spit were 'secured' by the construction of groins, channel dredging and a sand bypass system. The Waterways Authority were frequently involved in controversy over commercial development rights on public land on the Gold Coast (Condon 2006). In one case a prominent Board member obtained 64 hectares on the western side of the Spit for tourism urbanisation (now the theme park Sea World). Other tourism related developments on the Spit were also approved during this time and were subsequently built, renovated and extended: an exclusive shopping precinct, a commercial fishing wharf (now also accommodates super yacht berths), an exclusive resort complex and an international hotel and apartment complex. Other development proposals that did not get off the ground included an 'amusement oasis', a mini city comprising 8000 permanent residents and a golf course (Condon 2006).

Development controversy on the Spit ended temporally in 1992 when a newly elected Labor State Government disbanded the Waterways Authority. However it was not until 1997 that the Labor Government set up the Gold Coast Harbours Authority to take a more local approach to the management of the Broadwater and Spit environs. The 1998 Gold Coast Harbour Study Issues Paper was part of this endeavour to address local issues at the local scale and take into account local place values and interests.

The Gold Coast City Council released the Gold Coast Harbour Study Issues Paper for public comment in 1998. The intent of this Paper was to produce an "integrated and coordinated land use and management plan for the Gold Coast ... Broadwater" (Whelan 2006). The Issue Paper and public consultation associated with it was essentially about the making of places; viable places that were valued by 'new' and 'old' players alike. The outcome of the community consultation process however produced instead a "strong picture of people's dissatisfactions" (Whelan, 2006). This was partly because, as Urry (1995) argues planners, urban designers and developers ('new' players) often perceive place meaning in accordance with preconceived notions and predetermined outcomes. These notions and outcomes frequently privilege and inscribe 'new' ideas and concepts. Local place meanings and values (of 'old' players) are often subjugated and marginalised or erased. One thing that did emerge from the 1998 Gold Coast Harbour Study was that the Gold Coast City Council agreed that no development (private or commercial) would occur on the remnant of public land at the northern end of the Southport Spit and that the open space character of the area would be retained and enhanced (Gold Coast City Council, 2003).

Notwithstanding, the Gold Coast City Councils planning regulations, nor the lengths to which previous National Party Government officials had defended the Spit against development, nor the

fact that the Government had specifically set up the Gold Coast Harbours Authority as a local approach to the management of the Broadwater and Spit environs, on 15 September 2005 the Queensland Labor Government announced its intention of developing an international cruise ship terminal and related services on this valued and valuable piece of public open space. In order to bypass local Government planning restrictions (and we argue the views and input of local communities) the State sought absolute control over the planning and development processes by declaring the project a 'Significant Development'. This declaration triggered State legislation that called for an Environmental Impact Study (EIS) which meant the Government had direct control over the way the EIS was developed, the criteria by which it was to be assessed and it enabled other legislation to be bypassed if necessary. Importantly, by declaring the project as a 'Significant Development' the local planning Authority, The Gold Coast City Council, and significantly local communities ('old' players), were positioned as observers with no authority to input into the project other than decreed and regulated by the State Government ('new' player).

In December 2005 the Queensland State Government created a Gold Coast Marine Development Project Board to act as the proponent for the Spit development. The Board was set up to advise the Premier and the Co-ordinator General and to undertake tasks as required by the Government. In effect the State Government created its own proponent for the project, a proponent that was also to advise the Government. All decisions taken by the Government were to be, and in fact were, based upon the advise of the Board. To heighten this inbred decision making process the State Government called for expressions of interest from developers at the same time as it commissioned an EIS for the site (Bligh 2005). The supposition being that the advise from the Board would be in favour of development. In addition the Government sought direct control over the proposal, feasibility and development of the project.

To provide effective opposition to the State Government and its plans for the Southport Spit a consortium of community groups joined to form the Save Our Spit Alliance (SOSA). This energetic and dedicated group organised a number of rallies and delegations and petitions over the next 2 years and maintained (and continue to maintain) an evocative and resourceful web site. By July 2006 (just 10 months into the feasibility studies) the SOSA had collected over 20,000 signatures as part of their petition to the State Government to stop development on the Spit (SOSA d).

The SOSA's objections to the State Government's development proposal were founded on five key points. These were (SOSA b):

1. The economic benefits to the community, the City and the State were marginal because SOSA research indicated that cruise liner passengers spent more money on board the than they did on shore.
2. The loss of public open space in the face of rapid population and urban growth. This was given support from Methven Sparkes, President of the Nerang Community Association, who said (SOSA b) "On any weekend the Spit is filled with thousands of picnickers, walkers, runners, cyclists, divers and snorkelers, fishers, surfers, dog walkers, and exercise enthusiasts, all of whom value the opportunity to access such a beautiful area so close to the CBD."
3. Safety issues relating to the use of seaway.

4. The negative impact the development would have on existing tourism operators on the Spit, namely the dive industry, surfing industry, fishing industry, charter boats and kayaking.
5. Environmental impacts, including dredging, erosion, flooding and air and water pollutants from the cruise liners.

The SOSA mounted their campaign based upon these five factors. A few months after a well attended and enthusiastic protest, and in response to a continued barrage of criticism about the development proposal (see SOSA a), the then Deputy Premier, Anna Bligh, herself a Gold Coaster by childhood experiences, summed up the situation. She said (Courier Mail 2006): “it would be great if [the Spit] was less environmentally sensitive, if people had less emotional attachment to it – that would make it a lot easier.” We suggest that in this statement the Deputy Premier was casting *local* place attachment as an obstacle in the development process. The Government perceived the Spit to be, and valued the site as, a space of economic opportunity. A member of Parliament at the time in support of the Government’s Spit development proposal argued that “The Beattie Government has a duty to provide, amongst other things, economic stability and employment opportunities for the people of this State ...” (Smith 2006).

Notwithstanding, on Friday 03 August 2007 (just over two years from the first public announcement) the Premier Peter Beattie proclaimed that the Cruise Ship Terminal on the Spit would not proceed. The Premier did not directly acknowledge that this decision reflected the views of over 22,000 local residents (SOSA d). Instead the argument put forward by the Government was that the decision not to proceed was based on the cost to tax payers; an economic, rationale not an environmental, nor a cultural, and certainly not a social or community rationale. It is important to note however, that the decision by the Government not to proceed was taken at the height of a State Government election campaign.

At the time a Gold Coast channel nine TV news program (SOSA c) conducted a poll with the question: ‘Will the Beattie Government lose your vote over it's push for a cruise ship terminal at The Spit?’ (emphasis in the original) and the published result showed that 86.4 percent of respondents said YES.

It of interest to note that 50 percent of users surveyed in our intercept surveys were not aware of the development proposals for the Spit and only 15 percent were or had been involved in community action against the proposed development that threatened the Spit environs. This suggests that the people who signed and attended the rally were not necessarily the ones who visited the Spit on an everyday, regular basis. Those that did use the Spit regularly, as the surveys testify, perhaps took the Spit for granted or felt disempowered. One thing that did emerge from the data was that all respondents who indicated that they were unaware of the development proposals also indicated that they were against development on the Spit, but not necessarily opposed to the upgrade of facilities. Indirectly, tax payers (who were also petition signers) changed the course of history, placemaking and tourism futures on the Gold Coast.

The Southport Spit continues to ride a wave of development abuse. On the 11 February 2010 the local Federal Member of Parliament send out an email survey asking his constituents if they wanted “a cruise ship terminal on the Spit, the Broadwater or neither?” This email followed in the footsteps of a previous announcement by the State Government, in mid 2008, of their (renewed) intention of

developing a cruise ship terminal in the vicinity of the Southport Spit. In addition, other smaller private and commercial development proposals continue to be lodged for this section of prime public undeveloped, somewhat raw, open space. The most significant of these was yet another cruise ship terminal proposal in mid 2012; this time emanating from the Gold Coast City Council Mayor Tom Tate. Mayor Tate, backed by the newly elected Newman Liberal National Party State Government put out a call for expressions of interest to develop a range of tourist infrastructure including a casino, hotels and cruise ship terminal on the Spit (See SOSA a). By June 2013 the development project was in doubt, primarily on account of fiscal arrangements. In an effort to save the spit from major development a second rally took place in November 2012 and recent studies indicate that the Spit environs have been “identified as a key environmental asset worth more than \$611 million for the city” (Weston 2013). At the time of writing (October 2013) the Deputy Premier Jeff Seeney announced that the Newman State Government would nominate a developer to build a marine in the vicinity of the Spit. Dr Steve Gratton (Gold Coast Sun 2013) is reported as saying “The Broadwater Marine Project has always been a speculative real estate opportunity at the Spit... .”

The ‘old’ players in this development conflict include those that value the Spit for its historic/existing/inherent/familiar characteristics and qualities: desirable, usable, accessible, equitable, free, public open space. These ‘old’ players include local communities and local organisations (SOSA and GECKO). The current ‘new’ players on the block are recently elected Mayor Tate at the local government level and the Newman government at the state level. The election of these ‘new’ players, not surprisingly, reinforces the cycle of development conflict on the Gold Coast. The intent of the ‘new’ players is to disrupt the existing ‘norms’ as understood by the ‘old’ players. This ‘norm’ has been established over time and is embedded in the value of the place. The tensions and differences between the two groups of players seem irreconcilable (see table 1).

Table 1: Tensions and differences in the cycle of conflict on the Southport Spit.

Old players	New players
Preserve existing land	Land is more valuable if developed
Respect current place values	Produce for new place values
Land is more valuable as existing	Economic value of the land a priority
Environment is at risk if developed	Environment is a minor concern
Local economy would suffer	Local economy would thrive
Jobs would be lost (diving, etc.)	More jobs
Priorities: environment, society	Priorities: economy, society

The big question remains: will the proposed cruise ship terminal go ahead? Even if it is not successful this time around, an asset of such proportions is unlikely to be ignored by the development industry on the Gold Coast. New players and new ideas are likely to result in proposals for the development of the Spit environs time and time again in the future. And if the Spit is developed will this be just another link in a long chain of development conflict cycles, none ever completely resolved? Will we, one day, value a cruise ship terminal; will this be the new norm?

The battle between ‘old’ and ‘new’ players and their placemaking practices is ongoing. This does not mean that one is more important, nor necessarily excludes, nor has to be dominant over the other. Since the 1950s the histories of the Gold Coast City have shown little responsibility for the past and

scant obligation to future generations. As such the production, sale and consumption of goods and services providing pleasure has become so deftly woven into the economic landscape of the City that it is not easy to isolate them in policy or practice. This condition has raised concerns and excited resistance around “democratic participation in the local politics of place, contestations over ecological space, and decisions about land use” (Stratford 2009), concerns that are central to the Southport Spit. In the case of the Southport Spit local placemaking practices and local communities succeeded in achieving (for now) a local outcome, valued and upheld by many local people.

Conclusion

In this paper we have examined how competing place values have been constructed between pro-development State and Local Governments at one level and local residents/users at the local scale. Proponents for development often see opportunities to create new spaces and associated economic development opportunities while many locals have personal, historical and emotional attachments to place. An important contributing factor to the development conflict on the Southport Spit is derived from the evolution of historically significant local leisure and recreation spaces, to spaces that focus on the production and consumption of tourism experiences and services. In this instance the displacement of local communities and the marginalisation of local interests has meant community values of place are placed at risk. We examined the Southport Spit development conflict to better understand how place values and meanings are generated, interpreted, voiced, empowered and/or marginalised in development discourses.

The significance of this paper has been to demonstrate the importance of forging a more engaged and critical planning process that reaches across communities of interest, in mediating placemaking processes and practices in tourist cities like the Gold Coast. Discourses on placemaking involve decisions about what communities value. This requires a structured and rigorous approach to learning, understanding and managing the tensions and differences that may exist between players. That is, any attempt to reconcile competing claims on place involve an understanding of the social processes and practices that contribute to place values, meanings and attachments. In the case of the Southport Spit, the Queensland State Government and the Mayor exacerbated development conflict by ignoring existing norms with regard to social meanings and local attachments to place. This was despite a long history of development debate around the site. The Government’s dismissive attitude towards local place values and attachments suggests that the cycle of conflict will continue until such time as local place values are meaningfully incorporated into planning and development discourses.

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Foreign Bodies

The role of overseas agencies in New Zealand hydro-electricity development 1940-1970

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Between 1940 and 1970 the New Zealand Government undertook an extensive expansion programme of hydro-electric power infrastructure across New Zealand's North and South Islands. This paper documents the advice and collaboration that occurred between the New Zealand Government and various agencies of the Governments of the United States of America and Australia. Material is drawn from New Zealand and Australian archival sources covering newspaper articles, the proceedings and publications of professional societies, and official correspondence, publications and reports of New Zealand government departments. These sources are discussed chronologically across a range of professional jurisdictions.

Keywords: hydroelectric power, national infrastructure development, international interagency collaborations

Introduction

In the second half of the twentieth century national infrastructure development agencies in the US, Australia and New Zealand benefited from the exodus of talented professionals and skilled workers from post-war Europe. The process of developing hydro-electric power infrastructure in New Zealand involved the recruitment of many of these individuals to accelerate the delivery of an urgently needed electricity network which had been hampered by acute labour shortages during the war years. While individual professionals have been selected as the heroes of this brave new world of national electrification, less well documented are the international knowledge and personnel transfers made between government agencies themselves. This paper will argue that while individual contributions were notable, collaborations involving international networks of scientists, engineers and built environment professionals made a significant and integrated interdisciplinary contribution and answer the question: How did the agencies of foreign government participate in the delivery of New Zealand's power infrastructure between 1940 and 1970?. Four agencies and the

synergies between them will be investigated: The US Government Bureau of Reclamation, Department of the Interior and Tennessee Valley Authority and the Australian Commonwealth Snowy River Authority. Material is drawn from New Zealand and Australian archival sources covering newspaper articles, the proceedings and publications of professional societies, and official correspondence, publications and reports of New Zealand government departments. These sources are discussed chronologically across a range of professional jurisdictions and with reference to the delivery of a network of power infrastructure in New Zealand. The forty year period is divided into decades with each representing a trend in knowledge transfer: planning, building and remediation being the respective foci of the forties, fifties and sixties.

In New Zealand the development of hydroelectric power during the post war period is documented primarily in terms of power infrastructure, policy and labour relations (Martin 1991) and the organisation and history of public works provision in New Zealand (Noonan 1975). Local histories of power projects (Mangakino (Hasman 1976) and Otematata/Twizel (Sheridan 1995)) are few, and focus on social and communal achievements of the workforce who built the projects. Leach (1976, 1999) interrogates the role of architecture in large engineering projects, and documents the architectural expression of the power generation and reticulation in New Zealand highlighting the work of émigrés Frederick Newman, Helmut Einhorn and Chris Vallenduuk. While Ernst Plischke's contribution to New Zealand architecture is well recorded (Tyler (1986), Sarnitz and Ottilinger (2004) and Gatley (2008)) his work on the hydrotowns (Nolden 2004) draws scant comment from architectural historians in his country of refuge.

Early work on the Tennessee Valley Authority documented the political and democratic processes underpinning the scheme as an enlightened regional economic development initiative (Lilienthal 1944, 1964) or the complex macro to micro planning processes which cut across state and federal jurisdictions (Huxley 1945). More recent literature concentrates on leadership and organisational myth (Hargrove 2001), the rise of a modernist design culture (Macy et al 2007), industrial relations and organisational behaviours (Colignon 1997) and social displacement (McDonald and Muldowney 1981). General histories of the Snowy Mountain Authority are few and date from the construction period. The SMA published its own publicity document in 1961 explaining the engineering of the scheme in simple terms to the Australian taxpayer. Meeking (1968) wrote a social history of the locality and the project for a general readership which documented the communities which waxed and waned in the Snowy Mountains as a result of the power infrastructure and irrigation work undertaken by the Authority.

Between 1940 and 1970, 17 hydro-electricity projects were completed by a public works authority in New Zealand, construction on a comparable scale to the TVA, but implemented in twice the timeframe. The dam construction and commissioning sequence by the Public Works Department [PWD] (later The Ministry of Works [MOW]) on the North and South Island Rivers proceeded in the following order (the date of first power generation follows the name of the dam):

1915-39	Coleridge 1915, Mangahau 1924, Tuai 1929, Arapuni 1929, Waitaki 1935
1940-49	Cobb 1944, Highbank 1945, Karapiro 1947, Kaitawa 1948
1950-59	Maraitai I 1952, Whakamaru 1956, Roxburgh 1956, Atiamuri 1958
1960-69	Tekapo 1961, Waipapa 1961, Ohakuri 1961, Aratiatia 1964, Benmore 1965, Matahina 1966, Aviemore 1969, Manapouri 1969 [Maraitai II 1970]

The North Island and South Island grids were connected in 1960 after a 3 year delay caused by a change in government.

The pro-active erudition

The forties was an information and expertise transfer between the US and New Zealand around workforce logistics, project implementation, and the technologies of critical national resource development. The TVA development is first reported in New Zealand in *New Zealand Engineering* in 1946 (NZ Engineering 1/1 1946). In an article entitled 'Present and future river control and hydro-electric power projects in the United States'. This material was prepared by the US Government Foreign Service, and reported in great technical detail on major engineering projects recently completed or planned in the United States including the TVA and the Boulder, Grand Coulee and Bonneville dams. In September 1946 after the announcement of the Waikato scheme by the Minister of Works, Military Engineer Major C. J. W. Parsons published 'Reflections on the Waikato Basin Development Plan', also in *New Zealand Engineering* (NZ Engineering 1/2 1946). While no reference is made directly to the TVA the text reflects many of the resource development agendas associated with the project for more than a decade, tellingly expressed in idealistic New Deal rhetoric:

The final integration into a national plan would then follow the truly democratic process of development by free and varied creative evolution through the channels of complementary discussion, reconciliation, co-ordination and mutual assimilation into final harmony and balance.

The exchange of personnel between New Zealand and the United States was becoming more frequent and included American engineers A.W. Simonds and Dr J.L. Savage whose involvement will be discussed in Section 4. After a recent trip to the United States, Ministry of Works Project Engineer Mr J.T. Gilkison wrote 'Engineering Progress: Here and Abroad (NZ Engineering 4/4 1949) reporting his address to the South Auckland Branch of NZIE on 8th October 1948. His speech covered a range of engineering issues which were highly relevant to the Waikato projects including airport, rail and road infrastructure, dam design (arch, earth and thin section), heavy plant requirements, concrete formwork, aggregate and sand sourcing, batching, joint design, and air entraining and finishing. He also comments on the mix of public and private contracting and the recruitment and remuneration of professional staff. His observations on workforce accommodation reinforce the wisdom of using the town of Mangakino [Figure 1] as a construction base for the multiple Waikato projects:

During the harnessing of the river three stations will be under construction at any one time ... Not only will time be saved in the long run but also money, as it is cheaper to transport men daily for a short distance than to shift their camps from job to job. The new township of Mangakino, commenced two years ago, is now nearing completion, and its modern amenities will serve an ultimate population approaching 5,000 ...Only on the most isolated projects is it necessary to provide accommodation for workman. As a general rule there is no shortage of workmen, who often travel up to 50 miles daily to work. (NZ Engineering 4/4 1949)



Figure 1: Mangakino Township 1952 [Mighty River Power Archives]

While there was considerable academic interest in the TVA by the social science experts in New Zealand, it was the practical lessons which ultimately translated well into the New Zealand context. The 1940s were the early years of large scale dam building in New Zealand while the Tennessee Valley Authority was almost a decade ahead in implementing its huge hydro-electric enterprise. Being a technocratic organisation, and a public agency it was a perfect model for the New Zealand Public Works Department to emulate at that moment in history. For much of the forties New Zealand experts from many professional groups engaged in researching pertinent aspects of the TVA experience for future implementation. The period of active application of many of the lessons learned occurred in the following decade.

The active fifties: experience

The knowledge and personnel exchanges of the forties were applied to the infrastructure projects of the fifties. By early 1950 American engineers are reported working on power projects in the Waikato, aiding their New Zealand colleagues on technical matters. Mr. A.W. Simonds and Dr J.L. Savage are reported as assisting with the washing out and grouting of the rock joints on the right bank of the Maraetai Dam [Figure 2] (New Zealand Herald 1950). Later in the decade New Zealand engineers are visiting the US to gain expertise. Engineer Mr J. Ridley studied in America in 1954-55 on a Commonwealth Fund Civil Service Fellowship subsequently working with Americans in the Pacific. He later became a project engineer at Benmore in 1960 (Otematata Welfare Association 1960). Commissioner of Works Mr. E. McKillop made two trips to the northern hemisphere in the years 1949 to 1951. His annual reports written in the Appendices to the Journal of the House of Representatives during these years indicate a very wide brief that ranged from sourcing labour and steel supplies to studying prefabricated housing (AJHR D1 1949, 1950, 1951).



Figure 2: Maraetai I Dam [Rick Allender 2012]

Dr Savage, an ex-TVA Hydro Engineer and Chief Designing Engineer of the US Bureau of Reclamation, visited NZ in 1949 for 6 weeks on official business peer-reviewing both North and South Island Hydro-electric schemes (Archives New Zealand BBAD). His findings were summarised in both the *New Zealand Electrical Journal* and *New Zealand Engineering*. Dr Savage's brief was to advise on the integrity of completed hydro projects and the investigation work and design of new construction initiatives, especially aspects which could improve delivery timelines. The report was positive about the quality of hydro projects built to date, and the high level of professional expertise provided by the Ministry of Works and the State Hydro Electric Department. Recommendations included identifying the need for more projects, and therefore more personnel to meet the expansion programme contemplated, including the recruiting of overseas contractors and the securing of large scale plant. He made constructive comments and suggestions on the design of future dams including the construction of a concrete dam at Atiamuri, and the inclusion of spillway deflectors at Maraetai and Roxburgh. He endorsed the building of an earth and gravel dam at Waipapa and recommended further investigations of sites for Ohakuri, Paraiki and Atiamuri. He suggested an underground station at Huka Falls to preserve the scenic quality of the area and endorsed plans for building control structures at Lake Wanaka and Lake Hawea along with the improvement of those at Lake Whakatipu.

Precautionary scientific testing of rock at the Maraetai dam was also referred to the United States Bureau of Reclamation with Mr L. James the MOW Chief Design Engineer in attendance in Denver Colorado, and Andrew Simonds duly joined the Maraetai team. There were other professional intersections. English Engineer John Hunter who was a representative of UK consulting firm Sir Alexander Gibbs and Partners worked on Atiamuri in the 1950s and had visited both the TVA and SMA schemes earlier in his career. In 1957 Jack Smith the project manager for Fletcher Construction on Ohakuri hired three American tunnelling experts; Max Lurz, Sammy Thornhill and Sam Cashman (who had worked at the SMA) (Contracting and Construction 1957).

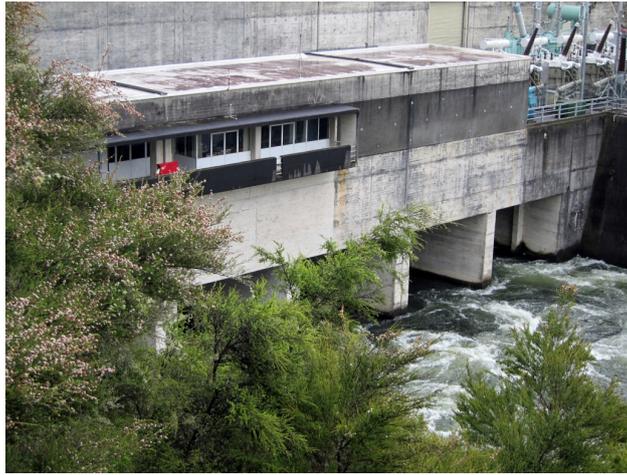


Figure 3: Waipapa Dam [Rick Allender 2012] showing human scaled control room

Alongside the engineers, were architects involved in the design of power stations of the era who were European émigrés working for the Ministry of Works. Frederick Newman arrived in 1938 as a refugee from Europe where he had been working on industrial, administrative and infrastructure commissions in Austria and Russia. Working initially in the Department of Housing and Construction, Newman was appointed in 1948 to head the newly formed Hydro-electric Design Office (Leach 2003), and led a team whose professional composition and modern, monumental aesthetic sensibility greatly resembled that of the TVA, until his retirement in 1956. Fellow countryman Ernst Plischke also worked at the Department of Housing and Construction, and was responsible for designing the plan (Nolden 2004) and town centre for Mangakino in 1947 (Samitz 2004). Newman was joined in the HDO in 1952 by talented Dutchman Chris Vallenduuk who scaled, materialised and proportioned his powerhouses and control buildings to the enormity of the engineering work and the formidable beauty of the landscape, while maintaining a fine attention to visual and tactile detail [Figure 3] (Designscape 1973). German immigrant Helmut Einhorn headed the Office between 1956 and 1968 (People and Planning 1976) when Vallenduuk took over as Power Architect until his death in 1973.

The fifties were a decade of action when four power projects and a hydro town were built, and ten future dams were planned along with two more 'Works' towns. It was the genesis of an emerging power industry and it involved overseas experts principally in the fields of science, engineering and architecture. In the sixties as environmental concerns emerged, the focus of the hydro projects shifted again, and concerns which had dogged the TVA began to impact its Antipodean counterpart.

The counteractive sixties: extension

As hydro-electricity infrastructure became a permanent feature in the hinterlands of the developed world, a backlash of conservation activism emerged. The remote and fragile ecologies of the snowy Mountains in Eastern Australia were an early example of efforts to ameliorate the environmental impacts of dam design. The Snowy Mountains Scheme commenced 16 years after the TVA. Its influence over New Zealand hydro-electric design was limited to engineering design since the project was largely underground, was combined with an irrigation scheme and was constructed on remote

sites in high altitudes in a national park. The TVA was providing expertise to the SMA in the 1950s at the same time it was advising the New Zealand Government.

Snowy Mountains Authority

Constructed between 1949 and 1974 the Snowy Mountains Scheme in South-eastern Australia is a hydro-electricity and irrigation system consisting of 16 dams, 7 power stations and 225 kilometres of underground tunnels, aqueducts and pipelines over two state jurisdictions (Victoria and New South Wales). Established by an Act of Parliament in 1949 to address the burgeoning domestic and industrial power demands of Australia's east coast cities the Snowy Mountains Authority oversaw the investigation, design and construction of a scheme which captured the east flowing water from high elevations in the Snowy River system and diverted them west via a network of lakes and tunnels into the Murray and Murrumbidgee Rivers, to irrigate agricultural lands in Victoria and South Australia. In doing this the scheme generated a surplus of power for two states and one territory (ACT) (SMA 1961, Crook 1972, Freestone 2010).

The Commissioner of the Snowy Mountains Authority was New Zealand engineer William Hudson. After graduating from the University of London, Hudson undertook postgraduate studies in hydro-electric engineering, at the University of Grenoble, France. Returning to New Zealand in 1922 he was appointed assistant-engineer on the Mangahao hydro-electric scheme and later worked with Armstrong and Whitworth as engineer-in-charge of construction of the Arapuni Dam. The apogee of his long and distinguished career was his leadership of the SMA.



Figure 4: Manapouri Dam [John Adams 2009]

The Snowy Mountains Scheme is the largest engineering work in Australian history. The SMA provided another more contemporary and politically aligned model for New Zealand's hydro-electricity provision and had itself been given assistance by the US Government Bureau of Reclamation of the Department of the Interior (Meeking 1968). The following section will detail influence the SMA had on the landscaping, conservation and resource protection aspects of building hydro-electric power facilities in New Zealand.

The progress of the Snowy River Scheme (summaries of the SMAs monthly reports) were regularly reported in *New Zealand Contracting and Construction* magazine in 1956 and 1957, and an article in July 1956 made mention of intensive geological surveys and anti-erosion measures taken in the design and construction phases of the project in collaboration with the US Bureau of Reclamation. By the early 1960s there was considerable disquiet in the developed world about the effects of hydro-electric development on the natural environment, especially scarred landscapes needing post-construction restoration, the use of exotic tree species as planting rather than indigenous ones, and environmental resources disturbed by raising lake levels. The debate began with concerns over the treatment of the famed scenic site of Huka Falls and the Aratiatia Rapids which were to be integrated into the Waikato power production system (Auckland Star 1959) with their peak flow diminished (a scheme which was eventually abandoned). Escalated throughout the 1960s the public controversy coalesced around the building of the underground Manapouri power station [Figure 4] to provide cheap power for an Australian owned aluminium smelter near Bluff (New Zealand Herald 1959), and the consequent flooding of native forests bordering Lakes Te Anau and Manapouri. The protest became a crucible for both an emerging environmentalist movement and a renewed sense of national identity (Belich 2001). In 1960 HDO architects Helmut Einhorn and Chris Vallenduuk visited the Waikato projects to discuss the application of landscape design concepts in the early phases of design. They were briefed on the Aratiatia site by project engineer Mr McLeod, construction engineer Mr Warren and landscape consultant Mr Smith in order to develop a sketch design of the landscaping (National Archives ABZK W5472 889). By 1970 the MWD had enlarged its ambit from architecture, housing and engineering (civil, electrical, mechanical and power) to providing technical services for national roads, water and soil conservation and town planning. A proposal by government to establish an overarching National Parks Authority was unpopular at the time but ultimately led to the formation of The Ministry for the Environment as an environmental protection agency (Noonan 1975).

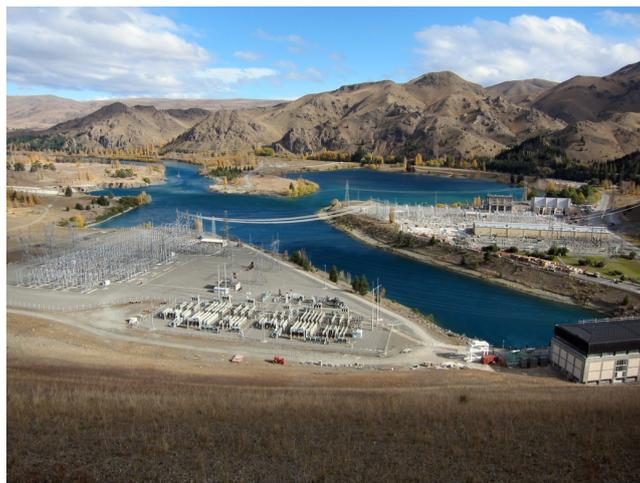


Figure 5: Benmore Dam [Rick Allender 2012] showing exotic landscaping

In engineering circles the landscape treatment of dams was beginning to be taken more seriously, and in 1966 Western Australian landscape architect John Oldham made a presentation at the New Zealand Institute of Engineers after touring the country for two weeks (New Zealand Weekly News 1966). Trained as an architect and town planner and married to landscape designer Ray McLintock, Oldham was better known in Australia for his exhibition designs at the New York World's Fair in 1939 and his connection with the Australian Communist Party (Erikson 2011). However his contribution to practice of landscape architecture which emerged later in his career was also significant (Goddard 2002). Oldham's presentation focused on the *planning* of the landscape in concert with the hydro works rather than using landscape as a remedial treatment after the terrain is damaged and using indigenous planting species to meld the project with the local ecology [Figure 5]. Citing US experience, he argued the case for training landscape architects locally and integrating them into design, construction and engineering teams working in the energy sector, making the point that this up-front investment in professional expertise could save money on the construction and remediation side of the ledger. He repeats the call for a government authority to manage this (New Zealand Gardener 1966).

Oldham argued in his paper that the aim of landscape architecture is to enhance nature with engineering and architectural interventions, not to overwhelm it. He stated that the three most important principles with respect to hydro projects were the dam structure itself must be significant, aesthetically pleasing and visible; the dam structure must be designed to integrate harmoniously with the 'primitive landscape'; and provision must be made for people to observe, recreate and enjoy the projects to their best advantage via the design of serial scenic roads alignments with strategically placed lookouts capturing viewing highlights, along with public amenities such as restaurants, picnic areas, restrooms and information centres.

Oldham illustrated the general points he made by using examples of his hydro-electric work in Western Australia on the Wellington and Serpentine Dams, explaining that he used regular curves to link the geometric forms of the dams with the rugged natural terrain, he had created 'islands' of natural and man-made forms, placing geometric structures (simple rectangular forms for buildings and bridges and viewing platforms) into the bush and bush in manmade settings (native planting in car parks) to effect a contrast and between the two. He used predominantly native planting, local materials and aboriginal colours and motifs to construct landscaping features which are both traditional (parterres) and modern (cantilevered lookouts).

In the 1960s advice to the New Zealand power sector came mainly from the recent experience of personnel on the Snowy Mountain Scheme, and concentrated on forward planning strategies and soft infrastructure issues particularly landscaping. The injection of this expertise led to New Zealanders taking a professional design approach to large scale interventions on pristine scenic sites of national importance, and laid the foundations for the ongoing contribution of the professions of landscape architecture and town planning to the development of the built environment in the country.

Conclusion

This paper has demonstrated that overseas agencies such the TVA and the SMA provided cogent development models and expertise for the New Zealand hydro-electric infrastructure provision at

key moments in the development history of the nation. Over a thirty year period there was a considerable degree of cross-fertilisation of ideas, experience and expertise. Divided into three decades the influences could be categorised as academic and technical knowledge transfers in the 1940s, professional personnel transfers in the 1950s, and an expansion of power infrastructure delivery responsibility into the realm of environmental conservation in the 1960s. The outstanding feature of the knowledge and personnel exchanges which did occur is the breadth of professional engagement, and the interdisciplinary nature of the collaborations at a time when many professional disciplines were consolidating their memberships and establishing their mandate for leadership in the built environment. The significance of the research lies in the identification of interdisciplinary nature of collaborations in the decades after the Second World War, and the impact this had on the history of the planning of the built environment in New Zealand.

By the 1970s public awareness and mobilisation around the international conservation movement emerged in all three projects to stay the pace and intensity of development. The ultimate privatisation of the US TVA the Australian SMA and the New Zealand MOW, has meant a great deal of knowledge, experience and inter-agency goodwill has been diluted or dispersed within the commercial sensitivities of private sector organisations.

In New Zealand and elsewhere an emerging awareness of hydro-electricity as a sustainable energy form is now counter balanced with a much greater emphasis on conservation and resource management issues than was the case in the mid-twentieth century. This combined with twenty-first century government austerity measures, a shrinking public sector, and an unwillingness to publicly fund major infrastructure projects means we may not see the same commitment to, or calibre of interagency knowledge transfers in the future.

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Revisiting the Form of Chinese Traditional Capital Cities

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A widely accepted assumption concerning the form of Chinese traditional cities is that they are derived from Confucian Cosmology and Fengshui theory, thus making them full of myth and symbolism. In this paper, we attempt to build three arguments based on political economic perspectives. Firstly, borrowing Kevin Lynch's definitions (1981), we argue that the ideal form of Chinese traditional cities is a mechanical, functional model rather than a magical one. Secondly, by examining historical maps of various capital cities, we suggest that the form-evolution as well as distribution of Chinese cities can be better classified according to the relationship between the tributary mode of production (TMP) and the petty capitalist mode of production (PCMP). Thirdly, we argue that it is possible to use our classification and analysis to examine the form of current Chinese cities as the nature of the Chinese political economy remains relatively unchanged.

We have succeeded at identifying a dynamic consistent pattern of change in Chinese city form over history as the interaction between TMP and PCMP. Social and physical forms are the result of a polarized society and an uncompleted public sphere interface between the state and the citizenry, with a consequent inequality in urban development in modern times.

Keywords: Chinese capital cities, Chinese city forms, traditional planning and design, Chinese political economy.

Introduction

Concerning the form of Chinese pre-modern cities, a widely accepted assumption is that the Chinese city form was derived from a universal city model originating three thousand years ago which reflects ancient Chinese Cosmology (Wheatley, 1971, Wright, 1965, Golany, 2001). In fact, many historical records including maps and texts also confirm the existence of this universal square form and a distinct street layout as characteristics of many Cities. However, in second half of the last century, archaeological evidence based on fieldwork has shown that there is a relatively big gap between what was drawn and written, and what was actually built. Scholars such as Nancy Steinhardt (1990), Piper Gaubatz (1996) and Yinong Xu (2000) suggested that geographical and defence factors are the two main reasons for this gap. To be more precise, the cities in Northern China such as Xian and Beijing are closer to the ideal form as the land there is flat. In contrast, cities in Southern China such as Hangzhou, Guangzhou and Suzhou often have irregular street networks and an organic form due to the presence of more mountains and rivers. Existing literature concerning the form and distribution as well as classification of Chinese cities has shared three assumptions that: (1) There is an universal form of the Chinese walled city which reflects Chinese cosmology; (2) The actual form of Chinese cities might be different from the ideal model primarily due to geographical factors; and (3) A simple classification of Northern and Southern cities is possible based on their shape.

While we believe that geographical factors might play a significant role in making the form of city, human interactions and human economic activities are the main drivers behind the form of any city with a long history. The Chinese political economy produced a consistent pattern of the Tributary Mode of Production and Petty Capitalist Mode of Production over at least thousand years (Hill Gates 1997), and here we have attempted to study the evolution of Chinese city form as the interaction between these two economic forces, or in Geertman's words (2007), we comprehend Chinese city form as the result of an interwoven process between a "state-sponsored" and a "spontaneous" urbanism.

In this paper, we firstly review existing literature concerning the form and ideology of traditional cities in China. This will serve as the background for our three arguments:

1. Although the ideal city form of Chinese capital cities reflects to a certain extent the Chinese cosmic diagram, the reason for the longevity of the magical city model in China compared with other civilizations is that this ideal form is in fact a functional model, being an exploitation machine of the state.
2. In fact, the application of the actual form of Chinese capital cities goes beyond the ideal form, given the actual form is the production of the interwoven process between the state-sponsored and a spontaneous, informal mode of urbanism.
3. As the nature of the Chinese political economy remains almost consistent, it is possible to trace a consistent pattern in Chinese urban form over history.

Finally, we will demonstrate our arguments with emergent urban forms in modern China: the self-sufficient work-unit compound versus the slum neighbourhood in the Maoist era and the CBD and Gated Community versus the urban villages in the reformed period from 1978 onwards.

The ideal form of the Chinese city: magical or mechanical?

Existing literature asserts the existence of a universal city form in China, however, this “universal city form” is identified in this paper as the “ideal” as opposed to the actual form. This section firstly describes how this ideal form might be derived from Chinese cosmology. Secondly, we attempt to build our first argument that this ideal form is in fact a functional model or a mechanical tool of the state.

Description of the ideal form of Chinese traditional City

The description of the ideal form of Chinese capital cities was found in a historical record called the book of rites, chapter Kaogongji, dating back to the Zhou dynasty (1046-256 BC). It reads:

"The city is of nine li in square perimeter with three gates on each side, each gate opening to a broad avenue divided into three parallel ways, of which the middle one is for vehicles, the left for male pedestrians, and the right for female pedestrians, thus forming a square lattice within nine ways running from north to south and another nine from east to west. In the center of the city stands the imperial palace with the ancestral temple of the imperial family on its left and the She, or the Altar of the Earth on its right. In front of the palace but still within the forbidden walls is the imperial court while behind the Forbidden City lies the market".

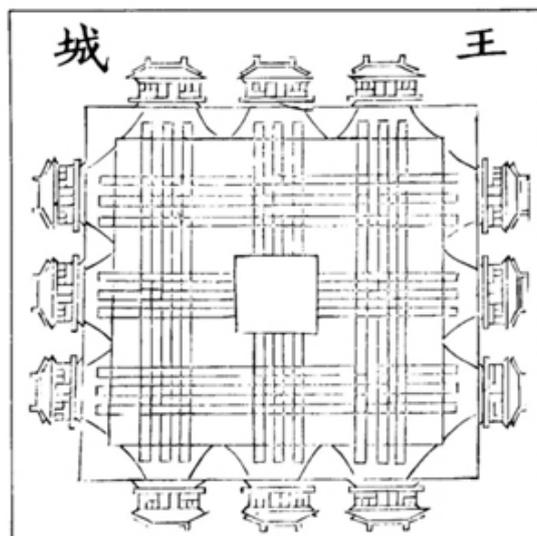


Figure 1: Wangcheng in Sanlitu Jizhu part 1, vol. 4.

In the second half of the 20th century, scholars from historical, anthropological and architectural disciplines have investigated the meaning behind the text and how it was applied in reality. Firstly, it is widely accepted that this description must be derived from ancient Chinese cosmology which sees the human world as a square with the Emperor at its centre (Needham, 1962, Wright, 1977). As the Son of Heaven, the Emperor is the one who connects people with the universe, and who can bring

prosperity to the human world by inserting cosmic order into his physical city and social realm. Paul Wheatley (1971) even suggests that the street layout in this ideal city must be related to hexagrams in the I-Ching or The Book of Changes. In addition, according to Chinese belief, the walls and gates play a very important role. For example, the walls help to keep the universal energy (the Qi in Chinese) inside individual houses, palaces or the whole city (Feuchtwang, 1974). In contrast, the gates are the place where this universal energy might enter or escape the built entities, thus their locations were carefully advised by a Fengshui master (Feuchtwang, 1974, Xu, 2000). Concerning this religious aspect of this ideal form, Piper Gaubatz, in her study of Chinese capital cities, has concluded:

“The entire plan of the city, down to the level of individual quarters, is laid out with great attention to geomancy, numerology and the benefit of harmonizing human settlement with the natural and spiritual worlds” (Gaubatz, 1996).

However, no actual city can be found to be hundred per cent identical to the ideal model. The application of this ideal city model varies largely from region to region (Steinhardt, 1990, Mote, 1977).

Differences aside, according to Chin Pai (Pai, 1987), following physical characteristics can be found in most capital cities:

1. All cities were enclosed by walls and were mostly square or rectangular in shape.
2. Cities have a checkerboard street network running NS and EW.
3. The city and the principal official buildings were oriented towards the cardinal directions with special emphasis on the north-south axis.
4. A zoning system of specialised walled districts was developed in accordance with the Chinese principle of social segregation (dividing the society into four classes with the official-scholars as the highest and the merchants as the lowest class).

Kevin Lynch suggests this “magical” city model was the very first type of city which can be found in many other ancient civilizations (Lynch, 1981). However, the longevity of the Chinese model still requires a comprehensive explanation. Arthur Wright suggests that the reason for this longevity “was the cumulative weight of history” in China. Confucian education has made “historical precedent” for the Chinese “something of the power of law and logic for Westerners”. Hence, he claims the increasing weight of cumulative history rather than innovation that can be found in architecture, city planning or other fields (Wright 1987).

To a certain extent, Wright’s explanation for the longevity of the Chinese magical city model might be right. However, from a political and economic perspective, we will argue that the main reason for the longevity of Chinese magical city model derives from its hidden functional principles. This will be discussed next.

The functional aspect of Chinese ideal form of city

In *The Good Form of City* Kevin Lynch classifies three types of city form; the magical, the machine and the organic city model (Lynch 1981). Based on existing literature, Lynch claims Chinese capital cities are good examples of the magical city model. However, we argue that the Chinese ideal city

form more resembles a machine or a functional city model than a magical one. Our argument will be based on two pillars: firstly, the study of the “Shi” concept in ancient Chinese political philosophy and secondly, a political economic analysis by Hill Gates (Gates, 1996).

In ancient Chinese political philosophy, there is a concept called “Shi” (勢) believed to be inherent in traditional Chinese warfare, politics, literature, calligraphy, painting and architecture. The ideogram of the “shi” was explained by Francois Jullien, a French sinologist, as follows:

“The term shi is the same as the word yi, which is believed to represent a hand holding something, a symbol of power to which the diacritic radical for force or li was later added. Xu Shen thinks that what is held in the hand is a clod of earth, which could symbolize something put in position or a positioning” (Jullien, 1995)

In his book, *The Propensity of Things: Toward a History of Efficacy in China*, about the concept of “shi”, Jullien defines “shi” as the notion of power born out of disposition. Qi Zhu, in a study of the impact of the concept Shi in architecture, also reviews a variety of interpretations by different philosophical schools of thought during the Warring State Period. For instance, Sun Zi, suggests a shi is manifested as a clever combat disposition used in warfare to gain an advantage over one’s opponent. From the legalist school, Shen Dao and Han Fei define a shi as the controlling power inherent in political hierarchies, while Xun Zi, a Confucian philosopher, believes that authoritative ritual power (shi) is an effective and determining strength that stems from ritual dispositions (Zhu, 2008).

Applying the concept of Shi to urban planning and architecture, the Chinese ancient elite seek to gain advantage (automatically) from a certain (natural or artificial) spatial configurations. The ideal form of the Chinese city is hence built in a way, so that the Emperor at the centre automatically gains an absolute power over the mass. Zhu Jianfei (Zhu, 2004) compared the spatial configuration of the Chinese ideal city with the Panopticon designed by Jeremy Bentham. The Emperor in this way has an absolute visual power. In his walled palace, he can see anyone, while remaining invisible to the outside.

The second pillar which supports our view of a Chinese ideal city form as a functional model is that the primary functional principles behind this model are derived from the state-managed tributary mode of production (TMP), the primary economy of the walled capital cities. Hill Gates, an American anthropologist and historian, describes it as an exploitation mechanism which “for a thousand years...has transferred surpluses from various producer classes (peasants, petty capitalists, laborers)” to the ruling class “by means of direct extraction” in the form of “tributes, taxes, hereditary labor duties, and the like” (Hill Gates 1997). This mode of production is comparable to those in ancient Rome or India, thus ancient Rome and traditional Chinese cities share a common feature of the checkerboard street layout which seeks for efficacy in circulation and defensive function. Chinese capital cities are differentiated from those in ancient Rome only in that they are the home of only the ruling class, excluding all the commoners. In order to do so, Chinese city planners used the wall intensively as a separation tool which not only keeps the commoners outside the city, but also keeps different groups of people inside in different isolated districts. Thus, the ideal form of Chinese capital cities resembles an ancient Roman military camp more than the Roman cities

themselves. The Chinese walled city is more functional than even the Roman machine city model from which cities in some Western countries derive.

From observing the pragmatism of the Chinese regime over the last century, in which the Chinese state has changed its belief and ideology several times, we are convinced that the idea of the existence of a religious, mythical city model in China for over two thousand years is questionable. We argue for the longevity of Chinese ideal city form for the reason that it is primarily a functional model rather than a magical one.

The form of Chinese actual Cities: Commercial Zones versus Walled City

The ideal city form is often mistaken as the actual universal form of all Chinese cities. In fact, it represents just half of what made Chinese capital cities. The second half of Chinese capital cities, which were largely neglected in or are absent from many historical records, are the commercial zones outside the city walls. This is a densely populated area characterized by irregular street patterns and narrow alleys. This section will discuss this neglected part and its role in the evolution of Chinese city form.

The commercial zones outside city walls

We define the actual form of Chinese capital cities as consisting not only of the walled territory but also territories outside city walls which often clustered by city gates. The outer part was in fact home for the commoners which might count for at least 75% of total population (Schinz, 1996). Alfred Schinz, a German geographer, in contrast to many others who suggest capital cities serve merely administrative functions, has observed a commercial part attached to many of them. These commercial zones are characterized by a much more dense built form, organic and irregular street patterns and a vivid colorful lifestyle occurring until late at night.

Some historians argue that the organic shape and irregular street patterns are due to geographical factors (Eisenstadt and Shachar, 1987, Mote, 1977). However, the study of the morphology of European medieval cities has suggested informal economic activities can also generate organic street patterns. Economic activities such as trading tend to generate the shortest routes from everywhere to the market place. In the European context, where the market is often found at the centre of the city, this tendency will optimize the form of the city as a circle (Hiller, 1996).

In China, because the location for the market was close to the city gates or a major route connecting city gates to the river, common people will be clustered around these two elements, creating an organic shape and irregular street patterns. We believe the mechanism of the informal petty-capitalist economy has produced the organic and irregular form rather than geographical factors.

In addition, there is also an interesting spatial characteristic which makes commercial zones in China different from European cities. For instance, this zone is clustered into different groups based on lineage, kinship, gender or professional associations. As a result, for example, a group from Zhejiang will build their own school, library, temple and welfare system for only Zhejiang people to use. The organization and function of this commercial zone might reflect the early form of civil society elsewhere, at least in the late dynasties (Rowe, 1992). However, a civil society has never come into existence due the ability of the state to bring old orders back to society at any time.



Figure 2: Xiguan, commercial zone in Guangzhou city, Qing dynasty
(Source Guangzhou Municipal archives).

The evolution of Chinese capital city form

The previous sections have identified two substantial characteristics of Chinese capital cities. By examining historical maps of major cities, we suggest the evolution of the actual form of Chinese cities can be described in four steps as follows:

- Step 1: The foundations of most walled cities before the Tang dynasty are characterized by building the city wall and constructing important buildings. This period is relatively short. It is worth mentioning that the number of Chinese cities has remained mostly unchanged since the last imperial period (Skinner 1977).
- Step 2: Serving as stimuli, walled cities attract traders (the petty capitalists) and labourers from the hinterland, settling in commercial zones outside the walled cities. This process might take more than a century.
- Step 3: The petty-capitalist mode of production evolves, giving rise to a mature civil society. In turn, this threatens the stability of the state's hierarchical system. In response, that state who best understands the relation between merchant class and the rise of a civil society, knows exactly what to do to bring the society back to its ancient order. In the name of protecting the common people from pirates or the need for a larger city, the state will extend the old city wall to include this commercial zone. In fact, after becoming walled, the majority of labourers will lose their home as they are not allowed to live inside the walled city. The business of the petty capitalists will decline. Many buildings within the old commercial zone will be converted to state property.

- Step 4: Once, the commercial zones become walled, a larger walled city is completed, and the same process from step one to step three will repeat over and over again. For example, the city of Guangzhou underwent this process four times.

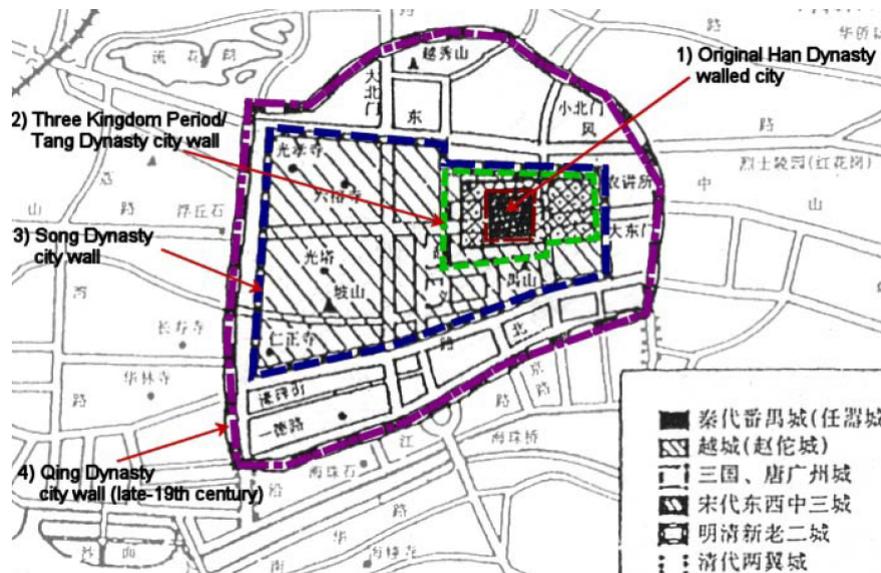


Figure 3: Diagram showing the successive expansion of City Guangzhou (Source City council Guangzhou 1999).

However, there is a crucial problem which leads to the density of this commercial area because Chinese capital cities are often sited closer to a river bank according to fengshui theory and commercial zones prefer to locate between the river and the walled city for transportation efficiency. As a result of this configuration, there is not enough land to extend the cities towards the river. Thus, the built forms of commercial zones were differentiated from the walled areas. Not only was the density in this area much higher, but also new building typologies emerged. For instance, the shop house typology was created from the courtyard house type, and multi-storey houses were constructed in contrast to a landscape of one storey courtyard houses in the walled city. There was a lack of open spaces in general, so the streets were very narrow. In Guangzhou, those small alleys are often less than one metre (Schinz, 1989).

Having walled the commercial zones, the Chinese state often attempted to extend the existing rectangular street network into the commercial zone. However, large parts of commercial areas remains irregular and organic in shape today.

Distribution and classification of Chinese capital city forms

The existing literature about Chinese traditional urban planning offers at least two ways of comprehending how Chinese cities are distributed over a vast country. William Skinner, an American prominent geographer, divided China into nine physiogeographic provinces based on the quality of soil for the production of agriculture. Skinner then applied the Central Place Theory developed by Walter Christaller, to suggest the logic underneath the network of Chinese cities (Skinner, 1977a).

This approach is more sophisticated than the simple division of Chinese cities into those administratively-oriented in the North versus those commercially-oriented in the South (Wright, 1965). Recently, Hill Gates criticized Skinner's view of Chinese capital cities as administrative centers per se. In addition, she suggested the Central Place Theory of Christaller, which is suitable for a natural capitalist economy in Germany, overlooks the nature of the Chinese economy as a combination between The Tributary State-Managed Mode of Production (TMP) and The Petty Capitalist Mode of Production (PCMP) (Gates 1996). Hence, Hill Gates offers a new method for comprehending the distribution Chinese cities based on the interrelationship between these two economic forces as follows:

	TMP	
	<i>strong</i>	<i>weak</i>
<i>Strong</i>	TMP/PCMP <i>strong/strong</i> Lower and middle Yangzi, Pearl River delta	TMP/PCMP <i>weak/strong</i> Southeast coast (Fujian), Taiwan
PCMP	TMP/PCMP <i>Strong/weak</i> North China Plain, Chengdu Basin	TMP/PCMP Weak/weak Southeast to Northwest interior crescent
<i>Weak</i>		

Figure 4: TMP/PCMP and Regional Distribution (Source: Hill Gates, 1996).

In previous sections we have identified the impact of the TMP and PCMP on the actual city form respectively; here we find the potential to use Gates' analysis for a new classification of Chinese cities. In this way, form will be classified according to the political and economic functions of the city.

For example, Cities in the North China plain and the Chengdu Basin (Beijing, Xi'an or Chengdu) have a strong TMP and weak PCMP which implies the square shape ideal city form is preserved relatively well. In contrast, cities on the Southeast coast or in Taiwan (for Quanzhou or Fuzhou) have a weak TMP and a strong PCMP which means an organic and irregular shape will be the dominant pattern.

In two other groups of regions whose TMP/PCMP is either strong/strong or weak/weak, it is difficult to find a correlation between form and economic function. However, cities under these two conditions are easily classified according to their physical or population size. Although both groups of cities have irregular form, cities in Pearl River Delta and Yangtze Delta regions are much larger not only in physical size but also in population. In contrast, those in Southeast to Northeast crescent (weak/weak) are relatively small and play no important role politically and economically.

The forms of 30¹ major cities from 4 political-economic regions are examined to test the validity of this classification. The results suggest that Hill Gates' theory is not only an effective tool for

comprehending the distribution but also for classifying the city forms. Natural factors of course also play an important role in the making of city form, especially in the case of small cities with no economic and political significance. However, we believe, in these densely populated cities, economic activities and human interaction should be considered as the primary driving force in shaping the physical form of city.

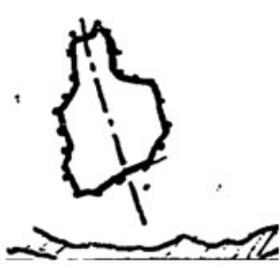
	<i>strong</i>	Square	<i>weak</i>
<i>Strong</i>	<p>Nanking</p>  <p>Lower and middle Yangzi, Pearl River delta</p>	<p>Fuzhou city</p>  <p>Southeast coast (Fujian), Taiwan</p>	
Irregular	<p>Xi'an</p>  <p>North China Plain, Chengdu Basin</p>	<p>Urumqi</p>  <p>Southeast to Northwest interior crescent</p>	
<i>Weak</i>			

Figure 5: Classification of City Form according to TMP/PCMP.

In the two sections above, we attempted to build two general arguments. Firstly, we argue that the ideal form or cosmic model of Chinese cities follows a functional, machine city model rather than a magical one. Secondly, we argue the organic, irregular shape of the actual form of Chinese traditional cities is a function of commercial activities rather than of geographical factors. We then have tried to use Hill Gate's political economic analysis to identify the evolutionary pattern as well as the distribution of four form-types of Chinese cities.

The next section will apply our theory to the reading of modern Chinese cities.

The form of Chinese modern cities: The remains of a distinctive pattern

There are divided opinions concerning current Chinese urban development. While a large group of scholars believe that Chinese cities were gradually westernized under the impact of globalization (Marshall, 2004, Ren, 2011), a small group suggest that Chinese urbanism is still distinct (Friedmann, 2005, Hassenpflug, 2010). Indeed, if justification is merely based on the general impression of the physical form of Chinese modern cities characterized by glass-steel office towers and wide roads filled by cars, then Shanghai, Beijing or Wuhan are not very different from New York or London. On the other hand, by identifying features which have survived from ancient times and still play an important role in shaping Chinese urban form, such as the Wall, south-north orientation of buildings and a certain degree of symbolism, some might argue for the longevity of Chinese ancient planning (Benjamin, 2006).

From a political economic perspective, we argue the dual track in economics of TMP and PCMP which results in the co-existence of a state-sponsored and a spontaneous mode of urbanism, is in fact a macro unchanged pattern of development over time. The interaction and co-existence of the two modes of urbanism, in turn, will generate distinctive physical patterns in Chinese modern cities.

We will attempt to support our argument by depicting built forms generated by each mode of urbanism in the Maoist and reformed periods in following sections.

Mao's era 1949-1978: Work-Unit Compounds versus Slum Neighborhoods

In the Maoist era, state-sponsored urbanism was characterized by the construction of 'work-unit compounds' as new centers of Chinese cities, while those spaces between the newly inserted work-unit compounds observed a 30 year process of slum development given the constraints imposed on spontaneous urbanism.

Work-unit Compounds

In the period from 1949 to 1978 called the Maoist era, state-led urbanism was dominant in China. Under the new socialist ideology, cities were no longer understood as consumption entities but places of production, and the emphasis was put on rapid industrialization. Thus, a new urban form, the work-unit compound or danwei was inserted into many cities.

The typology of Danwei is derived from Soviet model "with their characteristic three-to five stories rectangular buildings often stretched for mile" (Gaubatz, 1999). Beside a factory, work place, located at the center of each danwei, there are also educational and recreational facilities including food distribution within those walled compounds. So, basically the life of Chinese citizens could be conducted within the danwei without having contact with the outside, which virtually eliminated the need to improve basic infrastructure for the city as a whole.

In many respects, the new work-unit compounds resemble the old ideal form of Chinese capital cities. Firstly, it is the idea of creating a universal built form. Secondly, although this universal built form might be the heart of the city, a large proportion of the population remained excluded and neglected. In the case of pre-modern China, the neglected areas were the commercial zones outside

the city walls, while in the communist era they were the spaces between the newly inserted work-unit compounds, called “slum neighbourhoods”.

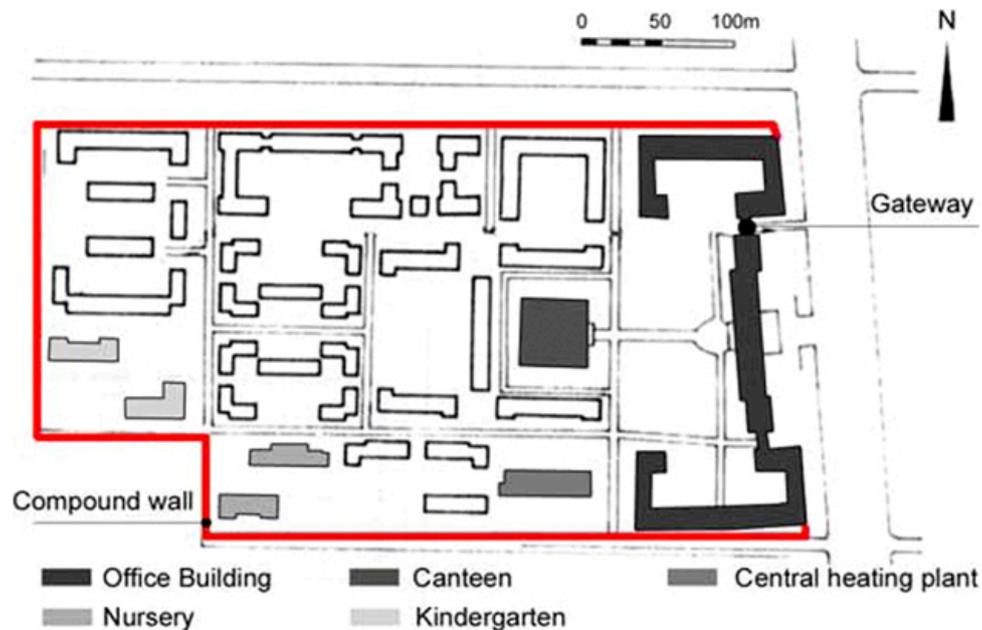


Figure 6: Typical Layout of a Work-Unit Compound.

Slum Neighbourhoods

In general, because of the absence of a free market and the abandonment of any economic and construction activities conducted by individuals, the landscape between work-unit compounds remained functionally ‘flat’ without any differentiation. In addition, in East Asian countries, where the lifespan of houses on average is very short, for example in Japan, it is about 30 years, banning construction activities by individuals and providing no alternative leads to a long process of decay for old historical city cores. Nevertheless, the need for greater living space given the increase in population led people to expand their homes illegally, encroaching on the shared courtyard and the neighbourhood alleys.

Another interesting aspect observed in this period was the ‘insularization’ of those decaying neighbourhoods in order to protect their scarce public facilities from outsiders. This reminds us of the old commercial zones where different groups based on kinship and lineage of association also tended to cluster themselves in the absence of public governance.

Reformed era from 1978 onwards: CBD and Gated Communities versus Urban Villages

If the socialist cities might remind us of Chinese walled cities before the Song dynasty (960-1279) where commercial activities was banned, and the TMP was the only economy of the city, then the emerging cities in the reformed era resemble those in late dynasties with the rise of the PMCP. It is

worth noting that Chinese state ideology has changed again within a short period of time, this time reforming the TMP to become almost identical to a capitalist mode of production, similar to the old dynastic economy. This 'capitalist' part plays an important role in transforming the physical city, because for the first time in history, a free market has become the centre of the city.

Central Business District and Gated Communities

Learning from the Central Business District of the advanced capitalist city model, the Chinese state has replaced many old parts of historical cities with office towers to accommodate international companies. To accommodate a small group of people who get rich quickly, many gated communities have developed on the outskirts of cities. The land use pattern of the old socialist city has been radically reconstructed to meet the requirements of a capitalist economy.

As work and housing have become separated into different districts, and millions of migrants have arrived, traffic has become a major problem in many Chinese cities, especially as many people can now afford a car. The impact of the car invasion as well as the dictation of traffic engineering in urban planning and design in China looks at the first glance similar to elsewhere. However, there is a significant difference, which is to a great extent the heritage of Chinese imperial planning and thinking.

Looking at historical maps of Beijing, Xi'an or other major cities in China, one finds that the main road network often divided the city core into street blocks with huge dimensions, for example the Beijing grid is 600m by 600m. Beginning with a historically 'already' dehumanized urban fabric of the feudalist mode of urbanism, current development in China which is car-oriented exacerbates the problem. In China, we observe a combination of modernist urban planning with Chinese dynastic thinking which has resulted in a landscape of endless wide roads and superblocks, such that human beings have never seen before.

Urban Villages

In contrast to the state-led urbanism, spontaneous urbanism occurs at the urban fringe where cities merge with rural land. The hukou, and dual land tenure systems which once were the means to control social mobility, have now created the gap for informal, spontaneous urban development. We will discuss just one particular new urban form generated by this informal mode, namely, urban villages, or villages in the cities.

At first sight, urban villages in China today might remind you of those villages in London in previous centuries where the city spilled across the surrounding countryside and submerged everything in its path. But in China the situation is very different. On the one hand, real estate developers often ignore these densely populated villages because of the high compensation involved, instead taking only the rice fields around villages. This means that farmers will lose their jobs. On the other hand, collective land ownership in the countryside in China does not allow people to purchase their land and move to another place legally. The only and the best opportunity for those former farmers was to turn their houses into rental apartment space for migrants, flooding into the cities.

In China today, there are around two thousand such urban villages where former farmers suddenly became rich land-lords and they represent a new type of petty capitalist. Because state-led urbanism

needs cheaper labour from the hinterland, it has ignored their need for housing and basic services, and the new petty capitalists have filled this niche.

The case of urban villages in modern China closely reflects the commercial zones outside the walled pre-modern cities. Both are the production of the petty capitalist mode which makes just a few rich and the majority poor. In the case of the urban village, a few owners (less than 20 percent of all people living in the villages) have now becoming landlords. The rest are a “floating population” who migrate temporarily to the cities, work hard for cheap wages, contribute massively to the Chinese economy, and do not even receive the right to stay and use public facilities in Chinese cities. In this way, Chinese modern cities although not walled, exclude the majority of people living there, serving only a new kind of “ruling class”.

Other scholars might call the new rich group of people the emerging “middle class”. However, we suggest the term “ruling class” to be more suitable as this group does not fight for equality, does not contribute to shape the civil sphere, but instead builds new luxury gated communities for itself.

Conclusion

In this paper we have attempted to build three arguments concerning the form of Chinese cities. After reviewing literature about this topic which we think is derived from a more or less one-sided assumption, we based our arguments on a political economic analysis done by Hill Gates. Thus, we suggest Chinese urban form is the result of the interaction between a state-sponsored and a spontaneous mode of urbanism which reflects the TMP and the PCMP respectively. In addition, from the political economic approach, we assume that the primary ideology behind any built form in China is functional even when it seems to follow some symbolic diagram.

The analysis of the relationship between TMP and PCMP of different regions in China has offered a method to identify not only different urban forms, but also the patterns of evolution from the pre-modern period until modern times. As Chinese social and physical form has to a great extent been always polarized, some related issues are inherent such as the absence of public space, and historical conservation. The solutions to these issues are unfortunately not in the hands of architects or urban planners. They might not even be necessary as the Chinese have learned the art of living and enjoying life within a small gap between the two forces of life for a thousand years.

¹ Shenyang, Beijing, Shanhaiguan, Datong, Taiyuan, Linzi, Pingyao, Jinan, Lanzhou, Biangliang, Luoyang, Xi’an, Xiangfan, Chengdu, Chongqing (strong TMP/weak PCMP); Nanking, Natong, Suzhou, Hangzhou, Huizhou, Nanchang, Guangzhou, Foshan (strong TMP/strong PCMP); Fuzhou, Quanzhou, Chaozhou, Xiamen (weak TMP/strong PCMP) and Lanzhou, Xinning, Urumqi (weak TMP/weak PCMP).

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The Gardens of *Anlaby* - a Utopian Dream

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Anlaby Station is the oldest sheep stud in South Australia (SA) dating back to 1839. The gardens have been noted as significant exemplars, Beames & Whitehill (1992), Swinbourne (1982), and in *Pastoral Homes of Australia* (1911) published by *The Pastoral Review*, wherein *Anlaby* was described as “being of no particular beauty architecturally . But the gardens are unique.” The *Anlaby* property is on the SA State Heritage Register and the *Anlaby Gardens* are listed in the *Oxford Companion to Australian Gardens* (2002). The beginnings of *Anlaby* in 1839 are integral to the colonial expansion of the interior of South Australia. *Anlaby* at this time was a completely self-contained community within a sheep station containing a survival garden, much like a self-contained English manor-village. The process of land sales offered by the SA government enabled *Anlaby* to expand, wherein wealth flowed and gradually the survival garden style at *Anlaby* was transformed into an extensive decorative garden style. This enabled the garden to act as a backdrop for major South Australian society and public gatherings. The driving force behind the garden during its height was the fashionable plant trends in the United Kingdom. This is evidenced by the inclusion of an extensive stove house, grotto, roses and the Gardenesque style of plantings. Traditional English head gardeners were also employed to manage the garden. The realisation of the beauty of native plants was never allowed in the inner world of this landscape; it always remained on the perimeter. The owner’s vision of the garden was Utopian, however, due to climatic forces, the dream was not fully realised. The challenge now lies in preserving this Utopian dream for future generations. This paper considers the historical evolution of the property, its context as a historical exemplar and the challenges facing its future conservation having regard to Adelaide peri-urban, climate change, and differing owner economic circumstances.

Keywords: experimental landscapes; environment theory; local trends; social history; Anlaby

Introduction

The State of South Australia (SA) is unique in as much as it was a planned settlement; a society created by the expansion of colonisation closely calibrated to land sales. The colony was founded in a period where the industrial revolution was gaining momentum in the Western world. The proceeds raised from land sales funded bona fide settlers to South Australia and also provided capital and labour.

The Dutton family, who established *Anlaby Station*, formed a key part of this colonial expansion into South Australia's then frontier country. *Anlaby Station*¹ is South Australia's oldest sheep stud. The property dates back to 1839 and at that time was a completely self-contained community within a sheep station containing a survival garden, much like a self-contained English manor-village. The inland explorer Charles Sturt and his party stayed at *Anlaby* in 1845, whereby the *Station* acted as a resting point for the explorer and his party, thus assisting the exploration process into Australia's inland. The government of the day consulted Sturt for his opinions on the suitability of land for settlement farther north in South Australia. Sturt is connected with the discovery of the Darling and Murray Rivers.

Explorer Edward John Eyre also stayed on *Anlaby* for about a year and explorer John McKinlay stayed in 1861 on his "Burke Relief Expedition" in the quest to find the ill-fated Burke and Wills party at Coopers Creek.

Such was the hospitality extended by the manager of the *Anlaby* run Mr Alexander Buchanan to McKinlay and his party at that time, it prompted McKinlay to name a lake and hill in honour of Mr Buchanan and Anlaby. This is confirmed in John Davis' *1861 – 1862: Tracks of Mc Kinlay and Party Across Australia* (1863:99):

Mr. McKinlay has called this Lake Cudgeecudgeena, 'Lake Buchanan,' after Mr. Buchanan, of Anlaby, the gentleman who showed us such kindness on the way out and a small hill, on the south-west side of it, he has named "Anlaby," after Mr. Buchanan's station.

Physical setting and the climate and rainfall

Anlaby is located 16 kilometres from Kapunda, which is just north of the Barossa Valley and 83 kilometres north east of Adelaide.

The landforms surrounding *Anlaby* have been described as the Central Hill Country in Michael Williams' classic text entitled *The Making of the South Australian Landscape* (1974: 7):

"Beyond the Barossa Valley is the Central Hill Country where the general highland relief diminishes and is replaced by a series of longitudinal ridges which separate wide alluvial plains and rolling hills. North of this zone and extending into the arid interior is the high ground and

truly mountainous relief of the Flinders Ranges, which have an abrupt western scarp but a broken eastern margin of isolated hills, basins and plains."

The country was appealing for sheep grazing with good pasture and the availability of water. Further confirmation of the optimism surrounding the observations concerning suitability of the country in South Australia for grazing was stated in *South Australia, in 1842. By one who lived there nearly four years. Illustrated by drawings* (1843: 13) *"The pastures are almost illimitable, and highly nutritious."*

The newly arrived colonists had very little knowledge of what the climate was like. The only guide they had was information which was supplied from the South Australian Company, which claimed what the weather would be like and such was the optimism concerning rainfall. An example of this advice is contained in *South Australia, in 1842* (1843: 16) whereby:

"No statements have obtained more general circulation and belief, than that South Australia was subject to severe and long continued droughts; and was, generally speaking almost destitute of water – the deficiency of water in the town of Adelaide, in particular, was represented as being frequently extreme. THIS IS FALSE. The fact is, that Adelaide is abundantly supplied with wholesome water... Thus on average of these two years, there were ninety-eight days per annum on which rain fell, being at the rate of nearly two days in each week, and twenty-two inches average quantity during a year. Throughout the whole of that period, there was not one calendar month, without rain. Can anything more favourable, be desired?"

It is recognised that Wyatt (Protector of the Aborigines in 1837) and Kingston (Deputy Government Surveyor) kept records of climate observations and periodically weather information appeared in *The Register* newspaper. There was a run of relatively mild years over the first twenty years of settlement, with a drought in 1856 and spikes in temperature over several years to 47.6°, in 1858. The colonists were becoming aware that the run of relatively consistent years may have not been an accurate average to base further assumptions on the overall weather patterns in South Australia.

The beginnings of meteorological reporting were established with the government appointment of Charles Todd in 1855 and scientific meteorological records and observations began in 1860. The weather stations around the colony were closely linked to the telegraph offices.

In the years 1864 – 1865 there was a very bad drought in South Australia which caused alarm within government circles. The government of the day appointed the Surveyor General George Goyder to traverse the northern areas of the colony with a view to making observations in regard to rainfall patterns on the landscape. Goyder did this in an admirable way and returned to Adelaide in a month to report his findings and observations. He was able to draw on a map of South Australia a Line which he believed would mark land suitable for agricultural use from those which were only fit for pastoral use. To this day Goyder has been proved correct with his observation.

The location of *Anlaby* falls well within the Goyder Line. An accurate measure of rainfall statistics have been kept of the Kapunda district since 1861. The average mean rainfall is 493.5mm; yearly rainfall has only dropped below 400mm twenty one times between 1861 and 2012.

If the rainfall statistics during the period of Thomas Leslie's tenure as Head Gardener at *Anlaby* (this was the height of the garden) are examined, it is revealed that in the years 1904, 401.1mm and in 1911, 375.6mm were recorded. It is obvious these were the two periods where the dam became dry.

In the 1900 – 1914 period Malcolm Leslie, son of Thomas Leslie, Head Gardener 1900 – 1914, recalls

On two occasions during the 14 years my father was at Anlaby the dam became dry" and 'A large dam supplied the garden with water. In summer 37,000 gallons was used daily, the pumping took place every other day in summer, as on the second day the tank was usually empty" [Notes by Malcolm Leslie, (private collection). Based on this information, it seems likely that any years where rainfall dropped below say 440mm, it is probable the garden could not be sustained with out losses to plants due to lack of water [sic.]

A weir was constructed in the 1890s and additional water was sourced from soaks and a bore in the lower section of the garden. In dry periods the salinity exceeds approximately 1200 parts salt with this water, which makes it unsuitable for watering the foreign plants which were introduced into the landscape at *Anlaby*.

Staff members living at the *Anlaby* village were never permitted to use water from the dam or bores to water the modest garden patches contained within their lodgings. This was a directive from Mrs Emily Dutton and this further emphasises the struggle to keep this utopian garden of Eden, surrounding the homestead, alive.

The beginnings of the South Australian State

In many ways the theories of colonisation advocated by Edward Gibbon Wakefield influenced the founding members of The South Australian Association which led the imperial United Kingdom parliament in 1834 to pass an Act which authorised the founding of the colony of South Australia.

Wakefield was born in London in 1796 and educated at the Westminster School and Edinburgh High School. In 1813, he was secretary to the British envoy in Turin. He married in 1816 and after four years of marriage, his wife passed away. In 1826, he abducted a 15 year old heiress and married at Gretna Green and then went to Calais. Pursued by his wife's family, he returned to England in 1827. Wakefield was convicted of a statutory misdemeanour and sentenced to a three year term of imprisonment at Newgate. It was during this period in prison that he conceptualised his theories on emigration and systematic colonization.

In Donald Meinig's *On the Margins of the Good Earth* (1962: 10), Meinig states:

Ultimately, it has been noted, Wakefield envisioned the trans-planting not of a seedling, but of the full grown tree of English society, root, trunk, and branch.

In many ways one can conclude that Wakefield theories were based on creating a planned, orderly system of colonisation which avoided convicts and other mistakes of previous settlements in Australia by the Crown, thereby creating a planned, utopian settlement structure and society.

Giesecke and Jacobs (2012: 9) have described Utopia as:

In the discipline of utopian studies, the utopian impulse is seen as an essential element of the human drive toward a better life. The concept of utopia and the practice of utopian projection have had a remarkably lively history in Western culture since Thomas More coined the term in his 1516 Utopia. This founding text, a description of a society supposedly existing in the New World, was not intended to be taken as a blueprint. The very word 'utopia' is a neologism evoking both eu-topia (Greek for 'good place') and ou-topia (Greek for 'no place')." And "The field of utopian studies' premier bibliographer, Lyman Tower Sargent, has defined utopianism as 'social dreaming", an activity manifesting 'three faces: literary utopias, political programs, and intentional communities.

The first colonists arrived in South Australia on "The Buffalo" in 1836 and the colony was proclaimed on the 28th December of that year.

Initial delays with the country surveys caused a state of stagnation in the new colony. Many colonists had land orders but were unable to get possession. The most pressing need was the cultivation of the land in order to secure food and thereby survival.

The main focus of land survey was initially Adelaide and then southwards and in an easterly direction on the eastern side of the Mount Lofty Ranges.

The original survey of 120 acres (48.5 hectares) *Hundred of Waterloo* was surveyed at the verbal request of Mr. Dutton in 1843. The section was granted to George Fife Angus, and others (South Australian Company) on the 17th June 1844.

Angus was the founding chairman of the board of directors of the South Australian Company which was formed in London in 1835. Angus has been referred to as "Father and Founder of South Australia".

The discovery of copper in the early 1840s at Kapunda, which is located adjacent to the *Anlaby* run, stimulated mineral interest in the colony. The copper discovery at Kapunda was made by Francis Dutton, one of the Dutton brothers. The find was quite by chance, while he was looking for some lost sheep during a thunderstorm. He made this fact known to his neighbour Captain Bagot of the *Koonunga Run*, who also produced a rock showing colour. This mineral find helped place South Australia for a period, as the largest mining exporter in the British colonies. The mineral boom resulted in the inflow into the colony of both capital and colonists.

Beginnings of the *Anlaby* run 1839 – 1865

The Dutton brothers originally settled in New South Wales in the early 1830s and had pastoral interests in Yass and in the Monaro district.

Frederick Dutton, the eventual owner of *Anlaby*, had also worked for Edward Riley on his property *Raby*, in New South Wales. Riley was an early prominent pastoralist in New South Wales.

William Dutton was the first member of the family to visit South Australia briefly in 1839 and stayed with Captain Finniss at Mount Barker.

Finniss had been involved in, amongst other things, the overlanding to South Australia of sheep from New South Wales. There was a drought period in the 1830s in New South Wales and this provided the opportunity to make extensive capital by the overlanding of sheep to the then greener pastures of South Australia.

The trend of overlanding sheep is confirmed in Theodore Scott's *Description of South Australia with sketches of New South Wales, Port Lincoln, Port Phillip, and New Zealand* (1839: 25):

The immense fertile plains covered with the richest grass, make it peculiarly a country for the pasturing of sheep and cattle. The wool grown in South Australia, is of the finest description. In November 1837, there were not 5000 sheep in the province, though the discovered country would feed more than 100 times that number. Several thousands more, however, have been sent from Van Diemen's Land and large flocks of sheep and cattle have made overland journeys from Sidney [sic] to the colony. The overland journey is described as safe and practicable.

Finniss had tried to set up a Pastoral Company at Mount Dispersion 97 kilometres north of Adelaide in 1839, but it failed. Frederick Dutton then took over the run and this, combined with the fact that Alexander Buchanan had overlanded 5000 of his sheep from New South Wales in the same year, created the beginnings of the *Anlaby* run and by 1865 the land area of the estate had expanded to 100 square miles (258.9 ²km).

The land contained within the *Anlaby* run had been purchased, under government policy prior to 1866 through cash sales for land. This policy did not change until the introduction of the *Scrub Lands Act of 1866* whereby land after the passing of that *Act* could be bought on credit from the government, provided certain criteria were met.

The Midland Northern Railway did not reach Kapunda until 1860 and prior to this *Anlaby* would have been a somewhat isolated outpost community which had to support itself. The families who resided in the village style settlement relied on gardening as life support.

The population of *Anlaby* was seasonal, based on the shearing season and produce had to support up to twenty families who resided there, plus the large seasonal increase of staffing levels during the shearing times.

The original site of the beginnings of the *Anlaby* village was adjacent to a beautiful freshwater spring which was discovered by an employee named Sebastian.

The earliest plan of the homestead and garden was commissioned by Alexander Buchanan, who was manager for Frederick Dutton.

The plan which was drawn by surveyor F. Darling of Hindmarsh Square Adelaide in August 1859 shows a substantial fruit and vegetable garden with a modest house garden and a central water fountain feature adjacent to the main home. Also illustrated on the plan is the large stone home, which was constructed in 1857 in a Mediterranean style with three separate wings and underground rooms.

In the publication *Gardens in South Australia 1840 – 1940* Jones and Payne (1998: 38) have observed when referring to garden styles of the Mid North region gardens in South Australia between 1850 and 1890, that:

Planting design and 'survival' in consideration, with predominant attention to foods and forage plants. No available evidence of colour as a consideration. Texture provided by strong architectural plants such as Agaves, Aloes, Yuccas, and large cacti also seasonal foliage of South African bulbs. Plants selected primarily because of their toughness, drought tolerance, and minimal water and maintenance needs" and of Garden Design "Geometric or simple with a strong emphasis on drought tolerant plants that would grow in low rainfall areas with no summer irrigation. The large survival garden at Inlay at this time certainly contains those elements.

Alexander Buchanan died in 1865 and had transformed the original overlanded flock of 5,000 sheep, from New South Wales, into an extensive flock of 60,000 sheep, thereby providing the means of expanding this utopian dream from slab huts to an English style village which was a self-supporting community. Frederick Dutton subsequently appointed H.T Morris as manager of *Anlaby*, whose uncle was Captain Hindmarsh, and Morris himself had been previously Chief Inspector of Stock for the colonial government of South Australia.

A valuable account of *Anlaby* in the 1860s was published in the *Kapunda Centenary Book Memories of Kapunda* (1929: 35):

I cannot go back to the earliest days, as my first introduction to the establishment was in 1865 ... There was also a fountain in front of the main building, facing the garden. The old store had also been demolished and a good stone building erected about 100 yards further west. Other buildings erected at the same time were large stone stables and coach houses, gardeners' and bachelors' quarters, and Blacksmith's shop also a large hot house. There was a large garden on the property stocked with a great variety of fruits, vegetables and flowers under the skilful treatment of Mr Angus McDonald (afterwards Head Gardener at the Botanic Gardens in Adelaide).

McDonald was also in later years employed by the Barr Smith family at their large Adelaide estate called Torrens Park as Head Gardener. He also was involved in the South Australian Gardeners' Society.

It is interesting to note that by 1865 there is confirmation of the addition of a large hot house to the garden buildings. This indicates not only a prospering pastoral property but also the inclusion of an environment for plants not normally grown in the mid northern region of South Australia.

So by 1865, we can establish the garden at Anlaby was not only for food production which aided survival, but the philosophy was partly shifted from sustainability to rarer plants which needed the protection of a hot house to create an artificial environment for introduced species of plants. This clearly reveals the need to tame the landscape adjacent to the home to reflect plants and plantings popular in the home country at that time, which was England.

Morris managed *Anlaby* until 1890, when Frederick Dutton passed away in the United Kingdom. Dutton, although owning *Anlaby* died a blind man and only ever visited *Anlaby* once after 1865.

The *Kapunda Herald Illustrated Supplement* reported on 3 July 1903 that:

Mr H. T. Morris took management (in Succession to Mr Buchanan), to the present time, the evolution would be most interesting. Mr Morris, with an eye to the beautiful amid the charming rural surroundings of the home, wrought a complete transformation. The old fashioned Australian country home began to extend in this direction and in that: quaint attachments were made, and a general rustic aspect prevailed the place. The old scraggy vineyard was converted into a garden, which in the years since have become a modern miniature Garden of Eden.

However, time was to prove this Utopian vision of a "Garden of Eden" was not sustainable in the harsh summer environment of the mid north of South Australia.

The Golden Years of the garden 1890 – 1914

Frederick Dutton bequeathed *Anlaby* to his nephew Henry Dutton, who was the only surviving son of Frederick's brother, William.

In Geoffrey Dutton's (1922 – 1998) *Out in the open: An Autobiography* (1994: 23) Geoffrey relates:

People like my grandfather, rich from Australia's wool, modelled themselves on land holders in the Mother Country, which of course was always called home. They surrounded their large houses with conservatories and shade houses.

The trend in the colonies with many pastoralists who owned large pastoral estates at that time was to construct a landscape to reflect English values, which included grounds fashioned by English formal landscape design and plant trends. These utopian visions were not only reflected in plantings

but also the spatial designs within the garden grounds, immediately surrounding the homestead, thereby creating a utopia based on English cultural and landscape ideals.

This was certainly the case at *Anlaby*, as the 1890s period saw a grand expansion of the garden not only in plants but also with infrastructure.

Henry Dutton, was also known as 'The Squire', embarked upon an extensive construction programme, which involved builders from Adelaide and the freighting of building materials, plants and soil by rail to Kapunda, then bullock wagon to *Anlaby*. Such was the determination to create this artificial environment, that soil for plantings was procured from the Mount Lofty area of South Australia and silver sand was imported from the United Kingdom for the potting purposes of the many rare plants contained within the stove house. The grand planting programme, which included mainly northern hemisphere plants, was sourced from well-established and renowned Adelaide nurseries and overseas, which included Henry Sewel's, Hackett's and Newman's in addition to others to create the utopian ideal of a garden of Eden, which at *Anlaby* included an Orchid House, a Cypripedium House, a Stove House measuring 100 x 27 feet (30.48 x 8.23m), Grotto, Green House, a pit, a Pelargonium House, a Chrysanthemum House, two shade houses, a Rhododendron and Azalea House, three Lily Ponds, a Tennis Lawn and three other large lawns, two Rosaries, a Grape House and a Mushroom House.

Such was the drive and determination of this utopian vision and dream for this ideal garden that highly skilled Head Gardeners were required to manage this introduced landscape and a team of twelve gardeners was required to maintain it. In the 1890s, Head Gardener, Mr John Everest, was recognised in an article of the time by 'Leuca' in *The Garden and Field* (December 1899: 159):

Mr John Everest, the head gardener, who has the reputation of being one of the most competent stove house men in South Australia ...

In 1900 Thomas Leslie was employed as head gardener. A native of Aberdeen, Scotland, he served his apprenticeship on the model estate of Mr Garden in Banff, Scotland. Leslie migrated to Australia in 1887 on the 'Orizaba' and interestingly enough, members of the Tallis family, who created the famous garden at *Beleura*, which is located on the Mornington Peninsula in Victoria, also travelled on the same voyage. Leslie initially worked for Mr Wagner, a founder of the Cobb and Co Coaches and owner of the mansion *Stonnington* in Malvern, Melbourne. It is thought that the prominent landscape designer William Guilfoyle may have designed the garden at *Stonnington*. Such was the expertise and experience of Leslie. Amongst his list of achievements were the winning of the Cave Trophy for the best Chrysanthemum blooms for the Squire and judging at various floricultural events which included the Adelaide Show Floricultural Society.

Because of the determination of the Squire to ensure this utopian landscape created at *Anlaby* was kept up-to-date with the English gardening ideals, Dutton sent Leslie, the head gardener, back to visit England on two occasions, to make a tour and observe trends. This is confirmed in press reports in *The Adelaide Chronicle* on 22 April 1911: "Make a tour of the gardens of the English gentry to gain trends for the handsome greenhouse." And on his return in November 1911, *The Register* on 6 November 1911 reported that: "Mr T Leslie Head Gardener of *Anlaby* has returned from a six month trip to the mother country, he made a particular study of all horticultural matters but found little that South Australia had to learn in the way of producing flowers."

The rose garden at *Anlaby* around 1900 was said to be one of the largest in the colony. This was confirmed by press reports of the time wherein 'Leuca' recorded on (December 1899: 159) that: "*Here will shortly certainly be the most complete, expensive, and I anticipate, the most beautiful rosary in the colony.*"

Beames & Whitehill in *Some Historic Gardens in South Australia* (1981: 75) have also observed that the rose garden at *Anlaby* was described as: "*The arches and trellises are reminiscent of those at 'Palmerston' (sic), the Earl of Mayo's residence near Naas in County Kildare, Ireland, but whether they were inspired by the garden at 'Palmerston' [sic] is not known.*"

The roseries were developed to their peak during the 1890 – 1914 period; there was an extensive use of standard roses, trellising and rose maypoles.

In the 1970s a small wooden box containing the names of 450 roses on rolled zinc rose labels, was discovered, as part of a lot offered during a clearing sale at *Anlaby*, as the Dutton family was disposing of the property. The names and a brief history of the historical find and many of the varieties are described in *Tea Roses – Old Roses for Warm Gardens* (2008).

The expansion programme for the garden was on a magnitude never seen at *Anlaby* before. What was the reason behind the rapid expansion of this introduced landscape? The changed inner garden domain was very much out of character with the surrounding sanctum of the Australian bush.

This planned English style garden, which included introduced foreign plants, needed a large amount of water on a daily basis in summer to sustain it and twelve permanent gardeners to keep it manicured and in order.

The thought comes to mind that it may have been a display of wealth and worldly success on the part of the owner to outsiders and Adelaide society, but this perception shifts when one reads a quotation from his grandson's book *The Squatters* (Dutton 1985: 123

Grandfather was a modest and deeply religious man" and "My grandfather, Henry Dutton (1844 -1914), whose wife (like the wives of many rich squatters) was an invalid, built an exquisite little church at Hamilton near Anlaby, for which he imported oak panelling, silver-gilt candlesticks, stained glass windows and beautiful vestments from England.

Was this garden a utopian dream of the owner and his wife? It was a perfect garden reflecting the beauty and values of the old country with a beautiful little church at nearby Hamilton in which to worship.

Mrs Dutton was infirm and bed-ridden for lengthy periods in the 1890s. This was combined with the fact that their only daughter, Ethel, had met with a tragic death in 1892. Did the couple turn their thoughts to the creation of this utopian landscape for solace? I think this was very much the case.

Henry Dutton was a man of impeccable taste and had a keen eye for aesthetics. An account of Mr and Mrs Dutton by an anonymous friend was included in an article 'Memories of Kapunda', *Kapunda Herald*, (1929:84)

Of Mrs Dutton it can be truly said she lived but to think of others and to plan some kind undertaking for their benefit, even when through long years of sickness. Very beautiful the 'Anlaby' garden was at that time. A memory which can never fade. One ventures to think that at one period – very particularly during the last five or seven years of Mr. Dutton's life – that no garden in the State, public or private, could equal it. It was his hobby, pride and he made every enterprise and extension in it a memorial to his dear lady, and a tribute also to her great love for flowers.

Henry Dutton passed away on the 25th August 1914 and the *Anlaby* estate was bequeathed to his only son, Henry Hampden Dutton. This era of the garden started in one of South Australia's worst droughts and also in the shadow of the First World War.

There was a large auction of stove and shade house plants in July 1915 which signified a change in the garden philosophy by reducing the extensive holdings of cold climate and tropical plants.

The Head Gardener left *Anlaby* and after reviewing certain records, one forms the impression that an actual Head Gardener was never employed after Thomas Leslie left. From this one would contend, both Mr and Mrs Dutton took on the role of supervising the gardening staff, this large introduced utopian foreign landscape surrounding the house, which was created by their predecessors.

In 1917 an extensive stock take of native plants was under taken. This was published in a booklet titled: *Native Trees and Shrubs, Anlaby, South Australia* published by J.W. Elliott & Co, of Victor Harbor in South Australia.

Mrs Dutton had a great love of motoring and in 1921 earned the distinction of being the first woman to cross the continent from Adelaide to Darwin. As reported in *The Register* on 30 August (1921: 5): "He was accompanied by Mrs Dutton. Mrs Dutton who is the first white woman to make the transcontinental journey to Darwin overland, the first woman to cross."

Extensive motor touring would have instilled a keen appreciation of the beauty of the Australian Bush and in particular native plants.

Mrs Dutton was attributed to have reorganised the grounds at *Anlaby* in a romantic style, planting native trees, shrubs and flowers. She visited England and her visits there included visits to society gardens and flower shows and plant nurseries.

During the 1920s Mrs Dutton introduced the twenty five acre (10.1 hectares) Plantation Dam Australian native area. The long drive into the *Anlaby Estate* contains plantings of *Eucalyptus cladocalyx* (Sugar Gum), which are under planted with *Acacia pendula* (Weeping Myall), which further demonstrates the shift in a philosophy more to native plants. Mrs Dutton's son, Geoffrey in *Out in the Open; An Autobiography* (1994: 9) recalls: "However enthusiastic my parents were about the Australian trees in their plantations, natives were excluded from the inner garden."

Mrs Emily Dutton died on 11th May 1962. Her son Geoffrey and his wife Ninette Dutton thereupon took control of the property. During this period of the evolution of the garden at *Anlaby* the old

stove house was demolished. In an article in *The Advertiser* on 14 December (1977: 25) a reporter states '*And then there of course there is the garden – a wilderness manicured and pruned by a tribe of gardeners in Anlaby's heyday and now kept in reign by Mrs Dutton with occasional help – I want to write much more and life has just become too strenuous here*'.

From 1978 to 1994, a Mr and Mrs Shannon owned the property and by 1981 the gardens were described by Beames & Whitehill (1981: 75) in a review of South Australian historic gardens:

Over a considerable number of years the gardens have declined, as it has become increasingly difficult to maintain such an extensive area. The original garden contained extensive trellis-work and arches on which climbing roses were trained, but while the trellises remain in generally good repair, the roses have died. From the early 1960s, the garden has not been maintained and was used as a sheep paddock until 1978 with the exception of mowing lawns immediately adjacent to the house. The new owner has begun clearing over grown shrubbery and pruning as the first stage of restoring selected parts of the garden as near as practical to its original state... After many years of neglect the garden is now maintained by the owner, with assistance from his sons at weekends.

The *Anlaby* garden forms a key role in the development process of the pastoral station style garden in South Australia. From humble beginnings in the 1840s to the major garden expansion period 1890 - 1914, the garden evolved.

The garden now contains the remnants of what was once the jewel in the crown of the pastoral station garden style in South Australia. This is evidenced by the size of the garden at *Anlaby*, the garden buildings, which include the remnants of a large stove house, shade houses, garden layout and various garden themes reflecting different garden period styles which include Gardenesque, Arcadian and Arts and Craft.

There was also a large native tree plantation planted in the 1920s.

The challenge now lies in conserving what little is left of the Squire's Utopian dream by way of the remnant plants and the ruined stove house and shade houses which once contained vast collections of rare plants. The current owners are faced with the same water challenges as previous generations of families who have owned *Anlaby*. Today's world of even greater climate change combined with the increases in maintaining the shell of what was a utopian dream make this vision almost impossible to achieve.

Acknowledgements: The current owners are supporting this research but wish to remain anonymous. I would like to also thank the members of the Leslie family who have provided valuable information concerning Thomas Leslie the Head gardener, during the 1900 – 1914 period.

Ethics: This research is being undertaken via ethics approval by the Faculty of Science, Engineering & Built Environment of Deakin University.

¹ *Anlaby Station* is referred to as 'Anlaby' in this paper. The *Station* has historically always been generically called 'Anlaby' in publications. However, with a change of ownership and accompanying subdivision of the overall estate in the 1970s, the primary homestead allotments, became known as 'Old Anlaby' and this is the way the property is referred to today in state government citations and general publications.

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Off Grid in 1900

Some generalities and a short discussion of the demolition of unreinforced brick chimneys

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The chosen area of study is the brick chimney which provided heat, hot water and cooking facilities in the timber houses of Auckland 100 years ago. Demolition of these chimneys is common as adaptive reuse of the older houses of Auckland occurs. The number of chimneys present in four representative streets will be counted, using aerial photography from the 1940's, and compared with the number present in recent aerial photographs. A long quotation, which provides good evidence regarding the importance of open fires for heating in New Zealand is given. Arguments for and against retaining chimneys and utilising wood biomass will be put, and these arguments will be placed in a context of urban resilience and of energy transition.

Keywords: chimneys, energy, demolition, aerial photography, infrastructure, transition, resilience, heritage, housing, off grid, 1900, primary account

Introduction

Early Auckland was a quite densely built up place, and houses were clustered close together. By the end of the 19th century suburbs were established, close to rail and tramway transport links. The infrastructure of these suburbs was hybrid. In most cases the houses were off grid, in today's terms, and continued to be so until after the First World War. This lack of reliance on infrastructure, which may come under stress, due to economic forces associated with energy transition, or due to natural disasters, may be a lesson from the past that is relevant as we undertake adaptive reuse of our early suburbs and plan new ones. How off grid were the suburbs of Auckland, in 1900?

Water was often collected from roofs for storage in tanks. The high stud found in pre World War One houses in Auckland has been partially attributed to the need to gravity feed water from storage tanks into houses, and the higher roof meant that pumps could be left out of the system. Piped water supply began in the central area in 1854 and in the suburbs by 1877 (Salmond 1986).

Auckland was the last of the large provincial cities in New Zealand to commission an integrated scheme for wastewater disposal. From the 1850's an ad hoc collection of sewers discharging direct to the harbour had grown up. The Orakei Scheme was opened in 1913 and the main interceptor sewer ran from Avondale to Okahu bay where it discharged screened sewage on the out-going tide off Takapurawha Point.

Water transport was the preferred and most efficient mode of shifting cargo in 1900. Scows and schooners serviced the small volume coastal routes. The scow was a very shallow draft vessel, and most of Auckland province's rural towns are located at the navigable limit for scows in the headwaters of coastal estuaries. Warkworth, Wellsford, Henderson, Clevedon, and Waiuku are examples (Langdon 2008).

Energy in Auckland: 1900

Coal gas was available in Auckland from 1865 on and electric power from 1908 (Bush 1971). Electricity generation began in 1902 for the tramway, using automatically fed coal fired boilers to produce steam to drive the generators.

A commonality between all the technologies of 1900 was efficiency of application, in terms of energy use. Coal and steam had radically changed the technological landscape of the time, but were applied on a case by case basis. For example, the southern ocean sailing route remained in use long after the opening of Suez and the development of relatively efficient steam driven ships, as cargos took long periods to load and less capital intensive ships could more cost effectively spend long periods in port loading bulk cargo. Passengers loaded themselves and by 1900 went through Suez, or west to Canada and then by train across the continent.

The history of energy use is an outgrowth of environmental history. It is often studied in conjunction with economics as there is a direct correlation between economic growth and increased energy usage. Typically, energy is consumed to create heat, light and motive power. It is worth pausing to consider overall trends in energy use, before narrowing the focus to the burning of wood to produce heat.

An often used measure of levels of industrial and technical infrastructure development is that of energy use in gigajoules, on a per capita basis. Per capita energy use in New Zealand has increased several fold since 1900 to a level of 120GJ/capita. This production of ever larger amounts of energy is directly linked to negative environmental effects.

“All anthropogenic energy systems also create environmental impacts, ranging from locally devastating deforestation to globally worrisome changes of the atmospheric composition, above all the emissions of CO₂, CH₄, SO₂, NO_x, and volatile organic compounds from fossil fuel combustion that have been responsible for increasing tropospheric temperatures, acid deposition, photochemical smog, and higher ground ozone levels.” (Smil 2010: 2)

In order to address this issue there will be a transition to a lower level of energy use, on a per capita basis. Smil believes that a level of 40 GJ/capita is achievable, and that to achieve it a lowering in life style expectations will be needed.

“Clearly, a strong case can be made for protecting the environment, not only by using natural resources more efficiently, but by simply consuming less energy, amassing fewer possessions and opting for more benign pastimes.” (Smil 1993: 121)

It is not suggested here that New Zealand societies of the future will be a rerun of the society of 1900. The lower level of energy inputs in 1900 may have some relevance in terms of societal resilience and transition to a less energy intense society. In 1900 there were a variety of energy sources in use. New sources included electricity and petroleum. The use of coal and wood, human muscle power, draft animals, windmills and sails persisted. Of these, the focus will now shift to the use of wood in domestic fire places, as a case study.

The use of wood for heat

There is no doubt that wood was an important energy source in Auckland in 1900. Generally, firewood was cut and seasoned, and as a high volume low value cargo, was transported to the city by scow, before being sold.

By 1900 the houses of Auckland had evolved, and a unique local vernacular had developed; the bay villa. These were built of kauri timber, with brick being used for the construction of fireplaces and chimneys. Some houses had as many as three chimneys. Typically, these houses belonged to farmers, or when in town, to those towards the top of the social hierarchy of the day.

Smaller houses had fewer chimneys, Those with single chimneys often had a fireplace in the front parlour back to back with a range oven in the kitchen. Ranges were made in Dunedin by Shacklock from 1873 on (Salmond 1986).

After the First World War fire remained as the primary source of heat for cooking, heating, and hot water for washing and laundry, although it was gradually superseded by electricity as the new technology became more available. In the countryside and the provinces the open hearth remained of key importance in making uninsulated timber houses inhabitable during the winter months.

To illustrate this direct reportage from people who used fire as a primary energy source is available. The transition from solid fuel burning to electricity and later to natural gas occurred gradually. The following is drawn from experience in New Plymouth between the wars.

“On Keeping Warm – Extract from ‘Memoirs’ by Jean Nicholls

When we were first married we lived in a beautiful old 1920s villa. Everybody loved it. We loved it - in the summer. The old wooden homes were built with iron roofs and no regard to windows facing the warmth of the sun. With no insulation, in the winter they were cold, very cold.

Typical of the era our home had lovely high ceilings with pressed steel mouldings; we needed scaffolding to paint them and a stepladder to change a light bulb; we tried to ignore cobwebs and soaring power bills.

Built over sturdy wooden piles; the lovely polished floorboards did their best to keep out the draughts. In the old days they didn't have such things as wall to wall carpets, just rugs and carpet runners. Some enterprising people put sheets of newspaper under the lino, or cheaper 'congoleum', and we had to stuff wads of newspaper into the window joins to stop the old sash frames from rattling in the wind.

Insulation? Batts? Furry flying mice! We didn't have those but we did have ants. Scrim was used as a weapon against draughts from the walls. This fine, sacking-like material was tacked to the wallboards and made a base for wallpaper. When the scrim became old or loose it moved about in the draughts, we soon discovered striped wallpaper was not advisable as it made the wavy lines more obvious. Long stuffed material 'sausages' under doors were great draught stoppers too and - great for tripping over.

To keep us warm we had four fireplaces with open grates. If a fire wasn't lit we filled the chimney throat with a piece of hardboard to keep out draughts, soot and the odd bird that wanted to visit. It is amazing what a mess a sooty, terrified bird can make in your living room.

The fires were so cosy in the winter; it was only in the mornings that I cursed having to clean out the ashes, relay the kindling wood and can in the coal. Each summer we chased soot out of the chimneys with a branch from a gorse bush; this saved the expense of hiring a chimney sweep. What a mess that caused. We lay newspaper on the floors and all the furniture had to be covered with sheets. When we first bought the house the chimney hadn't been swept for years. We didn't know that, but we soon found out. The fire brigade was very understanding and the spectacular chimney fire was a great way to meet our neighbours.

I had to clean the grate and surround with black lead, the same stuff I used to polish the coal range and the firedogs. Firedogs? Oh, they were black round knobs with a bar between to hold the poker. All the fireplaces had their own 'furniture' as we called it, the poker, a long-handled brush and shovel, coal bucket, fender and a wire fireguard. In the summer we would put a wooden or brass faced fireguard in the grate to cover up the hole. Some people were very good at making huge decorative paper fans for the grate.

An extra implement we always had was a long-handled toasting fork. In the evenings we loved making toast by the fire, roasting chestnuts and watching imaginary pictures made by the flames.

Everyone had a wood shed, with a big chopping block and an axe to chop wood and make kindling. We tried to avoid using macrocarpa - it would spit showers of sparks. Most people had woollen hearthrugs with the odd scorch mark or two.

By the 1930s there were electric heaters, with one or two open coil bars that would glow red-hot. These replaced the earlier electric elements set in porcelain frets. As they didn't have fans you had to huddle close to them. With their bright reflector backs they were very good at burning legs and furniture too! Quite dangerous I suppose. Some people would put a saucer of water by the electric fire 'to save the air from drying out', and some heaters had a special little water trough in the front. Now we do the opposite and use dehumidifiers! Gas fires with

porcelain frets were also used and didn't change much until the modern flame gas fires with their artificial coals and logs replaced them.

There was one room that was always warm - the heart of the home, the kitchen. With the coal range needed for cooking, the firebox was constantly going and constantly had to be fed with coal. At night we banked up the coals and added coke so the fire would last as long as possible. The first job in the morning was to rekindle or relight the stove. Our stove was black though you could get more modern ones in mottled green and cream enamel. The wire rack over the top would always be full of clothes and cloth nappies being aired. When the fire was low the rack also made a warm place for sick kittens and ailing pet budgies as well as warming plates and slippers.

Behind the stove lived a 'wet back', which was a system of water pipes that took hot water to a very small cylinder, it only held about ten gallons. 'Wet backs' were very popular and convenient though a far cry from the hot water systems of today. Later we managed to get a washing machine on wheels that heated water. We would fill the washing machine, heat it up and trundle it into the tiny bathroom. The only problem being the heat of the water in the rubber drain hose made our bathwater smell of "eau de rubber"!

People who had gas connections often used a 'caliphont' over their baths. This was a gas-fired cylinder and would heat water reasonably efficiently. They were sometimes called geysers; there were many stories of the hazards and bangs when the early models were lit, so maybe they were well named!

Of course we had hot water bottles to take to bed. The rubber ones were soft and comforting, not like the hard old ceramic affairs though they both had a tendency to leak!

The coal range was great and kept us warm, often too warm during hot summers. We may not have had central heating in those days, but with all the draughts the old houses certainly did have air-conditioning." (Hitchcock, Nicholls, and Cooke 2008: 44)

Energy in Auckland: post war fuel transition

The transition in energy sources used by New Zealand households has been investigated by the Building Research Association of New Zealand. As late as 1971 45% of New Zealand households reported using open fires as their principle heat source. This had reduced to only 10% by 2005, although this statistic is complicated by the fact that many households use several methods to obtain heat within their houses (Camilleri, French, and Isaacs 2007).

Energy in Auckland: current chimney count

These figures are borne out by making a count of the number of chimneys present in four representative streets, using aerial photography from the 1940's compared with the number present in recent aerial photographs.¹ This shows a halving in the number of houses that have chimneys over the period. Both orthographic (plan view) and oblique aerials were used in making the count, in order to achieve the best accuracy, based on the available information.²

Table 1: Houses with chimneys in 2010's, in Herne Bay, Auckland.

	Houses with no chimneys of any sort	Houses with 1 brick chimney	Houses with 2 brick chimneys	Houses with 3 brick chimneys	Houses with 1 solid fuel heater	Houses with 1 solid fuel heater/ 1 brick chimney	Total number of houses in street
Clarence St West	7	3			1	1	12
Islington St East	3	5			3	1	12
Islington St West	3	8			1		12
John St East	2	3	1		5	1	12
John St West	4	5	2		1		12
Ardmore Rd East	1	8			1		10
total in category	20	32	3	0	12	3	70

Table 2: Houses with chimneys in 1940's, in Herne Bay, Auckland

	Houses with no chimneys of any sort	Houses with 1 brick chimney	Houses with 2 brick chimneys	Houses with 3 brick chimneys	Houses with 1 solid fuel heater	Houses with 1 solid fuel heater/ 1 brick chimney	Total number of houses in street
Clarence St West		11	1				12
Islington St East		8	4				12
Islington St West		9	3				12
John St East		11	1				12
John St West		12					12
Ardmore Rd East		6	4				10
total in category		57	13				70

Arguments for the removal of chimneys

In my work as conservation architect at Auckland Council I have been involved in applications to remove chimneys, where their demolition is controlled through the Resource Management Act, for heritage reasons. Applicants give a variety of reasons for wanting to remove chimneys. These include:- concern that the chimney structure may collapse under loadings generated by very high winds or by earthquakes and concern that the chimneys are unsightly. Another reason is that the open fire is no longer in use, and the house owners wish to free up the space currently occupied by the chimney. This space is often used to accommodate an ensuite bathroom.

Further reasons to demolish chimneys are inefficiency and a fear of health effects associated with wood smoke. Such smoke contains fine particles and tarry substances which are regarded as hazardous. An official Auckland Council brochure contains the surprising claim that open fires make houses colder, and is associated with website information that claims that air pollution, which is comprised of 72% wood smoke from domestic sources causes 300 premature deaths in Auckland each year.

“An inefficiently run wood burner or domestic fire produces even more of this hazardous smoke as well as a tarry residue which has a bad effect on health. They do not heat your home properly – in fact open fires will actually draw heat from your home and create draughts. They are also very inefficient. The most energy efficient and clean home heating method is a heat pump as it does not create smoke or produce harmful fine particles” (*Enjoy the heat not the smoke* 2012).

Arguments for the retaining of chimneys in place

There are heritage reasons to conserve chimneys. Historic heritage is regarded as important in Auckland’s increasingly multicultural society. It provides continuity, and shared experience, in a city that has been rapidly transformed over the past 30 years, and is still undergoing transformation. At the least, old buildings serve as landmarks in the cityscape, by which a population can maintain orientation.

As well, old buildings contribute to the local distinctiveness of a place, particularly if they are of a type that is not common elsewhere in the world. This is true of the traditional timber houses of Auckland. Few cultures in the world built in timber, and built so many houses of similar type in such a short time period. These houses constitute an important and unique heritage asset in terms of tourism. The houses probably hold this value to a greater extent than the old masonry public and town centre buildings of the city, which are more similar to buildings common in overseas cities.

An examination of the literature regarding the conservation of New Zealand houses shows that all commentators are in agreement regarding the importance of chimneys and the degree to which they were an important and prominent element in the design of our traditional timber houses.

“During the Victorian period visually prominent chimneys were often elaborately treated, with polychrome and moulded brickwork as well as decorative chimneypots. Victorian chimneys in

particular should be carefully conserved and repaired as they form a vital part of the houses character.” (Arden and Bowman 2004: 136)

“Chimneys were another dominant feature highly visible from the street. They were also decorated. Some were very elaborate with extravagant tops of patterned and polychrome bricks and bands and often with tall elegant chimney pots.” (Stewart 1992: 41)

“Above the roof, the chimney was a challenge to the bricklayers art, and even modest houses sported chimneys with extravagant tops corbelled out, and out, and back again, often with specially shaped bricks.” (Salmond 1986: 125)

A further reason to keep chimneys in place is related to possible uncertainty and discontinuity of energy supply, as society enters a time of transition in the sources of materials used to produce energy. It is conceivable that electricity, which is the highest quality and most flexible energy source in application, will increase in price in an attempt to reserve its use for more high value applications than space heating. It is also possible that supply discontinuities will occur, due to natural or human generated disaster. Wood is widely available in our environment, and burning it in the same way as is described above, in the oral history from New Plymouth is likely to decrease the discomfort of such events. The ability to keep warm in such events, if they were to occur in winter would reduce health risks and make communities generally more resilient.

In conclusion

As noted in the introduction, all forms of energy generation have environmental impacts. Fossil fuel combustion produces CO₂, CH₄, SO₂, NO_x, and volatile organic compounds that are responsible for increasing tropospheric temperatures, acid deposition, photochemical smog, and higher ground ozone levels. Wood is not a fossil fuel, as it is not the product of fossilisation and biodegradation of organic matter. The decomposition of fallen timber left in the bush and not burnt does generate slightly less atmospheric CO₂ than that which would result from burning a similar quantity of wood, because by the time the bark of a dead tree has rotted, the log has already been occupied by other plants and micro-organisms which continue to sequester the CO₂ by integrating the hydrocarbons of the wood into their own life cycle.

The net increase in atmospheric carbon that results from burning timber is less than that which results from burning fossil fuels, as the tree the wood came from would have eventually rotted and produced atmospheric CO₂ if not burnt, and an equivalent quantity of CO₂ is likely to be reabsorbed by the tree that replaces the one lost, in a temperate climate. For burning fossil fuels the same calculation is not applicable, as material formally sequestered, and not part of the carbon cycle, creates an additional load of CO₂ in the atmosphere.

When considering the use of open fires it may be necessary to balance the negative health effects of particulate emissions against the negative effects of climate change induced by increased atmospheric CO₂ levels if the burning of wood is substituted by the use of electricity produced by burning fossil fuels in locations far from dense populations and that use stacks with scrubbers that remove the particulates. In New Zealand hydroelectric power accounts for 57% of the total electricity generation in New Zealand, with the rest being produced using mainly coal and gas.

Having households retain the ability to use open fires does keep options open, as the future of energy pricing and energy use is uncertain. Households that retain and maintain chimneys are considered more resilient in terms of coping with grid failures and changes in energy pricing than those that don't.

There are good heritage and building conservation reasons for leaving chimneys in place, where they are present as part of the original fabric of traditional New Zealand houses.

Taking these three arguments together I conclude that public policy that encourages the loss of chimneys may not provide a net long term public benefit.

It seems likely that other off the grid technologies of 100 years ago may be open to similar analysis, in terms of urban resilience. Use of available land for food growing, encouragement of the planting of useful trees rather than the merely ornamental, minimisation of waste production, onsite disposal of waste, and the harvesting of rainwater; all have the potential to increase resilience.

In many of these cases there may be problematic health effects associated with the adoption of such techniques in individual cases, but these effects may be offset by larger scale benefits at the level of populations.

¹ Aerial photograph (1940) *Auckland Council Gis* (Available online <http://intermaps.arc.govt/AucklandCouncilViewer/?extent=1754742,5920695,1755249,5920917> [accessed on 5/12/13]); and aerial photograph (2010) *Auckland Council Gis* (Available online <http://intermaps.arc.govt/AucklandCouncilViewer/?extent=1754742,5920695,1755249,5920917> [accessed on 5/12/13])

² Aerial photograph (2012) *Google Maps* (Available online <https://maps.google.com/?q=Ardmore+Rd,+Ponsonby,+Auckland+1011,+New+Zealand> [accessed on 5/12/13])

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A Tale of Two Victorian Historic Coastal Towns

Dilemmas of planning and conservation in Queenscliff and Sorrento

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Change has engulfed the coastal fringe of Australia. In balancing the built and natural environment, community needs, cultural significance and economic sustainability, planners aim to improve quality of life and create vibrant communities. Yet managing place change, particularly in coastal areas, is fraught with tensions. Most planning discussions about the rapidity of change, the impact of the Sea Change process and increased development have focused upon the extensiveness of residential expansion and the housing styles that challenge the essence of the character of these coastal towns. Character and sense of place qualities are the very reasons that sea changers desire to engage with and reside within these communities. One aspect missing from this discussion and analysis is the impact that large-scale transformations of iconic buildings are having upon these places. This paper examines the consequences that major commercial development projects have upon the communities of Sorrento and Queenscliff. It considers changes (proposed or realised) to four landmark historic hotels: The Koonya and Continental in Sorrento; and the Ozone and Vue Grand in Queenscliff. This paper focuses on issues of planning, social engagement and community debate.

Keywords: sea change, development challenges, planning and community debate, sense of place, neighbourhood character

Introduction

The built and natural environments, how they interconnect and are perceived, visually characterise and define coastal towns, especially those with significant heritage values. More than a decade after the ABC TV series *SeaChange* popularised “the dream of swapping fast-paced city life for the relaxing balm of the beach”, Victorians’ love affair with the coast continues (Domain, *The Age*, 4 December 2010). Over this decade, improved transport links (Geelong Bypass to the Surf Coast and Peninsula Link to the Mornington Peninsula) have made coastal towns more attractive to those looking to move to the coast and commute to work. Thus there are now full time seachangers, part time seachangers, and second home owners getting away from it all, by moving to the coast. For many, the key incentive remains the lifestyle.

Yet this ‘sea change’ phenomenon is fundamentally changing the coastal towns of Australia. In many instances, this is attracting opposition from established residents. The past national president of the Planning Institute of Australia vividly summed up the current struggle that is occurring in many of Australia’s coastal regions. Barbara Norman (2008) wrote that “the Australian coastline is littered with exhausted communities battling to save the character and environment of their townships”. The National Sea Change Taskforce was established in 2004, as a response to these wider community and professional concerns, and now has a membership of over 68 local councils around Australia. The Taskforce works “to ensure that coastal development is managed with a focus on the sustainability of coastal communities and the coastal environment”. Gurran et al. (2006) conclude that more detailed research is needed to develop new responses to coastal development, particularly in terms of promoting community wellbeing, strengthening social cohesion, avoiding socio-economic and socio-spatial polarisation and preserving sense of place.

This paper sits within a larger ARC Linkage research project, “Sea change communities: intergenerational perception and sense of place”. The twin historic coastal Victorian townships of Sorrento and Queenscliff, located either side of Port Phillip Heads, form the case studies for this research. The broader aim is to establish a more rigorous method of evaluating the physical and perceived impact of the sea change process on sense of place, specifically on the relationships between the built and natural environments of coastal settlements, using both quantitative and qualitative measures. This methodology will assist those communities to implement effective, place-sensitive sustainable planning and associated development practices.

Municipal planning schemes include both State and local strategies, policies and provisions that aim to manage change in a manner that preserves local heritage and neighbourhood character. For example, the underpinning vision of the Borough of Queenscliffe Planning Scheme (2009) is that “the Borough of Queenscliffe will maintain its unique natural environment, built and cultural heritage values through the careful planning of land use and development for the benefit of the community”. Despite the intent of this scheme, conflicts over proposed developments continue, with ongoing debate about environmental, landscape and heritage values and visual amenity.

Further, the respective heritage studies undertaken on the Mornington Peninsula Shire (Context with Kellaway and Lardner 1992, 1997) and the Borough of Queenscliffe (Allom Lovell and Associates, 1984; Lovell Chen, 2009) primarily address buildings and artefacts and do not consider place as heritage nor the environmental context of landscape and natural systems, nor the social,

interconnectedness, and visual/scenic significance of the places that determine their tangible and intangible character and place essence.

In determining neighbourhood character, Planisphere (2012) (a partner in this research) has sought to answer the fundamental question: How do buildings and landscape interact? They have determined that the qualitative interplay of built form, vegetation and topographical characteristics, in both the private and public domains, are the physical manifestation of neighbourhood character, that distinguish one place from another.

Changes that have engulfed the coastal fringe of Australia, are clearly manifest in Queenscliff and Sorrento. De Jong and Fuller (2008) have already documented some of the changes that have taken place in recent decades in these two towns. Most notable of these were the transformations of traditional harbours to marinas, historic hotels into luxury apartments and large-scale housing developments. In a subsequent paper, de Jong and Fuller (2010) investigated what indicators could be used to quantify the changes in town character. These included: changes in building footprint, changes in employment profile, decline in the number of permanently-occupied houses and the rise in planning decision appeals. It was acknowledged that while none of these are the perfect indicator of change, they do point to the complexity of change and the difficulty of councils, communities and planners to preserve the integrity of their towns. They concluded that the 'so-called' sea change phenomenon is impacting on the look, shape and feel of coastal towns and such towns are being affected by the importation of urban values of housing (size being one clear determinant), altering the very 'sense of place' that draws new residents to the area (unspoiled natural environment). These developments all point to a failure to understand and value the local landscape, the sense of place and the neighbourhood character.

While much of the planning discussion has focused upon the extensiveness of residential expansion and the inappropriateness of housing styles that challenge the essence of place character, little has been written about the impact that large scale transformations of iconic buildings are having upon these places. This paper considers four landmark historic hotels: the Koonya and Continental in Sorrento, and the Ozone and Vue Grand in Queenscliff. It examines the consequences that major commercial development projects can have upon communities such as Sorrento and Queenscliff through consideration of planning, social engagement and community debate.

Sorrento and Queenscliff

The twin historic coastal Victorian townships of Sorrento and Queenscliff are located either side of Port Phillip Heads, Victoria. Sorrento and Queenscliff are linked by a richly layered complex natural and cultural heritage; by spirit and sense of place; by geology and the formation of the Bay; by aboriginal heritage; by flora and fauna; through shared geographical, marine and social histories; by vulnerability, isolation, perceived roles; by tourism, growth and development. Yet there are marked differences in the way each town was founded, laid out, developed and connected to its own hinterland. At the beginning of the 21st century each has a different identity and atmosphere, resulting from decisions made over the past two centuries of European settlement. In articulating sense of place and character in these two historic coastal towns these similarities and differences must be taken into account.

Andrea Inglis (1999) in her book *Beside the Seaside: Victorian Resorts in the Nineteenth Century*, provides a useful brief contextual history of these two towns. Queenscliff was one of the earliest resorts to develop at some distance from Melbourne. By 1888, *Bruck's Guide to the Health Resorts in Australia, Tasmania and New Zealand* (1888: 87) considered it "one of the principal watering places in Victoria". The township dates from 1838, when the site, known as Shortland Bluff, served as a station for the pilots who navigated the treacherous waters at Port Phillip Heads. In the 1840s the small local community was composed mainly of lighthouse-keepers, pilots, fishermen and boatmen. In the 1850s Lieutenant-Governor La Trobe named the town, which was to "act as a place of recreation for the citizens of Geelong", Queenscliff (Beavis and Raison 1876-77). So began six decades of growth and prosperity. Inglis (1999) goes on to make the point that "Queenscliff was not only a scenic seaside location", but "it was also strategically important" (p12). By 1861 Queenscliff had five attractive hotels; in 1879 a railway linked it to Geelong. The 1880s, which saw Victoria catapulted into the boom years, saw frenetic building activity take place in Queenscliff too, and resulted in the construction of a number of splendid hotels, including Baillieu House (the Ozone) (1881-82) and the Grand Hotel (1884). By now thousands of people were flocking to the town – for long or short term stays.

It was in the 1870s that Sorrento became known as a holiday resort. While Victoria's first settlement had been established there in 1803, it did not last. Not till the 1840s did pastoralists and limeburners, and small fishermen settle in the area. Little changed until a number of Melbourne's prominent businessmen and politicians took up land to erect seaside residences in the 1860s. In 1870 Hotel Sorrento "a commodious hotel for the convenience of visitors" according to the *Guide, Illustrated Handbook of the Bay* (Melbourne, 1876-77) was erected. In the same year George Seth Coppin saw wondrous possibilities and took on the development of the town. He built the Continental Hotel in 1875. A year later the Mornington Hotel (now known as the Koonya) was constructed by the Bay. By the 1880s Sorrento's scenic appeal and well-known amenities enticed thousands to undertake the journey from Melbourne. Indeed the magnificent steamers *Ozone* and *Hygeia* carried "more than 50,000 people annually down to Sorrento and Queenscliff at weekends and public holidays" (Loney, 1982 p29).

In the 19th century Sorrento and Queenscliff were for many simply seaside resorts: places of escape from hot dusty cities in summer. They were also healthful places: fresh air laden with ozone enabled one to relax away from urban environments or recover from rickets and tuberculosis. Bay and ocean were made accessible at Sorrento by Coppin, who not only constructed a road from the jetty on the Bay to the ocean beach, but organised trams to carry passengers along this route. Through walkways and rotundas Coppin orchestrated experiences and framed the seascape. Different visions set the pattern for the two towns: Queenscliff has wide streets and a grid superimposed on its topography. Sorrento follows a linear pattern along Ocean Beach Road.

Place and Planning

Place is a contested term. While place is often perceived as being static and unchanging, it is in fact constantly changing. Queenscliff and Sorrento exemplify this. Over time change has impacted here, sometimes gradually sometimes quickly. During the 19th century Europeans imposed their concept of settlement on both places. The landscape was understood and framed as a European construct. The resorts declined somewhat in the early 20th century with the World Wars and the Depression

and went into stasis. The next wave of changes came with the advent of the motor-car in the 1950s. Sea change is the latest in a series of changes which have impacted these towns and their hinterlands, dramatically altering the relationship between built form, topography and the natural environment. Understanding place is central to planning. Place research has been instrumental in revealing the complexities of place and highlighting its importance to cultural heritage, identity and well-being. When people feel connected to a place - emotionally, culturally, and spiritually they care deeply about it. A sense of place provides a sense of belonging and of commitment. Place is the repository for our shared memories, experiences and dreams. It is the locus of family and community. Leonie Sandercock (1998) identifies six ways of knowing place: through experience, dialogue, gaining local knowledge, symbolic representation, visual experience, contemplation and action. Yet she argues that the notion sense of place is so difficult to define, because it partly depends on socially constructed understandings of place. Sense of place is not a static construct either. Friedmann (2010) suggests that “place is made and remade on a daily basis” (p153) for humans both understand and transform place through reiterative social practice.

Authors such as the urban planner, Kevin Lynch, and the geographer, Edward Relph, long ago recognised that place has physical aspects as well as social meanings. Lynch (1960) describes place through identifying characteristics such as paths, edges, districts, nodes and landmarks, clearly evident in these towns. Relph (1976) states that the identity of place is derived from the combination of physical setting, the activities associated with place, the meanings associated with place, as well as the spirit of the place, so relevant to understanding these towns holistically. Relph believes these components are interwoven and inseparable in one’s experience of place and that they need to be understood in order to be able to maintain them. The phenomenologist Christian Norberg-Schultz (1984) considered place to constitute the physical location - the “material substance, shape, texture and colour” - and the “atmosphere or character” (p116); the loss of one aspect, diminishing the total phenomenon of place. Norberg-Schulz named the essence of place, that is the combination of the physical and the atmosphere the *genius loci* or spirit of place. In the historic coastal towns of Sorrento and Queenscliff the *genius loci* is manifest in inspirational landscapes overlaid with cultural significance.

Practice and theory recognise the value of places of cultural significance individually and collectively. ICOMOS Australia’s Burra Charter (1999, p1) states unequivocally

Places of cultural significance enrich people’s lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences. They are historical records that are important as tangible expressions of Australian identity and experience. Places of cultural significance reflect the diversity of our communities, telling us about who we are and the past that has formed us and the Australian landscape. They are irreplaceable and precious.

The Burra Charter advocates for the conservation of these places for present and future generations. Sandercock (1998) argues that cities (and towns) are the repositories of memories and that public places can nurture belonging. The communities of Sorrento and Queenscliff would agree (ARC Focus Groups, 2013). The challenge in managing place is complicated by the multiple meanings ascribed to it. These towns, embedded in their physical location, rich in histories, tangible and intangible, accommodate and give expression to diverse meanings. The character of the towns was set in their

19th century beginnings: the scale, form, style and materials of the buildings, public and private, were dictated by Victorian taste and ideas. While both towns have a significant stock of heritage buildings, historical circumstance has meant that Queenscliff has retained much more of its integrity than Sorrento. Both towns face the real pressures of change that threaten the fabric of their identity.

The four hotels which are the subject of the case studies for this paper have significant cultural, historic, architectural and symbolic value in their respective towns. They are integrally associated with the identity and character of their towns. For residents and visitors alike these hotels recall an era in the late 19th century when Sorrento and Queenscliff were coastal holiday resorts of the highest calibre, when money was spent on magnificent architectural buildings to accommodate the social elite. Situated on ridgelines, along significant viewlines, on main thoroughfares, on prominent corners, they are still today clear focii in their towns. The hotels are drawcards visually, aesthetically, physically. They are ever present in the silhouettes of their towns: on approach, on departure. They embody something of the character and sense of place of the historic coastal towns, Sorrento and Queenscliff.

In recent years the question has been asked, what do we do with these grand old buildings? As each hotel has become a balancing act between preserving heritage and commercial viability, communities have loudly voiced their objections to inappropriate development. These hotels highlight the dilemmas at the heart of planning, conservation and economics.

Susan Thompson (2012) in her introduction to *Planning Australia: An Overview of Urban and Regional Planning* writes that

At its best, planning is respectful of the built and natural environments, encompassing people and the interactions they have with their surroundings. Good planning respects current and evolving Australian ways of life, meeting the needs of diverse communities by acknowledging their histories and the challenges facing them as they grow and change. It facilitates appropriate and good development, ensuring that economic, social and cultural prosperity is in balance with environmental and species protection. Planning is mindful of the richness that can emerge from community involvement in its processes and recognizes that, ultimately, everyone has a connection to the places they inhabit and use every day (p2).

She also stresses that

people are at the heart of planning. ... all good planning is about the integration of physical land use with socio-cultural considerations in the quest to build sustainable environments for everyone ... social and cultural concerns are not supplementary or subservient to other aspects of planning practice. That said it is an increasingly difficult task to address the needs, hopes and aspirations of the individuals and groups who live in the diverse communities for which planners have responsibility... (p8).

Understanding what planning is appears straightforward. The Planning Institute of Victoria (PIA 2011) states "Planning is the process of making decisions to guide future action". Dictionary definitions state planning is "an organised and especially detailed method according to which

something is to be done; a scheme of action, a design; an intention ... A design according to which things are, or are intended to be, arranged ..." (Shorter Oxford English Dictionary (2007). However, when applied in the modern context of urban and regional planning it becomes more complex as it juggles the built and natural environment, community needs, governmental desires, cultural significance and economic sustainability. Thompson (2012) suggests that the complexity of planning is caused by the overlap between various disciplines, including socio-political, economic and historic contexts which are interrelated and interdependent. The constantly changing environments, the changing perceptions and expectations of governments and communities also contribute to the complexity of planning.

Planning frameworks in Sorrento and Queenscliff both exist within the Victorian State Planning Scheme, governed by The Planning and Environment Act, 1987. The Act states that "the purpose of the Act is to establish a framework for planning the use, development and protection of land in Victoria in the present and long-term interests of all Victorians". The role of planning in conservation, in permitting development, in preserving sense of place and character in these historic coastal towns is considered in detail in the following case studies. The impact of social engagement and community debate in the outcomes is also discussed. Two postcards, *Sorrento, Victoria, Austr*, c. 1900 and *Sorrento from the pier, near Melbourne*, c.1906 clearly show the Sorrento and Continental Hotels silhouetted against the skyline, and the Mornington [now Koonya] Hotel close to sea level. The postcard *Queenscliffe from the Steamer*, c. 1906 shows the stately outline of Queenscliffe with its hotel towers (the Baillieu [now Ozone] and Lathamstowe) in the background. The Grand [now Vue Grand] is off to the right. This paper's underlying position is that changes to these landmark hotels impact on the integrity of the historic coastal towns themselves.

The Koonya Hotel, Sorrento

In 1980 the Shire of Flinders Council News (1980), reported that both the Continental and Koonya Hotels had been "restored to establish a character closely related to the historic nature of Sorrento" (p1). This was considered "rewarding for the township" (p1). The same News noted that the new "Sorrento Townscape Study highlights the need to protect and enhance the historic character of the township, in particular the limestone buildings in Ocean Beach road, and to ensure that new development is sympathetic to this character" (p3). It went on to say that there was currently no protection in place, nor any guidance for the retention of its historic character and its buildings, and no control over type or style of future development. In 1994 forced Council amalgamations occurred in Victoria under the Kennett Government. Some time prior to the formation of the new Mornington Peninsula Shire (MPS), the Shire of Flinders sold the steeply sloping land behind the Koonya Hotel (Figure 1). In 1994-95 it was proposed to build 2-storey buildings at the top end of the site, opposite Stringers Store, which effectively blocked any views to Port Philip Bay. The community rallied. Over 800 objections were lodged with Council. Nearly a thousand attended a public meeting. The unanimous view was that this proposal should be rejected. In 1995 the Council refused to rezone the land to allow construction of the private units that blocked Bay views. Council could not afford to buy back the land, so the wider community formed a Save Our Sorrento Committee (SOSC) and organised a fundraising campaign through Trust for Nature (Victoria) to help buy back half the land for use as a public park. In 1996 the developer Herret Close P/L proposed to build a 14-unit motel on the remaining half of the land. In January 1997 the Mornington Peninsula Shire Council (MPSC)

approved the development; SOSC moved an amendment, such that the covenant attached to the title of land preserved the arc of the view from the jetty to the beach and Bay. The developer agreed to sell half the land and contribute \$70k to the establishment of the public park, and the community set up a public appeal.



Figure 1: The Park at Stringer's Corner, looking across the residential development, the Koonya Hotel at the bottom right hand corner, through the Norfolk Pines to Port Philip Bay at Sorrento.

Three years of negotiations and \$160k raised by the community, delivered a compromise and an enhanced entry to Sorrento for the future. By September 1998 the land - a triangular piece measuring 1240 m² - was transferred to the MPS, protected by covenants requiring the Shire to preserve the park as a public facility for all time. The local press reported that the development had grown to include 35 detached or semi-detached houses plus 14 motel units, "all of a good standard", with the original Mornington Hotel on the corner retained. The achievement was heralded as the culmination of responsible planning and intensive community consultation (*The Mail*, 10 Dec 1998). The Koonya development was approved under the new Mornington Peninsula Planning Scheme, on 20 July 1999. The park was named 'The Park at Stringer's Corner'. Construction of the \$20m development began in February 2001. The first residents moved into their luxury apartments in

2003. The park took a little longer to establish, but it is now a well vegetated, much used public place with magnificent views over the Bay (Figure 1), and splendid views of the *Conti*.

The Continental Hotel, Sorrento

This 4-story limestone building with tower sits diagonally opposite 'The Park at Stringer's Corner' (Figure 2). The *Conti*, as it is affectionately known, is a striking landmark building on a cliff crest, comparable with the Hotel Sorrento on the neighbouring cliff crest, and regionally significant. Already in 1978 the Shire of Flinders Sorrento Townscape Study recognised historic values as fundamental to the town's identity. It also noted that a distinctive architectural character enhanced the quality of its streetscape, and that careful planning in consultation with all interested individuals and groups would encourage the township "to age graciously".



Figure 2: The Continental Hotel, Sorrento, cnr Ocean Beach Road and Constitution Hill Road, presents a striking silhouette on this cliff crest, opposite The Park at Stringer's Corner.

In February 2000, the MPSC rejected plans for eight 3-storey and two 2-storey apartment buildings in the heart of Sorrento. Two years later grand plans were revealed for the Continental Hotel: 30 one- and two-bedroom residential apartments with a 2-storey underground car park were proposed on land directly behind the Hotel. David Crowder, of Ratio Consultants, who conducted the Town Planning Assessment for the Hotel, considered the 5-storey development appropriate.

The design could generally be described as contemporary comprising flat roof, strong horizontal and vertical elements, and considerable articulation through the use of varied setbacks, building materials, colours and fenestration (p6).

The developers argued that “while contemporary in design, the building would have sandstone paneling to reflect the nearby heritage buildings”. The new 5-storey apartment block “would facilitate the restoration of an important landmark building”. Further, “it will not compromise heritage significance and will respect the character of the area” (27 August 2002). The Nepean Historical Society (NHS) raised objections to the application on the grounds that it was not in accordance with the Planning Scheme; that the 5-storey building exceeds the height limit; is on the highest elevation in Sorrento; is bulky and not in conformity with neighbourhood character; and precludes sea views for the adjoining southern property. Further it did not conform to the requirements of the proposed Amendment 23 of the Sorrento Precinct (NHS 5 September 2002).

Because of the slowness of the processing of the application, in excess of 60 days, the applicant exercised their right to lodge a “notice of review” with the Victorian Civil & Administrative Tribunal (VCAT) against Council’s failure to determine the application within the specified time meaning that the Council cannot decide upon the application but must notify the Principal Registrar of VCAT their determination to support or not support the proposal (MPC 2004: p3). After lengthy consideration, the MPS’s Development Assessment Committee (DAC) unanimously refused the application, believing that the Hotel’s heritage significance would suffer under the proposal. According to a council officer’s report to the DAC “Sorrento Historic Policy ... seeks to discourage the erection of buildings that exceed 8m in height” and “unless the development is reduced in scale and bulk it will continue to have an unacceptable heritage impact”. It was further stated that “the proposal’s design ... does not reflect the particular characteristics, aspirations and cultural identity of the community” (*The Mail* 20 April, 2004). In drawing together the extensive evidence and issues, the Council directed advice to the Principal Registrar of VCAT that it did not support the proposal as documented because of a major compromise of heritage values despite recognising that the physical alterations and use scenario were “reasonable ... [and that] many components of this proposal ... have significant merit and potential benefits to the community” (MPC 2004: 25, 27, 29). It is of interest that Cr Margaret Bell commented that the Shire at the time was considering applications for nine commercial developments in Sorrento, and did not want to set “the wrong precedent”. She felt this was a real test of Council to uphold its own planning provisions (*Mornington Peninsula Leader* 4 May 2004).

The Ozone Hotel, Queenscliff

The Ozone Hotel (Figure 3) is one of the four landmark hotels in Queenscliff renowned for their architectural and heritage significance, the others being the Vue Grand, The Royal and The Queenscliff Hotel. The building was constructed in 1881-82 and was originally called Baillieu House, after its builder, James Baillieu. It was re-named the Ozone in 1887 following the arrival of a new passenger paddle steamer which brought visitors to the town from Melbourne (QHM 2003). The town had already established itself as a popular destination for day trippers.

The Ozone Hotel has been described as “a successful blend of the French Renaissance and Italian Renaissance palazzo styles” (Allom et al. 1984:37). The Ozone complements an equally-imposing and

adjoining building called 'Lathamstowe'. Both buildings sit on a cliff top with commanding views of Port Phillip Bay and access to the beach. In 1980, the Ozone Hotel was listed on the Australian Heritage Register, and in 1995 it was added to the Victorian Heritage Register.



Figure 3: The Ozone Hotel in Queenscliff, facing out to sea.

In early 2005, the owners of Ozone submitted a planning application to convert the hotel into eight luxury apartments, and to build two apartments and a separate two-storey shop and residence on the rear of the site. The owners claimed that the hotel was no longer financially viable. The development was opposed by many people, both within and outside the Borough. Their opposition covered cultural, economic and social concerns. Opposition to the development within the town's community was spear-headed by the Queenscliff Community Association (QCA). Its members made a detailed submission to the Council and organised a "Save the Ozone" petition, which was signed by 203 people. The QCA were also prominent in a subsequent appeal.

The local council also opposed the development. In an extensive submission to Heritage Victoria, the State Government's principal cultural heritage agency, the then Manager of Planning and Development in Queenscliff expressed Council's strong opposition to the application. The council believed that the proposal did "not respect the important spatial, symbolic and cultural characteristics of the site and surrounding area" (Walker 2005). Despite good publicity, including an appearance on a prime-time television programme to voice their concerns to this and other changes

in the town (Stateline 2005), the campaign to save the Ozone as an intact building available to the public was not successful.

In May 2005, Heritage Victoria granted a permit for the development, arguing that since the exterior of the building was not going to change, its cultural significance was unaffected. Similarly, the new two-storey building did not detract from the original building's cultural significance. Figure 4 shows the front view of this new building constructed at the rear of the Ozone and facing directly onto Queenscliff's main street, Hesses Street, on which many of the town's most important historic buildings are located. Access to, or a view of the original building from the main street, has been lost. The only concession made to the objectors was to limit the height of a tower above the original roof line of the hotel which was claimed to be necessary to accommodate a proposed internal lift. In a follow-up letter to the then Minister of Planning, Rob Hulls, the then Mayor of Queenscliffe expressed the "anger and amazement" of the council (Bugg, 2005). The decision was appealed at the State's Civil and Administrative Tribunal late in 2005 but to no avail and the BoQ was ordered to issue a permit for the development (VCAT, 2005).



Figure 4: Access to the rear courtyard of the Ozone Hotel has been lost and replaced by a real estate office in the main street, Hesse Street, Queenscliff

The Vue Grand Hotel, Queenscliff

This two and three storey hotel, completed in 1882, was the town's "grandest hotel and at least the equal of Melbourne's best" (Runting, 2003, p31). There was a fire in the Vue Grand in 1927 and substantial rebuilding was required – it now displays a variety of architectural styles. However, not being an "intact" example of a certain architectural period does not detract from the significance of this building to the town's sense of place and character. To many, this building is quintessential "Queenscliff". The size and central position of the building means that it is seen daily by residents and tourists alike. The hotel is located on a corner in the main commercial street of the town and faces another significant historic building, the Queenscliff Post Office. It cannot be missed (Figure 5).



Figure 5: The Vue Grand Hotel, Hesse Street, Queenscliff.

In more recent times, some refurbishment has taken place with council approval. These include the conversion of the front verandah as place where food and drinks may be served. In 2005, the hotel was bought by the current owners, the Closter Brothers, Ross and Anthony. In August 2008, an application was received by the local council for redevelopment of the site.

In addition to the main building, there are a number of other buildings on the site. One of these is the single-storey former manager's residence (Figure 6). Its demolition and the construction of a three-storey (plus basement) building in its place is the main thrust of the development proposal. The addition will provide 13 new guest rooms, which the owners argue are essential to ensure the ongoing financial viability of the hotel as an accommodation venue. The Ozone Hotel was cited by the owners in their application to reinforce this argument. A heritage report commissioned by the applicant concluded that "the former manager's residence is of secondary significance ... has limited architectural distinction and undergone some unsympathetic modifications over the years" (BoQ, 2008, p67). The proposal was that the addition be constructed from off-form concrete and have colorbond steel roofing.



Figure 6: The (former) manager's residence at the Vue Grand Hotel, Queenscliff.

The BoQ Senior Planning Officer (SPO) recommended to council that a permit should not be issued for this development. The grounds for refusal were that the former manager's residence was "considered to be an integral part of the Vue Grand Hotel complex and its demolition will have an adverse impact upon the heritage values of the site and surrounds". In addition, the application was considered to be "inconsistent with the Local Planning Policy Framework of the Queenscliff Planning Scheme as it relates to heritage and *urban character* (our emphasis)" (BoQ, 2008: 95). Five

objections were received from the community, including that the height, form and mass, siting, style and materials were not responsive to the heritage character of Queenscliff. The SPO agreed with this assessment. It was also agreed that the building to be demolished was an integral part of the original complex and should therefore be retained. Overdevelopment of the site and contravention of key provisions of the Queenscliff Urban Conservation and Character Studies were among other grounds for objection. The council deferred its decision. Council elections returned a new council that month.

In April of 2009, the applicant lodged an appeal to VCAT on the grounds of 'Failure to Determine'. Two hearings took place in July and September, and an interim order was issued by VCAT in October (VCAT, 2009a). On the key issue of the demolition of the manager's residence, the order found in favour of the applicant and overruled the objections of the BoQ and the community. The interim order allowed the applicant to submit amended plans which addressed the concerns of the VCAT commissioner. These were secondary in nature compared to the key issue and focused on building design (roof pitch, separation of the old and new building, window placement and pipework visibility). Another hearing was held at the end of December 2009 at which a permit for the proposal was granted (VCAT, 2009b). The ultimate success of the application meant that the owners could offer the Vue Grand for sale with a planning approval, which they did in mid-2010.

Some reflections

This paper has considered major controversial planning deliberations that resulted in community angst and questions as to place character and compromise. The case studies comprised extensions and redevelopment works associated with iconic hotels in Sorrento and Queenscliff. Each involved heritage considerations, aesthetic values, as well as issues of scale, intensity, development appropriateness, commercial viability and change to the visual and social landscape.

The Koonya development proceeded. It was always a compromise, but achieved community satisfaction in terms of its sympathetic design and integration into the place and streetscape of Sorrento. The project demonstrates above all else the value of considered community, council and developer participation and cooperation in the development and design process, in drafting the terms of reference, setting the standards of what type and form of development could and should occur on the land, and ensuring covenants were put in place for the protection of the public park in perpetuity. The historic Koonya Hotel was restored and forms the cornerstone of the entire accommodation and entertainment precinct on the Sorrento foreshore. It is located at the bottom of the hill that turns and climbs into the Sorrento township.

Visually, aesthetically and spatially, the Continental Hotel at the top of the hill, forms the key entry focal point. It sets the character expectations of Sorrento: based on its heritage values represented by a rich legacy of limestone buildings, and an urban scale with low rise commercial development, in a seaside environment. Any redevelopment needed to be sensitive to the Hotel and its site's innate and wider values. In contrast to the Koonya development, there was little community and stakeholder consultation, and no discussion which could have enabled a satisfactory economic and redevelopment outcome which successfully addressed heritage and place values. In the end the Council refused the development. It found itself caught between idealistically wishing to enable redevelopment, while at the same time, needing to respect the philosophy and intent of their

planning scheme, and their historic character policies and guidelines for the Ocean Beach Road precinct.

What did the community learn from its failure to save the Ozone? The principle lesson for those involved was misunderstanding and underestimating the role of Heritage Victoria. It surprised and disappointed the opponents of the development that this was sanctioned by an organisation which they had believed would have been sympathetic to their arguments. Other lessons include: resisting the rezoning of commercial premises to residential; protecting the interior of heritage buildings as well as the exterior; listing on-site vegetation on the local historic tree register to prevent its destruction; and finally safeguarding historic hotels from becoming financially unviable. The leverage of this position has been used by others wishing to develop historic buildings in the town of Queenscliff. Other iconic hotels in Queenscliff subsequently threatened to turn their premises into apartments if their development application was not approved (the case of the Vue Grand). The dilemma of preserving heritage buildings, particularly grand hotels, operating in a competitive commercial environment is one that is likely to continue into the future.

Acknowledgments: The authors gratefully acknowledge discussions with Masters students David Allen, Belinda Breheny, Dustin Cashmore and Holly Slater in relation to place and planning; initial research by David Jones in relation to Sorrento planning vis a vis the Koonya and Continental; the help of Doreen Parker, John Alexander and the Nepean Historical Society Archives in relation to the Koonya and Continental Hotel developments; and the insights of David Kenwood and other members of the Queenscliffe Community Association into the Vue Grand and Ozone developments.

Note: Victorian Local Government areas: Mornington Peninsula Shire, Greater Melbourne Outer Metropolitan region, was established in 1994, it covers an area of 723.1 sq kms and has a population of 144, 608 (2011 figures); Borough of Queenscliffe, Southwest region, was established 1863, it covers 8.6 sq kms, population of 3000 (2011 figures).

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The “Spoils of History” as a Mediated Product

An Australian folklore-based example

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It is the purpose of this paper to engage with the challenge of interpreting situations and events in history so that they can be realized as forms of ‘mediated products’. The process and action of mediation has more to do with the ‘domestication’ of ‘the spoils of history’ (Lowenthal, 1996), and the transformation of those ‘spoils’ into present idioms (Gillis, 1997) – including history-linked and heritage-based tourism – than with the practices of serious scholarship and knowledge accumulation. As a contribution to underpinning the mediation process with appropriate levels of serious scholarship, to combat the potential for the ‘dumbing down’ of history (Coles and Armstrong, 2007) and to minimize the distortion and misuse of the ‘facts’ of history (Laurajane Smith 2006), the speculations in this paper are focused on constructing an investigative framework with which to ‘tease out’ the important and distinctive constituents of story-telling and place-making. The underlying intention is to expose the story-telling and place-making components of history which, through mediation and commodification may be incorporated into strategies of planned development. Using an approach adapted from forensic social science (here, drawing on methodologies and tools from geography and semiotics), an episode from Australian folkloric history is used as a case study.

Keywords: ‘spoils of history’; heritage story-telling; heritage place-making; heritage-based tourism; Australian folklore

Introduction

This paper engages with the challenge of interpreting situations and events in history as forms of ‘mediated products’. The engagement is more with heritage than with historical fact *per se*, drawing the distinction from a frame of reference in which ‘history’ is that which historians consider is worth

recording and interpreting, often as potentially verifiable fact, and in which 'heritage' is the companion mediated (sometimes commoditized) product which communicates selected facts and fantasies (see Graham, Ashworth and Tunbridge, 2000, pp. 1-7). The principal concern here is with the formulation of an investigative framework which can underpin the 'packaging' of history and heritage-related resources – 'the spoils of history' (Lowenthal, 1996) – for the niche purpose of history-linked and heritage-based tourism. This particular package has been selected because, amongst other things, it provides an opportunity to speculate on the inputs to the process (and act) of mediating 'the spoils' referred to by Lowenthal and the emergence of a determinable and distinctive product. In part, what is considered here draws together three issues: one of these is Garden's (2006) recent creation of a framework with which to examine the micro-scale of 'heritagescapes', a second is the Gillis (1997) commentary about the intertwining of history and heritage, and the third is the speculations of Coles and Armstrong (2007) about 'the phenomenon of history as popular culture'. Throughout this paper the focus is on exposing those elements which contribute to story-telling and place-making, those which confer a measure of 'distinctiveness' (to the story and/or place), and those which, whilst not focusing on or probing the cerebral depths of the historians' interest (see Borsay, 1991), are inclined towards a twinned experience of enlightenment and entertainment in which situations in history are selected, commodified and transformed into 'mediated products' for popular consumption.

Historians of various persuasions have engaged with commentaries on different aspects of the popularization of history. Lowenthal (1996), in particular, has referred to a 'crusade' engaging with 'the spoils of history', and Peter Borsay (1991) has differentiated within this crusade between approaches which focus essentially on knowledge accumulation and those which focus on unravelling the meanings of landscapes, places, buildings and events, and the expression of those meanings through images, icons and symbols. It is the determined pursuit of meanings (perhaps at the expense of the more cerebral history) which has often generated concerns about the over-commodification and mediation of history in which 'facts' are manipulated (even by, for example, distortion, obfuscation or omission) so that the story and its setting attract popular appeal (on this see especially, Laurajane Smith, 2006).

Teasing out the facts of history is often a convoluted process; if those facts are to be mediated and commodified so that 'the spoils of history' can be readily transposed into a product with commercial value (and consequence) and the historical integrity maintained, a suitable investigative and interpretation framework becomes necessary so that, at the very least, the linkage between fact and fantasy can be traced and exposed. It is the purpose of the experimental investigation reported here to expose such a process for consideration. What is done here accords with an observation made by Wood (2009); in his commentary on what he refers to as 'a historiographical revolution' (p.2) he reports on the study of history – and cultural history in particular – being impacted by the infusion of new perspectives and new subjects, new theories and insights from a range of social science disciplines. The case study presented for consideration here has a disciplinary foundation in the social sciences, where processes and perspectives from 'thinking geographically' and 'the gaze' component of semiotics are pulled into an investigation of a special case within the history of Australia, and more particularly from its folkloric history, as a step towards unravelling the transformation of particular 'spoils of history' into a commodity, a mediated product. The underlying entanglement of story-telling and place-making is shaped by highlighting the attributes of

distinctiveness; Gillis has referred to this as a circumstance where “the past is domesticated, made familiar, translated into present idioms” (1997, p.377).

After a brief review of the nature and scope of ‘the spoils of history’, and an equally brief commentary on mediation, commodification, and the creation of ‘themescapes’, attention is given to the construction of a three phase framework - ‘a scientific mode of ordering’ - which progressively exposes the intermeshing of story-telling and place-making, so as to expose the potential components of a mediated product. The focus is on the process of construction and assembly of an experimental three-phase framework; it may be construed as a tentative and hesitant contribution to the call by Jamal and Kim (2005) for “a well-theorized integrated framework showing the complexity, dynamism, scale and scope of doing a research study related to heritage and tourism” (p.56), and to the historiographical revolution described by Wood (2009).

‘Spoils of history’: mediation; commodification; ‘themescape’

Published commentaries on the nature, scope and range of history-linked and heritage resources – ‘the spoils of history’ – reveal considerable diversity. In addition to the extensive and conventional inventories exposed in sources such as Prentice (2003) and UNESCO (1989, 2003) there are categorizations which emphasize transcendental characteristics (myths, legends, folk tales), while others link ‘the spoils’ to matters of nationalism or to statutory instruments and international protocols. At one extreme of simplicity it has been commented by Johnson and Thomas that ‘the spoils of history’ may be considered as “virtually anything by which some kind of link, however false or tenuous, may be forged with the past” (1995, p.170)

For purposes other than intrinsic and perhaps altruistic knowledge accumulation – the ‘cerebral history’ referred to by Borsay (1991) – information about history-linked resources is generally subjected to processes of mediation and packaging so that the communicability of that information is presented in a form suited to the potential consumer. Some commentators have expressed reservations about interfering with the serious evidence from history (Laurajane Smith, 2006), but others have suggested that making the subject ‘familiar’ (Gillis, 1997) and re-presenting that evidence in carefully controlled forms need not be disruptive nor a case of ‘dumbing down’ (Coles and Armstrong, 2007). Any process of selection, interpretation and presentation is interventionist, and both mediation and commodification are acts of intervention; in a simple three-stage process, selection (the act of ‘teasing out’ the ‘spoils of history’) is the first, mediation (‘deciphering’ the ‘meaning’) is the second, commodification (the act of packaging into a product) is the third, with some of this phase focusing on aspects of further mediation and fine-tuning so as to suit a particular interest (such as heritage-based tourism).

The challenge in the processes of selection, interpretation and presentation is to at least suitably contextualize whatever history-linked issues are exposed for public, and especially popular, consumption. As Crang (1997) has observed, any single case of commoditized and mediated history and heritage-based story-telling and place-making is likely to have little more than a temporary ‘shelf-life’, as it becomes replaced by new stories or places of interest, or new forms of presentation, or becomes subjected to new instrumental policies and controls which affect its capacity to sustain (popular) interest. The leveraging of stories and places to meet consumer expectations is commonplace, not least in the cases of the metamorphosis of urban landscapes. Myriam Jansen-

Verbeke (1998) has carefully documented the commodification of urban changes and metamorphosis in a number of Dutch heritage-significant townships, describing as 'tourismification' the process of tourism-induced engineering to achieve a good fit of story and place and product. Such specially-formed areas are almost invariably 'themescape'-based, exhibiting a critical mass of distinctiveness and themed attractions. However, mediating 'the spoils of history' is a more challenging task than simply achieving the popularization of history.

Outline of a framework: 'Teasing out', 'deciphering', synthesis

The remainder of this paper addresses the construction of the investigative framework foreshadowed in earlier paragraphs, and it includes a brief review of a sample of inputs linked to that framework which feature in a case study embedded in the history of urban and rural Australia.

In its most simple form the framework has three phases, with both the overall configuration and the interlinked components conforming closely to a structure outlined by the Nobel Laureate Elinor Ostrom (2009, 2011) as a device which can accommodate both methodological and conceptual aspects of enquiry, and especially as a research instrument with which to collect information, to organize the collected information, to analyse that information, to facilitate the identification of potentially relevant variables and sub-components of the study topic, to pose questions for direction-specific enquiry, to improve levels of interpretation and understanding, and to form building blocks for the effective creation of new revelations and commodified products. The three phases may be summarily described as 'teasing out', 'deciphering' and synthesis, with the third of these phases being capable of accommodating the addition of specialized interpretative viewpoints which respond to the possible need of fine-tuning (or, as Ostrom claims, being 'well-tailored to the particular problem in hand', 2011, p.9), especially so that the actions of transformation, reformulation and 'mediation' can expose the distinctiveness of the potential product engineered from and around the selected 'spoils of history'.

There are, of course, already many existing conventional social science-based qualitative methods of inquiry which can provide useful starting and general points for an exercise of this kind, but a case can be made that the special circumstances of history-linked studies deserve a purpose-designed framework, albeit with disciplinary associations with the social sciences. A number of recent commentaries have expressed concern about the suitability of many of the standard approaches often used repeatedly with little adjustment to suit the special circumstances being researched. Recent collections of cases in heritage studies edited by, for example, Sorensen and Carman (2009) and Waterton and Watson (2010) have commented on some of the difficulties encountered in 'teasing out' and 'deciphering' the inputs to the stories being told, and especially the influences which have given shape and substance to the process of place-making. In many ways these edited collections have almost innocently supported the advocacy of Jamal and Kim (2005) for the construction of a well-theorized and integrated framework capable of coping with the complexity, dynamism, scale and scope of investigative issues in heritage. Some commentaries in associated fields of enquiry have referred to the need to search for 'novel' ways of discovering, revealing and interpreting relevant information including constructing explicit integrative frameworks (Franklin, 2007). Often these tasks are frustrated by working within the confines of particular disciplinary boundaries; two options have been canvassed to mitigate this, with, for example, the social geographer Doreen Massey strongly advocating what she refers to as 'conversations between

disciplines' and the educationalist Alice Rivlin urging the adoption and adaptation of what she has described as 'forensic social science'.

All of these provocations have been taken into account in the formalization of the investigative framework to be described here as 'a scientific mode of ordering', with its intention of enabling the eventual interpretation and refashioning of the evidence of history into forms of mediated products. In summary, while the process of exposing the evidence of history remains constant it is the different informational needs which give shape to how that evidence is presented; the evidence *per se* remains the same, but it is the engineering of the fit of the story-telling and place-making evidence which gives rise to the different products, each with its own story-line, place-relationships, 'critical mass' and distinctiveness (Urry, 1992). To borrow from Mary-Catherine Garden's (2009) exposition about her 'heritagescape' framework, the aim here has been to construct the framework so as "to capture the sense of heritage sites as both tangible and intangible spaces" (p.270), and so as to "explicate meanings and patterns" (Moustakas, 1990, p.44).

To recapitulate briefly, and to input from sources mentioned previously in this paper, the investigative framework being considered here as 'a scientific mode of ordering' is composed of the following:

- Firstly, as a structure of three interlinked phases – (a) a phase to 'tease out' and expose the range and scope of 'the spoils of history', and the contributory resources to and the influences on the selected episode of history, the story and the associated places; (b) a phase to 'decipher' how those inputs are brought to bear on the story, probing for linkages, dependencies, interdependencies, and configurations, and determining how 'the spoils of history' may be transposed into commoditized products; and (c) a phase – synthesis – which accommodates the actions of transformation, reformulation and 'mediation' so that the targeted 'spoils of history' can be aggregated into a recognizable structure ('themescape') which exposes the distinctiveness of the story and the various place associations; and
- Secondly, as a means of refining the 'themescape', one or more social science-based indicators can be applied to the aggregated information so as to expose the distinctiveness of critical aspects of the story and its associated places; for example, for the case study which follows later in this paper, the two indicators used are 'thinking geographically' (see Shurmer-Smith, 2002) and 'the gaze' component from semiotics (see Pearson and Warburton, 2005; Sless, 1986) which, in tandem, contribute to Urry's (1992) propositions that "it is the distinctiveness of the visual that gives all sorts of activities a special or unique character" (p.172) and that the aim of mediation in heritage-based tourism is to create a product which is "something distinctive to be gazed upon ... the signs collected by tourists have to be visually extraordinary" (p.173).

The overall aim of mediation is to engineer a good fit of story and place and product.

Across the three phases of the Ostrom-derived 'model' framework, there is inevitable engagement and entanglement with both substantive (subject-specific and subject-related) and methodological issues. Of the three phases, the first – the 'teasing out' phase – is formulated mechanistically and conventionally to expose the range and scope of 'the spoils of history', including, for example, the

resources of 'physical and material reality' such as (a) the *in situ* physicality of places, spaces, sites, tracks, structures and buildings, archaeological remnants, artifacts, and such textual records as documents, diaries and reports, and (b) the physical presence of these resources removed to and relocated off-site to museums, galleries, libraries and similar depositories, in public or private collections. The relative significance of these 'spoils' to the story being told and the place being created can be differentiated into at least five categories - intrinsic, symbolic, personal, economic, social and political. In the second phase - 'deciphering' - the analysis becomes concerned with the tasks 'to capture the sense', to 'explicate meanings and patterns', and to identify 'something distinctive'. It is these tasks which are interpretive rather than focused on fact-finding. There is a triad of contributory components to this phase - 'powerscape', conversion, and configuration. The first aims to unravel the influence on the resources of a 'powerscape' (Jacobs, 2006) which includes, for example, the record of history (from disparate sources), the actions of public agencies (such as strategies for safeguarding 'the spoils of history'), the attitudes towards commodification by entrepreneurial agencies, and the interest shown by the public towards history and heritage. Conversion is the second of the components; its principal focus is to expose and interpret the relative importance to the process of transforming 'the spoils of history' into products of, for example, the systems and operations of government, the agendas of interest groups, the impacts of business decisions and technical planning and design issues. The third of the triad's components is concerned with interpreting the configuration of the history-linked and heritage resources, both as a 'natural' or as a contrived spatial arrangement and specially-created 'themescape'. In aggregate these three components in this phase tighten the focus to the story-telling and place-making tasks/.

The third and synthesizing phase is that in which 'the spoils of history' become refashioned, converted and mediated into a product with a distinctive 'physical and material reality', and with a capacity to be commodified for any one of a range of purposes (for example, economic development, education, entertainment, identity formation, information promotion, raising community awareness, stimulating crafts, tourism, urban conservation and/or redevelopment). This is the phase in which the story-telling and place-making conflate. Whereas the previous phases and their components are likely to be assessed *in vacuo* (almost a contest-free 'zone'), it is in this phase that the focus sharpens to become situation-specific and distinctive. Engagement with mediation and commodification is not without criticism; whilst these processes embody the capacity to maximise the intrinsic or contrived economic potential of the selected 'spoils of history' they may also weaken the intrinsic value and authenticity of the resource as it becomes associated in some way with a commercial use. It becomes a principal task of the synthesizing, conversion and configuration process to be respectful of the resource and to avoid the challenges presented by, for example, (a) Goulding (2000) with his claim that popularizing heritage "sacrifice[es] scholarly credibility by presenting only those images of history that have broad market appeal" (p.836), (b) Waitt (2000) with his claim that the deliberate selection of versions of history may lead to stereotyping with replicas and copies, and (c) the claim of Halewood and Hannam (2001) that mediation may lead primarily (as a default position) to audience-friendly reconstructions and re-enactments. These may be mere lapses of precision about, for example, locations, sequences of events, credibility of the 'texts' and 'things', the re-presentations of elements of the story in artworks, and so on; and, as the story or parts of the story become commodified the inventory of matters of fact and fiction may become intermeshed and become mediated into signs, symbols, and replicas. Various layers of meaning can be exploited in the process of mediation; the favoured

situation would be where the verifiable ‘facts’ form the background (and the substance for the serious historian – see earlier), while the foreground is taken up by those elements of the story which (a) are particular to a selected situation (a person, a place, an event, a period of history), (b) may be differentiated according to selected distinctiveness-creating characteristics (discipline-based approaches), and (c) can be readily commodified and transformed into a mediated product for popular consumption.

The concluding element within this ‘scientific mode of ordering’ aims to implement the previously-listed commentaries of Moustakas (1990 – to ‘explicate meanings and patterns’) and Garden (2009 – ‘to capture the sense of heritage sites as both tangible and intangible spaces’), by exposing carefully-selected and critical aspects of the story and its associated places, that is, to expose the characteristics of distinctiveness (as nominated by Urry). For the case study which is commented upon briefly and selectively in the next section, two social science-based filters were applied to the final phase of the synthesis – a spatial reference, ‘thinking geographically’ and a semiotic reference, ‘the gaze’. In summary, these distinctiveness-revealing filters embodied mediating (intervening) factors such as:

- For the geographical filter – location, placement and association, positioning, spatial arrangement, patterns, symbols, identity, ‘*genius loci*’, sense of place, critical mass, accessibility, and sources of influence, jurisdiction, prescription and mediation; and
- For the semiotic (‘gaze’) filter – place, ‘thing’, object, document, tangibility, interpretability, visibility, authenticity, substitution, symbolism, scope and scale, legibility and communication.

One possible synthesis to emerge from combining these two filters is composed of six characteristics of distinctiveness; these characteristics are:

- historical context (both past periods and the current period);
- physical elements - places, sites, spaces;
- material elements - ‘texts’ and ‘things’;
- events and happenings;
- forms of presentation (and re-presentation);
- people associated in some way with the story.

Of course, the choice of these two filters nudges this study into a particular investigative, analytical and interpretive direction; the choice of other filters could be expected to take the investigation and analysis into a different direction, and even a different elaboration of these two filters may divulge other characteristics.

A test case: an example from Australian history and folklore

Having put in place the ‘bare bones’ of an investigative framework this narrative progresses here to an examination of how the mediation referred to in that framework may be used to ‘tease out’ the circumstances of a heritage story, and especially those circumstances which contribute to a particular and distinctive ‘product’. This process engages with both story-telling and place-making, and it focuses attention on the special case of the mediation of folkloric resources, and the even

more particular case of the folk hero as one of those resources, in the commodified practice of heritage-based tourism.

Whereas historians are generally dismissive of folkloric resources as serious contributions to the study of history, folklorists tend to suggest that whilst not an impeccable and invariably credible record of history folklore can be a valuable resource by adding an interpretive dimension to verifiable fact. For example, Lowenthal (1996) has claimed that the resources of folklore contribute significantly to any checklist of principal factors in art, economic, political and social history; and, in Toelken's (1996) study of the special case of the folk hero General George Custer, he has claimed that Custer "is as much a construct of folklore as an item of history; without the perspective of both fields his position would be impossible to understand" (p. 140). The special case examined here is in a similar position, astride both history and folklore; it is from the treasure trove of Australian folklore, and it focuses particularly on the spatial and semiotic evidence of the story of the bushranger and folk hero Ned Kelly. It is the stories, events and happenings, tangible 'things' and places linked to any folk hero which, through processes of careful selection, treatment and mediation become realized as products, as created 'thescapes' or as 'themed attractions' for the purposes of heritage-based tourism. This is the case considered here.

The mediation of the Ned Kelly story has become one of the most significant acts of commodification of the 'spoils' of Australian history. In summary, the story of this folk hero traverses a period of little more than twenty years during the last few decades of the nineteenth century, and it is coincident with the final few years of British colonial influence, the emergence of the independent States in Australia, the fracturing of relationships between the rural communities and government, and a period of hardship for many rural families which contributed in part to the emergence of the bushranger fraternity, and to folk heroes such as Ned Kelly.

The biography of the Kelly family includes references to such evidence of 'physical and material reality' (places, 'texts') as where the Kellys first lived, where Ned Kelly was born and grew up, where the children went to school, the areas across which the family endeavoured to engage in farming activities, the remnants of some family houses, and the burial places of some family members. It also includes references to locations closely linked to the bushranging apprenticeship of the Kellys, to their skirmishes with the police, to their court appearances and to the gaols in which they spent time, to the sites of the principal criminal activities indulged in by the family members and their friends including the bank robberies at Euroa and Jerilderie. Further signs and symbols of Kelly associations include, for example, the suits of armour worn by the Kelly gang at the Glenrowan siege, the Cameron and Jerilderie letters authored by Ned Kelly, the sash awarded to Kelly by the father of the boy he rescued from drowning at Avenal, the Kelly tree at the site of the gun fight at Stringybark Creek, the cells and execution place at Melbourne Gaol, and the Kelly death mask. Whilst some of these signs and symbols are located *in situ*, others, and especially those discovered at archaeological digs (such as the guns and cartridges), have been removed to museums, or have been commemorated in artworks on display away from the location of their happening, and still others have become degraded through lack of conservation; examples of degraded sites include the original Kelly house (at Beveridge), the family farmhouse (at Greta), and the siege site (at Glenrowan). Some of the events linked to the Kelly Story (such as gun battles, arrests, court hearings, bank robberies) have become celebrated by modern local re-enactments. Linked to the stories and places of most

folk heroes are ‘casts of a thousand actors’, (including, for example, family members, sympathisers, government officials, police, judges, prosecutors, defence attorneys and so on), each of which can be linked to the story by their participation at particular places and episodes, and which have become ‘immortalized’ by monuments and memorials. In the Kelly story, such participation includes, for example, the presiding judge (Sir Redmund Barry – with his association with the founding of public institutions such as the State Library and the University in Melbourne), members of the Kelly Gang (and their gravesites across various townships in north-east Victoria), and the police officers caught up in the Stringybark Creek gunfight.

Two further elements of the Kelly Story are susceptible to the ‘teasing out’ process aligned with the acts of geographical and semiotic filtering; one of these focuses attention on the substance of the over-arching context of the story, and the other is concerned with the ways in which the story is communicated in a diversity of arts-linked forms. As backgrounding, and spatially and semiotic referencing, there is the general and over-arching context of the physical landscape which influenced (a) the nature of the economic, political and social history of the period, and especially (b) the conduct of government administration and policing in the remote regions of the State of Victoria which generated mutual social and political antipathies between various groups in those remote regions and which contributed to the ‘social banditry’ of the type exhibited by the Kelly Gang. The records of history (see earlier, as one of the factors of ‘powerscape’, with those records now held in various public depositories) reveal the social and political disturbances which underpin the activities of the Kelly Gang, and the eventual conciliatory responses of the government. Subsequent popular, academic and professional interest in the Kelly episodes has contributed to the mediation of the ‘physical and material reality’ of that story and the creation of, for example, public policies and planning measures which give effect to the ‘what’ and ‘how’ dimensions of heritage conservation and to control over other forms of development in the Kelly ‘zone’, the active pursuit of story components through both public marketing strategies and the uptake of commercial opportunities resulting in the creation of Kelly-linked products, and the creation of a diverse range of arts-linked products in response to both artistic and popular interest in the Kelly story. The presentation and re-presentation of elements of the Kelly story are manifest in, for example, narrative forms, art forms (paintings, including the Sidney Nolan series in the Australian National Gallery, and the tapestry at Benalla), performance forms (including commercial films, documentaries, dramas, musicals, readings of Kelly diaries and other contemporary documents), symbolic forms such as monuments and memorials (at Mansfield, Melbourne), periodic re-enactments and celebrations (such as the annual Kelly celebration at Beechworth and the bi-annual celebration at Jerilderie), and even particularized signage along the Hume Highway, in the Benalla cemetery, and around Jerilderie.

Conclusion

It has been the purpose of this paper to engage with the challenge of interpreting situations and events in history as forms of ‘mediated products’, with a focus particularly on heritage and derived commoditized products from ‘the spoils of history’ (Lowenthal, 1996) rather than on what Borsay (1991) has referred to as ‘cerebral history’. The particular challenge for mediating ‘the spoils of history’ for a purpose such as heritage-based tourism is not necessarily in the protection of the historic ‘facts’, but in the selection of those ‘facts’, the presentation of them, the claims made about them, and the degree of manipulation and sanitization imposed so as to endow them with

heightened consumer appeal. One of the principal aims of the framework described briefly here has been to provide a mechanism with which to draw into the foreground those measures of distinctiveness which have (a) high factors of recognition, familiarity and appeal, (b) a determinable impact on local, regional, national history, (c) clear association with a particular geographical area, (d) a legacy of tangible items (some of which have been transformed into symbols and signs, and perpetuated through place-linked anniversary celebrations and re-enactments). What has been reported here is methodological and operational rather than a substantive contribution to Borsay's 'cerebral' history.

From different perspectives, and with different intentions, Gillis (1997), and Coles and Armstrong (2007) have referred to the 'domestication' and even the 'dumbing down' of the past so that the stories and their places may become accessible in the popular domain. In preparing the tentative 'scientific mode of ordering' considered here, the intention has been to overcome any tendency of 'dumbing down' by devising an investigative structure which, whilst engaging with the cerebral realm of the facts of history, can expose those elements which can be 'translated into present idioms' (Gillis, p.377), one of which is heritage-based tourism. It is likely that it is the careful selection of the two filters as tools of mediation (here, the geographical and the semiotic) which will transform and render the facts of cerebral history suitable for expression as a commodity, a product. Careful selection of the tools from forensic social science is likely to be the key to providing inputs to forward planning of places and situations with heritage-based tourism potential.

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The Contributions of R.T. Kennedy to New Zealand Planning

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Robert Terence Kennedy (1903-1997) was the foundation professor of town planning at the University of Auckland from 1957 until his retirement in 1969. During these years and into the 1980s he also practiced as a design consultant as well as advising governments on various planning matters. Kennedy had no tertiary qualifications but brought a wealth of experience from his time in the UK. He began his working life as an architectural assistant in Manchester and by the early 1940s was working with William Holford. This propelled him into a key role in the UK wartime planning bureaucracy alongside Holford and Gordon Stephenson. From 1943-55 he was Chief Planning Officer of UK Ministry of Housing and Local Government. He thus brought to New Zealand knowledge and expertise steeped in the British town and country planning tradition. Apart from establishing the first university planning qualification, his NZ career is also marked by high profile engagements in various design projects: waterfronts, civic centres, and motorways. This biographical paper stitches together the main lineaments of his professional life. It revisits his planning ideas, the firm moral compass guiding his work, his achievements and frustrations

Keywords: RT Kennedy, planning education, planning practice, New Zealand

Introduction

RT Kennedy - Robert for formalities, Terry to friends and colleagues, 'Prof' to his students – spent the first half of his life in Britain, initially as an architect and then as a town planner where he made his name as a senior official in the wartime Ministry of Town and Country Planning and its postwar successors. The second half of his life was spent as a planning academic and consultant in New Zealand. He played a key role in establishing professional education for town planning in New Zealand upon his arrival in 1957 to take up the foundation chair at the University of Auckland through to his retirement in 1969. His responsibilities involved promoting the understanding of town

planning and elevating community and professional discourse. The position also enabled the right of private practice which he pursued to the mid-1970s.

Unlike his eminent British contemporaries from the 1940s, William Holford and Gordon Stephenson, Kennedy has not been the subject of substantive biographical study, although his name surfaces intermittently in accounts of post-war reconstruction in Britain.¹ Stephenson long urged Kennedy to follow his lead in writing an autobiography but there was any number of excuses, most tellingly the self-deprecating feeling that Kennedy's own story would not be of particular interest for a latter-day readership. His New Zealand years are thus even less well chronicled. For over a decade Kennedy carved out a high profile in educational and professional circles, but there has been little serious study of the man, his ideas and legacy. Miller's (1998) authoritative review of NZ planning history literature turns up no references to him. However, her later history of the NZ Planning Institute (Miller 2007) establishes his contribution as a key educational figure active in professional matters. Sinclair (1983) weaves him into his official history of the University of Auckland. And we glean some understanding of his life and professional contributions from short obituaries and memoirs.²

Kennedy arrived in New Zealand with a small, energetic but somewhat fragmented town planning movement already in place, new enabling legislation on the statute books, but an institutional environment for professional education sadly undeveloped.³ While the three established professional professions for architects, surveyors and engineers vied with each other to command the new field of town and country planning, qualified planners came from British immigrants, ex-servicemen who studied in London after World War Two, or dedicated individuals undertaking a long and laborious external study to meet the British Town Planning Institute's (TPI) requirements. Complementing the fledgling professional discourse was a growing community appreciation of the need for expert land use management and design control, as well as a developing literature (e.g. Martin 1949). A notable initiative was the town planning school of Wellington's Architectural Centre supporting students undertaking external TPI study and which involved leading planning lights such as John Cox, Al Gabites and Maurice Patience; it ran from 1949 up to the launch of the Auckland program in the late 1950s.⁴

This paper focuses on a recapitulation of Kennedy's own story through a biographical perspective. It represents a preliminary, largely descriptive synopsis from a more extensive investigation of his career and draws mainly on his personal papers and discussions with former colleagues and family. It concentrates solely on his time in New Zealand. There are four main sections. The first provides a brief overview of his life and career with a review of the circumstances of his appointment at Auckland and subsequent life in New Zealand. The next three sections explore the main strands of interest in his professional life: (1) contributing to public debate through talks, papers and commentaries leading to a brief consideration of his core planning ideas and philosophy; (2) his engagement with planning education as foundation chair at Auckland; and (3) his work as a planning consultant, notably for the Auckland Harbour Board and the Wellington City Council.

A life in architecture and planning

Kennedy was born in West Didsbury, Manchester in September 1903. After school and a desultory period in a local bank he was articled to his architect father William Kennedy and attended courses at Manchester College of Technology and School of Arts. From 1925-1939 he worked as an architect

in local government. After completing his articles he first joined the staff of the Manchester City Architect. During this period he married Mary Yelland, a mathematics graduate from Bedford College, and they would have two sons: Nicholas (born 1943) and Phillip (born 1947). From Manchester he moved to Essex County for two years (1935-36) and then to the office of the Liverpool City Architect and Director of Housing, becoming responsible for the design of several central area redevelopment projects (1936-39). In 1940-43 he joined William Holford in the supervision of large wartime building contracts for the Ministry of Supply, first for a Royal Ordnance Filling Factory outside Liverpool and then several hostels to house munitions workers. In early 1943 he joined the new Ministry of Town and Country Planning. This was his entrée into town planning proper, working in the 'Planning Technique' section alongside Holford and Stephenson with the focus on new planning standards and techniques. After the war he was appointed Chief Planning Officer in the Directorate of Technical Services in the Ministry of Housing and Local Government. In this role he was involved in a more expansive range of town and country planning matters: the replanning of blitzed cities; the selection, designation and planning of 12 new towns; national parks; and examination of advisory city, regional and county borough plans. In 1955 he entered private practice with Holford in London. The working relationship with Holford was less open than their earlier partnerships (Cherry and Penny 1986), so despite taking a long time deliberating on leaving the Ministry he was soon looking again for a more rewarding position, even lodging an unsuccessful application for Architect of the City of London.

In 1956 the Auckland chair fortuitously came to his attention. This position was the culmination of a long lobbying campaign dating to the era of John Mawson, the second NZ Director of Town Planning from 1928 who conscripted to the cause Professor Cyril Knight of the School of Architecture, Auckland University College (Miller 2011). At various times rival professional bodies representing town planning interests took up the cudgels: the Town Planning Institute (formed 1930), the Town & Country Planning Association and the Institute of Professional Town & Country Planners (both in the late 1940s). The preferred model by 1948 was a chair as head of a separate school within a faculty of architecture at Auckland University College. Knight continued to play a key role and there was already a Senior Lecturer in town and country planning in architecture (Gerhard Rosenberg). The matter was considered exhaustively by Council, Senate and various committees into the mid-1950s. A member of Council, Norman Spencer, gave an endowment of £7200 to support the chair for the first four years. Spencer was a businessman, lawyer and philanthropist involved in the transport industry and chairman of the Auckland Transport Board from 1955 -1964 (Glenie 1972).

Kennedy, then aged 53 years was one of the two shortlisted candidates, alongside Neil Abercrombie, son of the legendary Sir Patrick. Neil had just taken up the position of Town and Country Planning Commissioner of Tasmania after five years as Senior Lecturer in Town and Regional Planning at the University of Melbourne (1951-55). Holford was a referee for both men, but Kennedy also enlisted influential support from Dame Evelyn Sharp, the Secretary of the UK Ministry of Housing and Local Government; Robert Matthew, Professor of Architecture at Edinburgh University; and Gordon Stephenson, by then head of City and Regional Planning at the University of Toronto. Applications were deliberated by various university entities including the professorial board and there was a report of a special 'London Committee'. The post was offered to Kennedy in October 1956. Although not a planner by training, his decade in the Ministry had seen him a key participant in a momentous period in British planning. He sailed with his family from Southampton on the "Southern Cross" and

arrived in May 1957 to take up his appointment: first head of the Department of Town Planning in the School of Architecture at Auckland University College.

Kennedy says he arrived in Auckland virtually “penniless” which seems a gross exaggeration but nevertheless enlisted the assistance of a distant relative in building a family home to his own design in Remuera.⁵ This provided a comfortable environment until 1965 when its amenity was compromised by construction of a residential flat building adjacent; he lost a subsequent court case which became a *cause celebre* in damning the legal and technical loopholes of local planning schemes (Northey 1966). Both his sons studied at Auckland University and became architects. At age 65, Kennedy was formally obliged to retire but was reappointed in January 1969 to the end of August 1969 as a transitional arrangement pending the arrival of his successor, Ivan Boileau from the University of Sydney. Already a seasoned consultant, he continued in private practice for several years, interrupted only by a disastrous retirement journey to Britain in late 1970 that lasted only a few weeks. He returned to seamlessly resume his primary part-time engagement as town planning adviser to Wellington City Council until 1974 when he moved to Christchurch to live alongside his son Nicholas in a new dual occupancy development. This marked his formal retirement. His final years were not always happy, with the premature death of Nicholas in 1977, and then Mary three years later after a protracted twilight suffering from dementia. Kennedy passed away in September 1997 just 10 days short of his 94th birthday.

The ‘Conditions of Appointment’ for the Chair of Town Planning dated May 1956 specified several responsibilities: the fostering of public interest and participation in town planning matters as well as directing and undertaking planning research; establishing and teaching into a new Diploma in Town Planning plus ancillary teaching into the Architecture programme; and the right of private practice as a planning consultant. I now look at each of these in turn, starting with Kennedy’s broader role in community outreach and understanding.

Promoting planning

On Kennedy’s retirement, Nancy Northcroft pointed to him as:

... a cooperative and willing participant in many activities outside the University. He has presented papers at many conferences and taken part in many public discussions. All these have benefitted enormously from his objective and critical appraisal of the matters concerned, and from the fearless and sincere way in which he says what he believes to be so (Northcroft 1969, p11).

Between 1957 and 1969 Kennedy’s surviving papers record some 70 talks, addresses, exhibition openings and conference presentations, alongside radio broadcasts on NZBC (including a three part presentation on subdivision, suburbia and housing in mid-1962) and television interviews. Most engagements were in Auckland but he was in demand throughout the country. The subject matter ranged widely beyond general accounts of planning systems and planning futures into presentations on diverse topics such as transport, residential development, urban renewal and civic design. He often defended the contribution of the planning profession too often made scapegoats for criticism. He diligently prepared typescript notes for every talk and quite a few of these eventually made their way to print. This body of work constituted his main research output; there was no funded research

leading to peer review outputs which are the staple of modern higher education research. His was an applied, reflective approach. Kennedy's publications were concentrated in local professional journals such as *The Journal of the New Zealand Institute of Architects*, *New Zealand Surveyor*, *Town Planning Quarterly*, and *New Zealand Local Government*, trade journals like *Home and Building*, community publications like *The City Beautiful*, conference proceedings, and feature articles in newspapers, mostly the *New Zealand Herald*. Not surprisingly, the greatest concentration came in the *(Town) Planning Quarterly* the journal of the NZPI which he co-founded and co-edited with Jim Dart from the early 1960s.

Although the *oeuvre* is modest, he nonetheless wrote consistently and his correspondence in retirement with colleagues such as Dart and Stephenson was prodigious. Much of this writing turned time and again to his experience as a professional planner particularly in London in the 1940s and 1950s. He commented on drafts and contributed detailed recollections for others' versions of planning history such as Myles Wright's *Lord Leverhulme's Unknown Venture* (1982), Gordon Cherry and Leith Penny's *Holford* (1986), Stephenson's *On a Human Scale: A life in city design* (1992), and for a new Danish edition of Steen Eiler Rasmussen's *London: The Unique City* in the 1970s. He felt his writing was inferior to his peers, putting it down to an early working life at the drawing board. Many of his personal letters were abandoned before completion as he apparently struggled with the right prose, apologising constantly for not being erudite enough. This undoubtedly held him back in sustaining a commitment to writing his own story at length. Nonetheless, in re-reading his writings today, one is struck by their directness and lucidity.

Kennedy was frequently involved in public debate in the media over planning matters. He saw this as not just a right but an obligation of academics because of their ability to comment critically "without fear of the consequences", a privilege that "should be zealously guarded by the universities" (Kennedy 1969, p16). Within weeks of arriving in Auckland he was writing letters to newspaper editors on various matters and building a reputation as a critic not afraid to speak his mind. The targets were numerous: the shortcomings of the *NZ Town and Country Planning Act 1953*, central government's approach to urban renewal (1964), transport planning in Auckland (1965, 1973). Even as an 80 year old he was speaking out against what he saw as unscrupulous property development in Christchurch.⁶ He conceded that he won few friends in government or amongst the ranks of politicians and even some of his fellow professionals. "But who, entering the ranks of planning", he reflected, "ever expected to be popular?" (Kennedy 1969, p16).

One of his most controversial engagements commenced almost immediately upon taking up his post at Auckland. Debate was raging as to whether the University should consolidate and upgrade around its historic location in Princes/Symonds Streets or decentralise to a new greenfield campus in suburban Tamaki. Influential members of the professoriate favoured relocation with the prospect of state-of-art buildings and infrastructure. This precipitated a tense, fraught and unpleasant work environment (Sinclair 1983). Kennedy was a pivotal figure in making the case to stay. His review of the general principles involved was his first published paper in New Zealand (Kennedy 1957). Incredibly, Auckland City Council was also keen to see the University move and lodged an appeal with the Town and Country Planning Appeal Board against confirming the central city as the university site. The Council's appeal was disallowed in August 1960 but came at a cost for Kennedy. Unhappy at the lack of support for his stance, he resigned from Council, the Professorial Board and

the New Buildings Committee. Uncomfortably, both the Chancellor, William Hollis Cocker, and the VC, Kenneth John Maidment, supported a move. The relationship with Cocker was fraught throughout his tenure but he continued to get along with Maidment who often took him for Friday night drinks at the patrician Northern Club.⁷ His relations with other senior academics seem to have been generally cordial but distant; Kennedy's lack of formal academic qualifications made him something of an outsider in academic circles.⁸ He looked back many years later to declare that 'life in the University was far from easy, after ten years of it I was glad to retire emeritus at 65'.⁹

Through his advocacy for causes, his public lectures, his teaching and his consultancy an appreciation of his planning philosophy can begin to be assembled. He was, as he confessed, a relative newcomer to planning having little formal involvement until joining the British civil service in the early 1940s. His formative views were thus shaped largely by practice and through his working associations with people like Holford, Stephenson, Thomas Sharp and Colin Buchanan. Intellectually, his influences were not Patrick Geddes or Raymond Unwin, whom he both regarded as eccentric, but Lewis Mumford, whose *Culture of Cities* (1938) he found inspiring, Patrick Abercrombie, Clough Williams-Ellis, and, perhaps surprisingly, William Lethaby, whose essay "Towns fit to live in" (1918) had first aroused his interest in planning.¹⁰ "As soon as greater interest in town life can be aroused improvements must be undertaken in every direction", wrote Lethaby (1922, p27).

Kennedy was first and foremost a physical planner. Time and again he returned to three crucial yardsticks in making and evaluating plans: the economic, the social and the aesthetic. He was a firm believer in the importance of what we would now term urban design - though rarely using that term - for its power in communicating the visions and elaborating the details that matter for successful planning on the ground. He left no great personal statement but his inaugural lecture entitled 'Design in Environment' comes closest. This was delivered at University Hall on 27 March 1958, an occasion also marking the transition of the Auckland University College of the University of New Zealand into a University in its own right (Kennedy 1958, 1958b). His major theme was the need to value the whole environment as conducive to better living: "the control of physical development on the land yields negative results if there is no design". He took the opportunity to reflect upon themes which would drift through his writings for the next decade such as the complexity and tedium of statutory planning, the challenge of the motor vehicle, the best new towns as model developments, and the subtopian tendencies of NZ suburban development.

Other dimensions which he valued come through his lectures and articles: the importance of interdisciplinary endeavour (albeit with the planner as team leader); the relevance of strategic and master planning as comprehensive forward-looking visions; and public participation. He was an unapologetically pragmatic planner which could be partly attributed to his years in Whitehall: "a theoretical future is so often at odds with immediate and practical solutions" (Kennedy 1969, p14). Alongside that was the need for simpler, realistic planning schemes. He channelled many of his ideas into constant critiques of New Zealand's main planning legislation, the *Town and Country Planning Act 1953*. He saw it as overly prescriptive and legalistic, particularly in its voluminous regulations, and offering few opportunities for positive planning or community involvement. His early criticisms of the complexity and the administrative demands of the legislation were not well received by the Town and Country Planning Directorate within the Ministry of Works in Wellington with whom he was offside on many issues. Nevertheless one of his most original ideas called for greater

centralisation: this was the recommendation that planning survey research and data gathering be taken away from local authorities and resourced at the national level (Kennedy 1968), an idea that would have come from his experience in central government in Britain (Kennedy 1949).

The type of centralisation which drew his ire was over-building of central business districts. He was anti high-density, seen as compromising spatial standards of living. New Zealand's main urban problems came not from "blitz and blight" but traffic.¹¹ While acknowledging the general quality of material life, he was also critical of the regimented and sprawling suburban landscape; 'in physical terms, a mess' (Kennedy 1968, p3). The middle way was sensible, practical planning, looking towards the closer integration of land use and transport planning; encouraging mixed use through more flexible land use zoning rather than monolithic spatial segregation; mixing public and private development, and enhancing urban design standards. His overriding yardstick was securing a common-sense balance of individualistic demands and collective welfare in the "public interest", a theme he returned to frequently in his writings (Kennedy 1965). What was notably missing to later-day eyes was a true appreciation of environmental management which helps underpin planning today, plus virtually no mention of Maori or lifestyles beyond the nuclear family. Kennedy was a product of his time and training as an architect-planner; but the early sensibility to urban design stands out.

Upon retirement from the Auckland chair, Kennedy was well aware that his campaign to promote community understanding of planning and reform the planning system still had a long way to go. In 1968 less than half of all local authorities had approved and operative planning schemes. The number of annual appeals against planning decisions had increased exponentially. And "planning in the eyes of many, including many councillors, has become identified with a seemingly unjustifiable bureaucratic interference with the rights of the New Zealander to enjoy life fully" (Kennedy 1968b, p3). At least the number of qualified professional planners was slowly growing as graduates from the Auckland programme took up positions around the country.

Teaching planning

Kennedy's brief from the University was for instruction to commence in the first session of 1958. He commenced preparation before leaving Britain by acquainting himself with curricula from various English universities. On arrival he consulted members of the architects, surveyors and engineers professional institutes and government officials to arrive at an educational model acceptable to all. The structure eventually arrived at called for a one-year full-time postgraduate diploma course with late afternoon/evening classes. Kennedy did not see this as a narrowly-focused academic qualification but more a post-professional experience aimed at men with "mud on their boots" (Kennedy 1958c, p213). Six main subjects were devised: two foundational papers in "Town Planning Theory and Techniques" complemented by instruction in Geography, Civil and Traffic Engineering, Surveying, Architecture, and Law, all as related to Town Planning. An additional thesis was "a test of how you apply what you know to a particular problem" and students were also exposed to drawing office and field survey work. This structure remained substantially intact until 1968 when an honours stream was introduced. Papers were taught by both core planning staff and other university lecturers. By 1968 the core staff had grown to five members - Kennedy, Gerhard Rosenberg from Architecture, two former star students (Jim Dart and Mike Pritchard), and Harold Turbott, who taught landscape architecture part-time. They were assisted by senior instructors from other

departments such as Professors NA Mowbray (Engineering), FJ Northey (Law) and Cyril Knight from Architecture. Honorary Visiting Lecturers delivering guest lectures included well known and respected professionals like JW Cox (Ministry of Works), FWO Jones (Auckland Regional Planning Authority), and Nancy Northcroft (Christchurch Regional Planning Authority).

Kennedy's main teaching responsibilities were two co-taught papers: one, the foundational paper on theory and techniques providing an overview of planning history, governance, design, survey, and methods; secondly, the architecture for planners paper, an introduction to architectural composition and materials, site planning, landscape, and urban design. Kennedy, who had departmental secretary Betty Cutter type out all his lectures, later recalled:

Just think of the bloody awful lectures that I had to give. I had never before given a lecture – on anything. I was no scholar, had had an insufficient education, had no degree had even failed matriculation ... When I saw what I thought I had said when typed out by Betty I was appalled and ashamed.¹²

Some former students have mixed recollections. Robert Riddell, in the first crop of students and later professor at Auckland himself, confirms that Kennedy was not a great lecturer to begin with and somewhat stuck in London in the 1940s but picked up enormously to become “much more of a Kiwi and a popular figure in NZ planning”.¹³ Michael Wearne remembers a practitioner rather than a theorist “not surprisingly”.¹⁴ Henry van Roon and Dick Smythe both remember an intense and alert lecturer with a wide general knowledge who cared about his students.¹⁵ Jim Dart, student and colleague, remembered him as:

... always stimulating in his enthusiasms and his passions, always constructive in his criticisms of poor design and indignant at the crassness, lack of vision and ad hocery of so much civic decision-making. Like the Ancient Mariner, once within range of his voice, he would capture his audience with talk at great length on a wide range of topical issues and always with a total recall of past events (Dart 1998).

Bill Robertson, later a President of the NZPI, captures further the character of the classroom:

His courses were all about the process and the various options and not expecting right answers. He would stand there looking at you over his rimless glasses and always able to suggest another point of view when one thought one had finally settled on a ‘right’ point of view. He was very good at providing wider references when various planning issues arose. He could always find alternative ideas or references to keep the planning possibilities open ... He used the diversity of student backgrounds to encourage us all to see the value of other skills, points of view and techniques.¹⁶

The diploma struggled early for students. Kennedy recalls the “birth pangs” as “agonising”.¹⁷ In 1958 there were 14 students (only four full-time); by 1969 this had risen to 59 students (12 full-time) (Northcroft 1969). By then there had been 66 graduates representing perhaps two thirds of all professionally qualified planners in New Zealand (Kennedy 1969) and 32 of his past students had been admitted as full members of the NZPI (Northcroft 1969). In 1969 the *Town Planning Quarterly* stated that “There is barely a government department involved in aspects of land use planning or a

territorial local authority of any consequence that does not have at least one ex-student on its staff" (Anon 1969). The Auckland diploma remained the principal means of providing professional training for town planners in New Zealand until 1974.

Practising planning

Kennedy's engagement with actual planning projects commenced in the early 1960s, all characterised by the intersection of his design-based physical planning, commitment to the public interest, and pragmatic balancing of competing interests. Three major consultancies are evident: two for the South Pacific Commission, a major engagement for the Auckland Harbour Board, and a wide ranging advisory brief for Wellington City Council over a number of years. Each is described summarily in turn.

First, and initiated under the auspices of the South Pacific Commission (now the Secretariat of the Pacific Community), were two reports. In 1964 with Jim Dart he provided an overview of "the factors to be considered and the problems to be solved in planning for the future development" of Port Vila in the New Hebrides (now Vanuatu).¹⁸ In 1969 with Dart and Mike Pritchard he reported on future planning possibilities for Nuk'alofa, the capital of Tonga, including a development scheme for a new government centre complex.¹⁹ These experiences began to open up Kennedy's thinking to different environments and cultural expectations and alternate ways of doing planning. His reports resisted the temptation to fit the situation "into a Procrustean bed of town planning as commonly practised in the UK, the US or NZ".²⁰

Second came Auckland where his chief client was the Harbour Board. In 1961 he had recommended "a tentative comprehensive plan" for the redevelopment of the waterfront²¹ and in 1963-64 was given the opportunity to do precisely that, working with an investigation group comprising the Board's financial consultant, deputy chief engineer and property officer. His son Nicholas drafted the drawings and Mary typed the text. The major objective of his outline plan released in February 1964 for the 13 hectare site was "to increase for the ultimate benefit of the Board the degree of desirability of the area to those interested in building development".²² The proposals aimed to encourage a re-subdivision to accommodate larger, more efficient building footprints; radical improvement in the vehicular and pedestrian circulation pattern; and overall enhancement of the environment. The outcome was "a set of possibilities" for comprehensive redevelopment to give Auckland "a new front door". The outline plan envisaged about 20 new multi-storeyed buildings arranged around pedestrian courtyards. The centrepiece Queens Square was the size of a football ground with an underground car park. Over 70% of the new commercial floorspace was to be offices, the major landmark being a 22-storey building on the western side of the Square. Footbridges connected an elevated shopping mall to the city and harbourfront. A new conference facility, hotel and three 12-storey flat blocks at the northern end of the elevated terrace were also part of the scheme.

With its featured podium, attention to a network of public plazas, modernist towers, segregation of car and pedestrians, and tokenistic traces of history (notably retention of the Edwardian-era Ferry Building), the project was a product of its time. It was a master plan pointing to possibilities beyond the uncoordinated redevelopment of scattered individual sites. It recalls comparable modernist-inspired schemes to renew Sydney's Rocks and Circular Quay area produced around the same time

(Blackmore 1988). Deletion of an earlier proposal for an above-ground motorway and projection of downtown residential land uses were progressive for the day. Moreover, only half the redevelopment potential of the existing planning scheme was to be capitalised to commend the community-orientation of the plan. The Kennedy plan was well received by the Harbour Board, the City Council and the wider community. Editorials in the major newspapers, the *NZ Herald* and *Auckland Star* were both laudatory. Auckland Mayor DM Robinson complimented “an exhilarating proposal which will have a profound influence on the redevelopment and the future of the area.”²³

Almost immediately the Harbour Board commissioned a more detailed feasibility analysis and from hereafter the story becomes a more complex narrative of the contested political economy of waterfront development progressively leaching the idealism of Kennedy’s initial design prospectus. An appraisal by Melbourne urban economist George J. Connor concentrated on the profitability to the Board of the area immediately west of Queen Street being devoted to a large department store and multi-storey car park. Featuring diminished public space (because of the absence of commercial return), it also dropped the apartments for a hotel and relocated the main office tower closer to the waterfront. In late 1964 the Board invited tenders for development welcoming yet more design alternatives. The only serious Expression of Interest came from an Australian-dominated consortium comprising Mainline Construction, Dillingham Construction, and Fletcher Trust and Investment Co., working with Sydney architects Peddle Thorp and Walker (PTW). Kennedy stayed connected long enough into 1965 to have his plans alongside Connor’s form part of the tender documents and subsequently to comment favourably on the planning competence of PTW (Smith 2013). Land title complications and depressed market conditions delayed progress but then the real controversy started. The relocated high rise office slab (opened as Air New Zealand House in 1973, now HSBC) overshadowed what remained of Kennedy’s Queen’s Square. Critics complained about wind tunnel impacts, non-compliance with planning ordinances, and secret deals between the developers and the Government (Richardson 1977). By this time Kennedy had completely disassociated himself.²⁴ He decried the outcome as “a triumph for the forces of commercialism over public interest”.²⁵ This proved to be just one episodic chapter in the incremental transformation of Auckland’s waterfront but it left Kennedy disillusioned:

I realise now that I had been over-optimistic in thinking that the Board, the City Council and the Government Departments who together would be responsible for the redevelopment of 32 acres, would be prepared to contribute in land and otherwise for the enjoyment of the general public, that is for the citizens, on whose goodwill they depended, and on the good opinion of the visitors and tourists who contribute to Auckland’s prosperity.²⁶

Kennedy’s time at Wellington, his third sphere of engagement with practice, ended no more happily. His formal association as Town Planning Consultant to the City Council spanned the years 1965-1975. The Council’s institution of a town planning division was in part the outcome of a campaign mounted by the Architectural Centre from the late 1950s. The brief was to advise Chief Planning Officer Ken Clarke (an Auckland diplomate) and the Council on a range of referred town planning matters. These encompassed matters such as preparation of a general planning scheme, new subdivisions, proposed redevelopments, zoning issues, street extensions, car parking, civil defence issues, administrative organisation, rezonings, and progressed into more intensive design commissions. As in many cities, the planning environment in Wellington in the mid-1960s was tense

as modernist ideals collided with the rise of the environmentalist movement and citizen scrutiny. Controversial public intellectual William Sutch (1965) dubbed Wellington “the sick city” as it wrestled with housing, open space, and traffic congestion problems.

Kennedy’s most contentious role was to review the Ministry of Works’ proposal for a central area motorway which had attracted serious debate and criticism. His December 1965 report affirmed the Foothills Motorway as “the only reasonable and effective major contribution to a solution of the present and immediate future traffic problems of central Wellington”²⁷ but took issue with details, such as the design and location of the interchanges proposed by the American traffic consultant De Leuw Cather.²⁸ In 1970 he completed a report on the design of a new Passenger Transport Centre Bus Terminal at Lambton Quay but his major creative project was a civic centre scheme developed between 1971 and 1974 in the area bounded by Jervois Quay, and Wakefield, Victoria and Harris Streets. Again working with Nicholas, his “super block” plan envisaged a traffic-free precinct with a new town hall, council chamber and ancillary offices, public library, concert hall, conference building, planetarium and open air theatre.²⁹ The scheme was not comprehensively realised but clearly had some influence in formulating an agreed template to move forward in the general disposition of main buildings, the basic concept of a central plaza enclosed by buildings as wind protection, and crossings to the waterfront. Warren and Mahoney Architects consulted with him in 1975 when designing the new town hall.

While his decade working in Wellington appears productive enough, it was not an altogether smooth association. The Capital City Planning Committee which he helped bring to fruition was too often factionalised into the interests of its local and central government representatives.³⁰ His working relationship with Government Architect Arthur Hallam was always a struggle. In November 1975 he informed Mayor Michael Fowler that he did not wish to be reappointed when the “frustrations, disappointments and growing bitterness proved too much”.³¹ This effectively was the end of his professional career. He seemed to have little interest in planning thereafter, seeing it as too expansive for its own good, increasingly bureaucratic and litigious, and subject more and more to the dictates of the market rather than the public interest.³²

Conclusion

RT Kennedy’s career spanned two continents over a half a century. In retirement in Christchurch, he made harsh self-judgments about an “up and down” serendipitous career. An admission to Gordon Stephenson in 1990 seems too bleak:

Unlike you I was never a dedicated Town Planner and unlike you never academically trained for the job. My lectures were an agony to me, my talks and addresses very ordinary. I wrote no books. I relied almost entirely on experience of town planning in the Ministry but made no name for myself outside it ... I have no great thoughts on the subject. Unlike you I was never dedicated. Often I was sceptical and inwardly critical of much town planning activity, so many plans, so many words, so much talk and so much paper.³³

Drafting his own story, Stephenson provides a more buoyant appreciation of Kennedy, albeit forged in the 1940s: “An architect of ability, he had nous, intellectual integrity and a dogged determination to do things properly [and] an unusual capacity for hard work and mastery of detail.”³⁴

This is a more comfortable summation. Kennedy remained an architect and an accidental planner with a vision forged in wartime and early postwar Britain. It didn't always translate well to the planning environment of provincial New Zealand. But while Kennedy may not quite make it into the ranks of the great men of planning history, the two very different halves of his planning career were nonetheless impressive in their depth and scope. Formal recognition of that is the CBE awarded in 1951 in recognition of services to town and country planning in Britain and his NZPI Gold Medal for exceptional service to planning in 1985.

There were three big shifts in his career. One was migrating to New Zealand, which he ultimately did not regret despite a lingering homesickness for the English countryside. The second was the move from architecture to planning, which he did feel more ambivalent about, describing himself on more than occasion as "an erstwhile planner".³⁵ Third was the step from practice to academia which he declared in his valedictory NZPI address as undoubtedly a good thing:

I first entered university life late in my own life, not until 1957 in fact. I have not regretted it. It has done for me what it has I hope done for most university staff and students. It has enlarged my own understanding of the world around me and by the intellectual stimulus it has provided made me think more deeply than I otherwise would have done of many things (Kennedy 1969, p16).

Kennedy is representative of the quintessential architect-planners of the post-war era, interested in more than just individual structures, seeking to understand their relationships in space and piecing together the fragments of the built environment into cohesive economic, social and visual wholes. But just as his individual architectural skills were effectively collectivised in local government settings before the war, so too there is no truly tangible planning legacy in New Zealand which can be unambiguously called his own. The high profile engagements in Auckland and Wellington were necessary steps in complex histories of urban placemaking but in their own right "ended up in tears, really - great schemes which just got watered down and watered down to the point that there was nothing left."³⁶

In 1958 he wrote the Commissioner of Works declaring that "as the first occupant of the Chair of Town Planning in New Zealand my concern is to further and stimulate interest in Town Planning."³⁷ It was as an academic that he made his major contribution to planning. At the University of Auckland, he assembled as impressive a teaching staff as then possible. His full-time colleagues were united and loyal; they respected his directness, his integrity, his worldliness, his experience, his pragmatism, his loyalty; and his immersion in and knowledge of current events. He could be a harsh critic but didn't spare himself, as evident from this account. He was a good manager bringing to bear his senior British experience from both private practice and the civil service. Many of the graduates from the first decade went on to distinguished planning careers in New Zealand and Australia. Bill Robertson recalls that Kennedy "was responsible for broadening and enhancing the education of many students who went on to contributory careers in planning and related disciplines."³⁸ I leave the final word to his friend and colleague Jim Dart:

The classes he had were with senior professionals from Auckland who came up the hill ... They gradually wove what they gained from Kennedy into their own thinking, their own work,

whether it was harbour board work or ministry works, roading or first attempts at regional metropolitan planning ... He opened the eyes of many people.³⁹

Acknowledgments: This is a first and incomplete précis of RT Kennedy's life but I am grateful for the assistance of many people in getting this far and would like to acknowledge Philip Kennedy for readily opening up personal records and memories; Wendy Garvey, Julia Gatley, Errol Haarhoff (all University of Auckland), Katy Gribbin (University of Liverpool) and Caroline Miller (Massey University, who also valuably critiqued an early draft) in unlocking resources, and to a small team of former students and colleagues more than happy to share their recollections: Jim Dart, Mike Pritchard, Robert Riddell, Bill Robinson, Dick Smythe, Ted Thomas and Michael Wearne. I also acknowledge the valuable commentaries of two anonymous referees.

¹ See Wright (1982), Cherry and Penny (1986), and also the autobiography by Stephenson (1992).

² See Northcroft (1969) and Dart (1998).

³ See Miller (2007) and also Ben Schrader, 'City Planning', Te-Ara: The Encyclopedia of New Zealand, www.TeAra.govt.nz/en/city-planning/sources; visited November 2013.

⁴ Architectural Centre website, <http://architecture.org.nz/>; visited November 2013.

⁵ "Disillusion in Town Planning and Architecture", handwritten letter to G Stephenson, c1988, not sent. Kennedy Papers, University of Auckland, Architecture Library, Box 1.

⁶ RT Kennedy to G Stephenson (GS), 27 April 1983, Gordon Stephenson papers, University of Liverpool Archives, UK.

⁷ RT Kennedy to J Dart, 18 October 1990, personal papers, file box in possession of Philip Kennedy.

⁸ J Dart, interview, Auckland. 7 August 2012; P Kennedy interview, Christchurch, 2 June 2012.

⁹ RT Kennedy to Tony & Susan Cox, 4 December 1992, personal papers, file box in possession of Philip Kennedy.

¹⁰ RT Kennedy, Notes for a Talk, Otahuhu Rotary [typescript], 23 June 1959, Kennedy Papers, University of Auckland, Architecture Library, Box 7.

¹¹ RT Kennedy, Talk, Traffic Tangles, North Island Motor Union, Wairakei. 18 September 1960, Kennedy Papers, University of Auckland, Architecture Library, Box 15.

¹² RT Kennedy to J Dart, 19 April 1986, personal papers, file box in possession of Philip Kennedy.

¹³ Robert Riddell, 27 June 2011, Phone conversation.

¹⁴ Michael Wearne, 22 July 2011, by email.

¹⁵ H van Roon, Auckland, 27 September 2012; RB Smythe, by email, 14 November 2011.

¹⁶ Bill Robertson, 20 July 2011, by email.

¹⁷ RT Kennedy to Jim Dart, 29-2-1984, personal papers, file box in possession of Philip Kennedy.

¹⁸ Report to the South Pacific Commission by RTK and JR Dart on a Visit to Port Vila, Efate, New Hebrides, January 1964. Report dated June 1964. 15pp typescript. Kennedy Papers, University of Auckland, Box 10.

¹⁹ Report on the Planning and Development of Nuk'alofa, Tonga. Kingdom of Tonga. January 1969. RT Kennedy, JR Dart and M Pritchard, Department of Town Planning, University of Auckland. Kennedy Papers, University of Auckland, Box 10.

²⁰ RT Kennedy, 'Town Planning Observations in the South Pacific', Seminar on Urbanisation and Resettlement in the South Pacific, Victoria University of Wellington, October 1969 (typescript, 20pp). p. 2, Kennedy papers, University of Auckland, Box 10.

²¹ RT Kennedy to GM, Auckland Harbour Board, 14 September 1961. Kennedy Papers, University of Auckland, Box 21.

²² RT Kennedy, Auckland Central Area Properties: Report and Redevelopment Plan, January 1964. 27pp + plans, p. 4. Kennedy Papers, University of Auckland, Box 21.

²³ "Elevated Quay Street Road Not Wanted", *Auckland Star*, 26 February 1964, p. 1.

²⁴ RT Kennedy, "Downtown Waterfront", NZ Institute of Landscape Architects Conference, Auckland, February 1984. Kennedy Papers, University of Auckland, Box 25.

²⁵ "Don't blame me says Downtown mastermind", *Auckland Star*, 25 June 1975.

- ²⁶ RT Kennedy, 'Downtown Waterfront'.
- ²⁷ RT Kennedy, Report on the Foothills Motorway Proposal, 7 December 1965, p. 14. Kennedy Papers, University of Auckland, Box 10.
- ²⁸ "Motorway plan for Wellington endorsed", *Evening Post*, 9 December 1965.
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- ³⁰ RT Kennedy to G Stephenson, 25 September 1986, not sent, handwritten, Kennedy Papers, University of Auckland, Box 1.
- ³¹ RT Kennedy to M Wright, 3 January 1977. papers, University of Liverpool Archives.
- ³² Philip Kennedy, RT Kennedy obituary, draft, for newspapers. Not published.
- ³³ RT Kennedy to G Stephenson, 10 September 1990, University of Western Australia Library, Stephenson Collection, Box 2.
- ³⁴ Gordon Stephenson typescript on the Ministry years, p. 5, Kennedy Papers, University of Auckland, Box 1.
- ³⁵ RT Kennedy to J Dart, 15 May 1991, personal papers, file box in possession of Philip Kennedy.
- ³⁶ Philip Kennedy Interview, Christchurch, 2 June 2012.
- ³⁷ RT Kennedy to PM Hanson, Commissioner of Works, 13 August 1958, Kennedy papers, Christchurch, courtesy Philip Kennedy.
- ³⁸ Bill Robertson email, 20 July 2011.
- ³⁹ Jim Dart interview, Auckland, 7 August 2012.

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Town Planning on Display

A timeline of Australian planning exhibitions 1912-1951

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Exhibitions played a vital role in promoting the benefits of modern town planning through the first half of the twentieth century. They helped convey the environmental, economic, and social dividends of strategic and statutory planning to the broader community as well as constituting a vehicle for planning advocates themselves to showcase advances and best practice design. Internationally, a series of influential events, such as the Royal Institute of British Architects Town Planning Conference in London in 1910, provide a major window on the development of the planning movement. What of the Australian scene? This paper surveys the national, city and touring exhibitions held in Australia during the major propagandist phase of the planning movement to inquire into the ideas, ideologies and legacies involved. It presents a typology of different exhibitions before zooming in on a series of thumbnail sketches in a chronology of individual exhibitions. Across the evolution of planning preoccupations conveyed, ecological issues emerge as a secondary concern alongside the main priorities of housing, traffic, playgrounds and land use zoning. The paper connects to the 'experimental cities' conference theme in revealing how the ideal city environment was portrayed by early planning advocates.

Keywords: planning exhibitions, Australia, twentieth century

Introduction

The visibility of planning has been central to its professional distinctiveness. The first half of the twentieth century was the heyday for a culture of exhibitions that was central to the emergence and maturation of the planning profession as it sought to comprehend and address the challenges of urbanization. Early on, major international exhibitions captured the globalisation of the planning

movement. National events linked the mission of planning with national development. City events captured the key market for planning ideas and addressed both metropolitan and central city concerns. Local events reflected the importance of community involvement and place-making. Criss-crossing all scales were travelling exhibitions assembled by various educational, professional and public interest organisations to promote planning as an instrument of urban reform. Planning was still rooted in voluntarism, there was much experimentation in various approaches to city, suburban and regional improvement, and the case had to be built for more decisive and sustained state intervention into the processes of urban development including housing provision and environmental management. Once that breakthrough was attained, in most western nations in some form by the late 1940s, the halcyon days of the exhibition were over. While communication strategies became central to planning agencies, the role of the exhibition as an earnest gesture of general civic education became much rarer.

The story of town planning can thus be told through exhibitions. although ultimately they constitute just one component of more complex processes of information and image transfer involving books, journals, lectures, and study tours (Freestone and Amati 2014). Notable events punctuate many national and international planning history narratives: the New York 'Congestion Show' of 1909, the Royal Institute of British Architects (RIBA) international conference and exhibition in London 1910, the peripatetic Cities and Town Planning Exhibitions of Patrick Geddes into the 1930s, the Ghent Congress of Urbanism in 1913, the Festival of Britain 1951, the activities of CIAM, exhibitions attached to meetings of the International Federation for Housing and Town Planning through the interwar years, and so on (Hall 2002; Ward 2002). A great and climactic surge of exhibitions in the 1940s was driven by the anticipation of post-war reconstruction as well as the release of iconic, integrative strategies such as the County of London and Greater London plans of 1943-1944 (Larkham and Lilley 2012).

This paper plots an Australian narrative of planning exhibitions in the first half of the twentieth century which parallels the emergence and evolution of an exhibition culture globally. It identifies a sequence of events which captured the planning *zeitgeist* of their times through assemblages of plans, maps, photographs, diagrams, charts, models, films, life-size installations and other display techniques. Exhibitions were also hubs for spin-off events especially speeches and symposia. They represent one 'window' on the evolving concerns and *modus operandi* of the early town planning movement, particularly in how ideas were disseminated, interpreted and adapted (Diefendorf 2013). Their visual content gives them intrinsic appeal, which connects to a growing interest in visuality in the social sciences (Rose 2012).

This paper begins by more precisely defining the exhibition as a typology of interest in planning history and presents a listing of the main events in Australia during the first half of the twentieth century. The main body of the paper is organised in five decadal sections. These each present chronologically a sequence of thumbnail sketches of key events that attempt to capture the main content, concerns and actors involved. The paper concludes with broader findings and reflections on the significance of these events in the development of Australian planning thought.¹

Planning exhibitions in Australia 1912-1951

The survey period from just before the first world war to just after the second is a crucial formative period in Australian planning. This half century witnessed the evolution of a distinctive and widely shared model of ideal urban environments that laid a platform for the emergence of statutory planning systems designed to realise such environments at regional, metropolitan, local authority and neighbourhood scales (Freestone 2010). Through this period numerous exhibitions of one kind or another were staged. Displays dealing with improving the built environment surfaced in diverse contexts: state and city fairs and shows; celebratory anniversary events; architectural exhibitions; 'Ideal', 'happy' and 'modern' homes exhibitions; public health, local government and social welfare events; design competition shows; and displays of student work. Of central interest in this paper are those events which were usually explicitly branded as 'town planning' exhibitions and were complete enterprises in themselves, not part of broader exhibitionary events. They were not necessarily stand-alone with a number associated with conferences.

Planning exhibitions were often landmarks in the emergence of modern town planning consciousness. They reflected the synergies between town planning and broader urban and social reform aspirations. They were staged to sell planning ideas, values and techniques - almost invariably in the modernist tradition thus capturing a scientific ideology based around premises of order, hierarchy, linearity, functionality and efficiency (Greenhalgh 1990). Their target was frequently not just one place but a more sweeping re-ordering of urban space. They were unabashedly "propagandist" in an era before that term took on negative connotations. They aimed to "educate" the community to planning aims and agendas to ensure greater understanding. This represented a form of community involvement, although far more passively than by today's standards. These early events were also a means of communication within an evolving professional milieu; that is, a way of codifying standards, building consensus, stimulating discussion and debate amongst an emerging cadre of experts.

By these criteria a total of at least 19 landmark events in Australia can be identified, as summarised in Table 1. Some of these events were singular exhibitions over in a day or two; others were roadshows and travelled between cities over many months. There are likely to have been more events, particularly at the local level, which have fallen under our retrospective radar, but we are confident that Table 1 constitutes an authoritative inventory of the major events in the first half of the twentieth century. The twin peaks are apparent: first, the 1910s when the planning movement first coalesced as an organised entity seeking to establish its social relevance and political legitimacy, and then the 1940s under the direction of a new generation of more professionally-inclined planners when it became apparent that the imperatives to inject greater oversight of resource allocation and spatial development could no longer be ignored by governments. The paper proceeds by describing each briefly in turn across five decades.

Table 1: Planning Exhibitions in Australia 1912-1951.

No	Dates	Exhibition	Location
1	1912 (June-July)	Exhibition of Federal Capital Designs	Melbourne, Sydney, and other capital cities
2	1913 (November)	Town Planning Display, Town Planning Association of New South Wales	Sydney
3	1915 (September)	Town Planning Books Exhibition	Adelaide
4	1916 (August)	Town Planning exhibition, Parliament House	Adelaide
5	1917 (October)	First Australian Town Planning & Housing Conference and Exhibition	Adelaide
6	1917 (December)	Town Planning Exhibition, Town Planning Association of NSW and Department of Local Government	Sydney
7	1918 (July-August)	Second Australian Town Planning & Housing Conference and Exhibition	Brisbane
8	1919 (November 1919)	First Victorian Town Planning Conference and Exhibition	Ballarat
9	1924 (February-March)	Sydney Regional Plan Convention Exhibition	Sydney
10	1925 (September)	Town Planning Exhibition, East Sydney Technical College	Sydney
11	1929 (December)	Town Planning Exhibition	Perth
12	1938 (February)	Town and Country Planning Institute	Sydney
13	1943-1944	Houses and Towns to Live In, travelling exhibition, Housing Commission and University of Melbourne Extension Board	Melbourne, Victoria and Tasmania
14	1944-1945	US Housing in War and Peace, travelling exhibition	Mainland capital cities
15	1944-1945	Housing and Town Planning, travelling exhibition, Commonwealth Department of Post-War Reconstruction	Sydney, Newcastle, Brisbane, Toowoomba, Adelaide, Perth
16	1948-1949	Town and Country Planning in Great Britain, travelling exhibition, British Council	Capital and regional cities
17	1948 (April-May)	Town Planning Exhibition, The City of Brisbane Plan	Brisbane
18	1948	County of Cumberland Planning Scheme, Cumberland County Council	Sydney city and suburbs
19	1951 (August)	Federal Congress on Regional and Town Planning	Canberra

The 1910s

Melbourne and Sydney, 1912

The decision of the Commonwealth Government to build a new seat of federal government and secure the best plan through an international design competition in 1911-1912 is hugely important in the history of Australian planning, also attracting international interest. It was always the intention to put the entries on public display in Melbourne following their judging in the ballroom at

Government House in Melbourne. Various venues were canvassed including Parliament House at the top of Bourke Street and the Exhibition Building in the Carlton Gardens until Melbourne Town Hall was chosen, the exhibition opening 4 June 1912. Public response was enthusiastic and a reporter captured the duality of appeal: on the one hand the designs represented “the latest thought on city planning and city beautification, and on this account appeal strongly to professional and representative men”; and for the “average visitor” there was the fascination of viewing plans that were “someone’s ecstatic dream for spending many millions of someone else’s money”.² The entries were subsequently shipped by steamer to Sydney and displayed in the basement of Sydney Town Hall, opening 13 July 1912. Public interest was less enthusiastic partly because of the inclement winter weather but the arrangement itself was not well thought out: it was “next to impossible for a layman to tell where one set ends and another begins.”³ Nevertheless, the timeliness of this exhibition was well appreciated by JD Fitzgerald (1912, p5) and others seeking “the acclimatisation of modern town-planning upon Australian soil”. A public debate on practical versus aesthetic city planning was sparked through differing reactions to the winning plan by Walter Burley and Marion Mahony Griffin (Reps 1997). From Sydney those entries not acquired by the Commonwealth were returned to entrants. Copies were made for viewing in other cities.

Sydney, 1913

The year 1913 was critical for Australia as a nation as a “hinge-year” marking a broad acceptance of modernity and “a huge outpouring of energy, hopefulness and creativity” on the eve of world war (Hetherington 2013, p7). Establishment in Sydney of the Town Planning Association of NSW, the first of similar bodies in every state, marked the emergence of a formal town planning movement in Australia (Freestone 2009). To celebrate the occasion George Taylor organised an exhibition over three days at the Royal Art Society in Pitt Street “for the specific purpose of appealing to the public’s sense of the necessity of the movement” (Town Planning Section 1912, p92). The centrepiece was the display of the Griffin drawings made available for the occasion by Prime Minister Joseph Cook.⁴ Also exhibited were plans of various foreign cities, improvement schemes for Sydney, garden suburbs, slum housing, the work of some of “Sydney’s leading architects”, historic sketches and more of Griffin’s house designs and community plans from the US (Town Planning Association 1913).

Adelaide, 1915 and 1916

A bellwether of the enthusiasm for reform in Adelaide engendered by the arrival of Charles Reade as a town planning adviser to the South Australian Government was a special display of books on planning and the related fields of housing, architecture, landscape gardening, interior decoration and furnishing organised in the Children’s Room of the Public Library by the chief librarian Mr HR Purnell in September 1915.⁵ In August the following year, as parliament debated proposed planning legislation, Reade staged his own exhibition in the Railways Standing Committee room of Parliament House. This was well received but Adelaide City Councillors were conspicuous by their absence, miffed both at the embarrassing visual evidence of overcrowding on display and more fundamentally by the threat of proposed new planning controls from state legislation which imposed on their privileged autonomy.⁶ The display drew mainly from historic and contemporary material assembled by Reade in England and then Australia since arriving as an emissary of the Garden Cities and Town Planning Association in 1914. Many of these plans and photographs would resurface in later major exhibitions in Australia and New Zealand. Reade’s enthusiasm for visual

material mark him as a disciple of Patrick Geddes with whom he had revealingly spent a fortnight in 1913 preparing for Geddes' award-winning exhibition in Ghent (Reade 1914).

Adelaide, 1917

Reade was the mastermind behind the First Australian Town Planning and Housing Conference and Exhibition held in Adelaide from 17-24 October 1917. The conference proper was held in the Institute Building on North Terrace with 23 papers presented from leading figures including WB Griffin, John Sulman, W Scott Griffiths, WA Saw, and JC Morrell. The much grander but now demolished Exhibition Building nearby hosted a display assembled from diverse sources including the Commonwealth Department of Works and Railways, state governments, central city and suburban councils, private companies, and individual collections, notably from Reade himself. In various courts and sections were arrayed historic plans and pictures of Australian cities; plans of European, Canadian, and American cities; photographs illustrating city planning projects and garden cities; and ideal homes and related trade exhibits. The Griffin competition plans for Canberra featured but concerns about prospective damage saw the Commonwealth Government decide to restrict most future showings to photographs only.⁷ Many iconic images date to their showing in Adelaide in 1917, including the plans for Colonel Light Gardens and Dacey Garden Suburb. At the rear of the exhibition building a model children's playground was constructed and a conference surplus of £70/13/4 was later applied to the first permanent children's playground on West Terrace (Garnaut and Round 2009). A full sized model of a returned soldier's cottage was also erected to convey a desirable post-war housing standard but also attracting criticism for not giving sufficient weight to design considerations from a women's point of view (Gatley 2005). Each evening moving pictures of modern cities were shown with a musical accompaniment to illustrate international and Australian urban scenes, parks, gardens, model villages. The exhibition was conceived as a major exercise in educating the community. Reade was confident of the results: "taken as a whole, the exhibition is readily the best and most comprehensive collection of material ever brought together for enlightening Australian public opinion" (*Official Volume of Proceedings* 1918, p37). It helped build the case for governments to have "the power to control and plan out city and town areas in the best interests of the communities as a whole" (*Cities of the Future* 1917, p22).

Sydney, 1917

In December 1917 the Town Planning Association of New South Wales and the Department of Local Government combined forces to re-show the NSW contribution to the Adelaide conference in the Art Gallery of the Education Department building in Bridge Street. Featured were JJC Bradfield's plans for the city railway and harbour bridge, resumptions and wharfage schemes for The Rocks, various remodelling schemes, residential street designs by W. Scott Griffiths, and artistic posters.⁸

Brisbane, 1918

Adelaide 1917 was the prototype for the second national conference held in Brisbane from 30 July to 6 August 1918 sponsored by the Queensland State Government (Freestone and Amati 2011). With nearly 600 delegates, the scale was twice that of Adelaide. The exhibiton was somewhat inconveniently staged in the Exhibition Building on the northern edge of the CBD, a tram ride from the main conference venue. It was organised into various sections covering state government displays;

historic photographs; international developments; soldier settlements; local government, health and water and sewerage; a child welfare section featuring actual health and play facilities; and a poster display (arranged by JD Fitzgerald). Reade's collection of international and historic Australian material again featured (Catalogue 1918). The images supplied by local councils dwelt upon parks, public gardens, recreational facilities, general panoramas, and street and civic improvements. Environmental content was notably absent apart from reforestation and street plantings. On Machinery Hill in the wider Exhibition Grounds two ideal houses were erected to convey the desired standard of middle class Australian housing. Nearby were various machinery exhibits connected to the practicalities of local government engineering. A selection of mainly touristic films was also shown. This exhibition if only as a logistical exercise was an impressive achievement and while fragmented was arguably the most notable planning exhibition held in Australia before the Second World War. It helped sustain the planning cause into the early post-war years flavoured by the same repatriation theme of the conference. The expectation at the end of the Brisbane conference was for a third national event in Sydney in 1920 but this was abandoned when the NSW State Government declined to materially assist despite the Commonwealth Government setting in train acquisition of photographs and plans from "munitions towns" in Britain as well as diagrams illustrating general principles sourced from the London-based Garden Cities and Town Planning Association'.⁹

Ballarat, 1919

The first and last state town planning conference held in regional Victoria in November 1919 had an associated exhibition intended to reinforce the major theme of practical planning and to impart "the information which will overcome the apathy born of lack of knowledge and combat the opposition originating in selfishness". The bottom line was that it was "a citizen's duty to be behind this project, and an appeal is made to you now to play a citizen's part" (Catalogue 1919). The material assembled was a pot-pourri of plans, surveys and photographs with an emphasis on public infrastructure supplied by the Melbourne and Metropolitan Board of Works, Melbourne City Council, City of Geelong, various Victorian government agencies including the Country Roads Board, and the Melbourne Harbour Trust. There were special sections on Ballarat and Queensland. A decade after the event a residual surplus was directed to a new instrument of public information: a publicity and tourist information kiosk.¹⁰

The 1920s

Sydney, 1924

In February-March 1924 the Sydney Regional Plan Convention, a voluntary reform body formed to pressure the state government to commence a metropolitan planning scheme, staged an exhibition of plans and photographs in the galleries of the central city department store Farmer & Co. The principal aim was to illustrate "civic pride and progress in various parts of the World, with special application to the growth of Sydney, and stressing the urgent need for comprehensive planning for the City's future" (Regional Plan Convention, 1924). Material came from impressively diverse sources including the UK Ministry of Health, the City of Gothenburg, and the Mayor of Toronto. Lunch hour addresses were given by local experts including Leslie Wilkinson, BJ Waterhouse, John Sulman and Keith Harris. The *Sydney Morning Herald* reported that "considerable public interest is being shown in the exhibition".¹¹ But no tangible outcomes ensued and the idea which gathered support here for

an international or at least imperial exhibition in 1930-31 to celebrate the projected opening of the Sydney Harbour Bridge also failed to take hold.¹²

Sydney, 1925

However, less than a year later came another exhibition, this time under the auspices of the Town Planning Association but with the central curatorial role assumed by the architect Gordon Keesing. Inspired by what he described as the New York model of annual exhibitions, Keesing's idea was to launch a similar program in Sydney to help cultivate a "civic pride which induces citizens to observe the architectural and structural improvements which are carried out from time to time".¹³ Held at East Sydney Technical College as part of a larger Health Congress, displays were arranged in groups representing government departments, local authorities, private practitioners and student work. The contemporary rebuilding of central Sydney under the Bradfield scheme remained an unavoidable centrepiece.

Perth, 1929

This event in December 1929 was multi-coded: it celebrated Western Australia's centenary, was intended to increase public awareness of planning possibilities following passage of the *Town Planning and Development Act* in December 1928, and helped focus the deliberations of the Town Planning Commission appointed to canvass future options and needs for the Perth metropolitan area. It was held in the Council of Industrial Development Hall in Barrack Street, spilling over into a supper room in the Town Hall. The exhibition was the initiative of the Town Planning Association of WA with key organisational roles assumed by the Secretary LG Taylor assisted by Ethel Joyner, one of the few instances where the contribution of a woman to these events was publicly acknowledged.¹⁴ While concentrated on local problems, a notable inclusion was a group of 30 plans and diagrams supplied by St Louis-based consultant Harland Bartholomew and Associates.¹⁵

The 1930s

Sydney, 1938

In the "roaring" 1920s the accent of the exhibitions was on harnessing and steering growth. In the Depression the planning movement lost much of its steam as public policy and reform activity was directed to more pressing concerns of employment and housing. Consequently this was a fallow time for classic planning exhibitions and reporting dries up. There is a record of one staged in Sydney in early 1938 by the Town and Country Planning Institute of Australia, a new professionally-orientated body aiming at supplanting the amateur contributions of the Town Planning Association.¹⁶ This rekindling of enthusiasm was to be taken up much more vigorously in the following decade.

The 1940s

Melbourne and beyond, 1943-1944

The first major event of the 1940s, the "Houses and Towns to Live In" exhibition in Melbourne, was an adult education initiative of CR Badger, director of the Melbourne University Extension Board.

The Housing Commission of Victoria financed it with exhibits prepared over six months by its Architects Panel comprising Harold Bartlett, Frank Heath, Best Overend and John Scarborough (Housing Commission of Victoria 1943). This exhibition was intended to show “what good national, regional town and country planning and good housing could and should play in the postwar lives of the people”. It appears to have been inspired at least in part by a project of the Workers' Educational Association in London (Riddell c1942). The target was emphatically the general public: “Public demand will ultimately produce positive results. Planning is essential” (Catalogue 1943). The well-documented exhibition was a mix of plans, charts, photographs, and models with lettering, posters and humorous sketches drawn by June Morton, a seventeen-year-old art student at Swinburne Technical School (Cooper 1943). Noteworthy exhibits were Heath's model of a neighbourhood unit, a scientifically based-concept for structuring community life then gaining in popularity, as well as his plan for future development of Swan Hill employing the same concept (Darian Smith and Nichols 2010). The Exhibition opened 4 October 1943 in the State Electricity Commission showroom in Flinders Street in the city. It then travelled through various Victorian country centres where the Workers' Educational Association operated and reportedly across Bass Strait to Tasmania. It did not prove the immediate catalyst for a planning school wished for by the University Vice-Chancellor.¹⁷ But it certainly catalysed the general propaganda effort with much of the material being adapted for re-use in the Department of Post-War Reconstruction's exhibition in 1944-45, explaining why the latter was not shown in Melbourne.

USA touring exhibition, 1944-1945

The showing of “US Housing in War and Peace” resulted from a visit by Dr HC Coombs, Director-General for Post-War Reconstruction to New York in 1944 and taking in a version of the exhibition at the Museum of Modern Art (MoMA). He was “so impressed by the story it had to tell that he felt it must be seen by Australians at first hand” (Cooper, 1944). What came to Australia was a special international touring exhibition also shown in Britain and developed by MoMA with the assistance of leading housing reformer Catherine Bauer (Amati and Freestone 2013). Sponsored by the US Office of War Information, it was predominantly a black and white photograph exhibition depicting pre-war and emergency housing community planning achievements with a major emphasis on prefabrication as a modern building technology. The exhibition was opened by the US Ambassador in Sydney on 14 August 1944 in Sydney.¹⁸ It subsequently travelled to Canberra, Melbourne, Brisbane, Townsville, Adelaide, Launceston, Hobart, ending its tour in Perth in June 1945. The exhibition was described as a “powerful stimulus” of broad practical relevance to Australia (Cooper 1944).

Post-War Reconstruction touring exhibition, 1944-1945

The “Follow the Red Footsteps” exhibition slotted into the general educational activities of the Commonwealth Department of Post-War Reconstruction, an instrumentality charged with managing the national transition from war to peacetime across a variety of fronts: economic policy, industrial, rural and regional development, social welfare, and housing and planning. It was curated by John Oldham who has been involved with the Australian contribution to the New York World's Fair in 1939. It opened in the ground floor showroom of the Sydney County Council in August 1944 showing simultaneously with “US Housing in War and Peace.” The primary rationale was “to educate the public on the necessity of modern town planning and better housing”.¹⁹ The ulterior motive was to secure a foundation of support for the housing and planning reforms recommended by the

Commonwealth Housing Commission and necessitating a national involvement in urban development, a prospect at which the states would ultimately balk (Freestone 2012). The exhibition was quite modest in scale and prepared on a tight budget. Graphics from the Victorian Housing Commission exhibition the year before were reduced in size and incorporated as informational elements within new panels. This was the first exhibition to really reflect the influence of advances in exhibition design and wayfinding abroad. The influence of the 'New Architecture' exhibition in London in 1938 was evident in the staging with curved panels, raised lettering, and paired photographs and models (Gold 1997). It subsequently travelled to Newcastle (October), Brisbane (November-December), Toowoomba (early 1945), Adelaide (March-April), closing in Perth (June-July 1945).

Great Britain touring exhibition, 1948-1949

The "Town and Country Planning in Great Britain" exhibition which toured Australia in 1948-49 drew from previous exhibits which the British Council toured through Europe but was purpose-assembled for Australia and New Zealand. In several venues it coincided with a national lecture tour by Sir Patrick Abercrombie (Amati and Freestone 2009). The British Council, like the US Office of War Information a few years earlier, was an agency promoting a specific national paradigm of planning and its exhibition similarly illustrates the diffusion of international planning ideas through official bi-lateral trans-national channels. Australians remained receptive to messages from the "mother country" and the Commonwealth and State Governments which underwrote the cost of touring were committed to awakening public interest in town planning.²⁰ The Exhibition opened in Melbourne on 27 September 1948 and was seen in nearly 30 towns, including all the state capitals, by the time of the last showing in Hobart in November 1949. Largely through plans, diagrams and models the exhibition covered the redevelopment of central areas; metropolitan planning for Middlesbrough, Manchester and London; the development of New Towns; and regional planning. The models had great appeal; much of the other content put together by a London Committee with input from the RIBA and the assistance of the design guru Mischa Black remained uncompromisingly technical.

Brisbane, April-May 1948

Brisbane City Council staged an exhibition in association with its draft city plan in the City Hall basement from 29 April to 16 May 1948. This appears to have been the first major event of its kind in Australia and was staged by the city planner Frank Costello, an architect-planner committed to promoting understanding of planning through the community and later as an educator at the Queensland Institute of Technology (Freestone and Low Choy 2013). It attracted an average of three hundred people a day.²¹ The display was organised into around 60 standard display panels covering the historic growth of the city; planning for future transport, sewerage and water supply needs; proposed open space and foreshore improvements; neighbourhood planning; commercial and residential architecture; down to everyday city details such as provision of bus shelters, shop awnings and street furniture. Far-reaching proposals on view included new city centre improvements, a metropolitan green belt, and a land use zoning scheme. Postwar economic rectitude and municipal politics in Brisbane in the 1940s conspired against direct implementation through major public expenditure but this was a significant early contribution to an evolving planning, development and design agenda for the city (Freestone and Low Choy 2013)

Sydney, 1948, March-November 1948

Meanwhile in Sydney the Cumberland County Council had also commenced an elaborate exhibition schedule in releasing its blueprint for the metropolitan area. The Council was established under the 1945 Local Government (Town and Country Planning) Amendment Act and was given three years to prepare its plan including the exhibition of detailed zoning proposals, one of the earliest formal exhibitions of a statutory planning scheme in Australia. This was held from 8 March to 30 June 1948 in the CENEF building in Castlereagh Street.²² New regulatory controls were described via 15 coloured maps, drawn at a scale of 20 chains to 1 inch showing land-use zones.²³ A range of organisations was invited to inspections and daily attendances fluctuated between 250 and 800 visitors. The Council's exhibition prompted nearly 3000 objections resulting in many minor amendments but within a month new plans were readied for a second exhibition in the Sydney Town Hall from 27 July 1948 to coincide with the formal handover of the plan to the Minister for Local Government. This was a more artful event designed "to give graphic and dramatic presentation of planning proposals to build up public interest".²⁴ For nearly a week the County Plan and supporting data were on show in the Main Hall and Basement of the Town Hall. Johnson (1997) explains the visual strategy as promoting a synoptic, totalising view, with visitors asked to see Sydney from the planner's birds-eye view. At the same time, the Council was preparing for a third showing of the plan in suburban halls for two or three days at a time running deeper into the second half of 1948. A fourth related event was a further display of the revised statutory plan in the light of submissions from 8 June to 15 July 1949 at the NSW Department of Local Government and nine suburban locations. By that time the Council had received and had to deal with tens of thousands of comments and objections. Very quickly the role of the planning exhibition had moved from a rather generalised instrument to win the hearts and minds of the community to a set piece opportunity for members of the public to ascertain just how they would be directly impacted by concrete planning proposals. Feedback from this point on was not always complementary (Johnson 1997). While educational exhibitions would not disappear in Sydney or elsewhere, the interface between the visual information prescribed by the planning system and the community would take on very different meanings.

The 1950s

Canberra, 1951

But there was one major goodwill exhibition to be staged. In 1951 a congress in Canberra was convened by three separate professional institutes then operating: the Town and Country Planning Institute (Sydney), the Planning Institute (Melbourne) and the Town Planning Institute of South Australia (Adelaide). This led to unification and establishment of the present Planning Institute of Australia as the peak professional body with Professor Denis Winston as inaugural President. The conference was held on 10-13 August 1951 as part of Canberra's celebration of the Jubilee of Federation. William Holford and George Pepler were guests of honour from Great Britain. Some 170 delegates attended the sessions held at the Albert Hall. Featuring prominently was an exhibition covering the subject of town planning in Canberra. The Department of the Interior prepared a display which resurrected the original Griffin plans as well more contemporary long range development programmes and models of other new development underway in the national capital. Special talks were given by Charles Daley (Executive Member, National Capital Planning and

Development Committee) and Trevor Gibson (Senior Town Planner, Department of the Interior) with a response by Sydney architect BJ Waterhouse. The organising secretary of the conference was Peter Harrison. He had been involved in the Cumberland County Council exhibitions in 1948 and a few years later would become chief town planner of Canberra's National Capital Development Commission. Harrison became a champion of the Griffin plan which had been sorely neglected as an actual guiding city strategy (Harrison 1957) despite its periodic celebrity status at Australian planning exhibitions since 1912.

Conclusion

Planning exhibitions offer a compelling yet curiously overlooked organising device for conveying visually the emergence and evolution of planning thought (Freestone and Amati 2014). The Australian narrative commences at the very time a formal community planning movement emerged from the early 1910s and climaxed in the early 1950s as planning practice entered a new era of professionalism organised nationally. That the Griffin plans for Canberra featured prominently in the NSW Town Planning Association's display of 1913, the first national conference and exhibition in 1917, and the Federal Congress on Regional and Town Planning in 1951 underscores both the importance of the federal capital project in the formative years of modern town planning in Australia and the role of exhibitions in highlighting that importance.

Almost all the events remembered here were linked to other historical occasions and contexts. These were not exhibitions for their own sake but events calculated to celebrate or secure support for other causes (e.g. state centenaries and new planning legislation in Perth in 1929; lobbying for a planning bill in Adelaide 1916 and 1917; establishment of a planning school in Melbourne in 1943; support for Commonwealth leadership in urban affairs in Sydney in 1945, and so on). In these terms exhibitions were far from neutral, beneficent exercises in public enlightenment but rather intentional political actions in pursuit of particular ends.

Their role in the international diffusion of planning ideals is evident. While most of the Australian exhibitions were home-grown affairs, they nonetheless were open to overseas content and visitors were able to scrutinise relevance for local conditions; indeed, this critical stance was encouraged by progressive advocates like Charles Reade from the 1910s. Reade is the most influential figure of that early era with a huge appetite for promoting planning and links to the British town planning and garden city movements. In the 1940s the conduits are distinctively institutional with the expansionist propaganda of the US Office of War Information and the British Council. Better land use zoning, site planning, housing and development controls persisted as the main ambitions of the movement to express deeper-seated concerns about the order and efficiency in the built environment.

Display techniques demonstrably advance over the five decades covered by this survey. The early exhibitions were primarily assemblages of things. Even the official proceedings of the first national conference in 1917 noted that the impact of the many and various sections was "diffuse" and that "town planning has been interpreted very broadly" (*Official Volume of Proceedings* 1918, p37). From the 1940s messages were transmitted in a less motley and more sophisticated way. This becomes evident in the post war reconstruction travelling exhibition of 1944-45 and the British Council exhibition of 1948-49 with input from Mischa Black, who by then had identified the 'exhibition designer' as a genre of architectural professional. Not only do the techniques of representation

become more artful and innovative but the intellectual frameworks which govern the exhibitions become more considered and thoughtful. While the exhibitions of the 1910s and the 1940s promoted a similar message of holistic urban reform, the latter were conceptualised within a much stronger hierarchical model from room to region.

All the exhibitions were serious business. As stated in the catalogue for the 1943 Victorian Housing Commission Exhibition: "This Exhibition is not intended for amusement or to fill in a few spare moments, but should evoke thought, study and ultimately, action" (Catalogue 1943). Although others in the same era adopted a more accessible tone showing films and moving to less static displays, there remained the impression that the accent on technical plans and diagrams nonetheless challenged the comprehension of the general public. At the breakthrough federal capital designs display in Melbourne in 1912, a reporter noted that "an examination of the plans shows that except to the expert they do not tell much".²⁵ Yet even in 1949 a British Council representative noted of their own touring exhibition that while interest among professionals ensured good attendances, it was perhaps too technical for laypersons.²⁶

Such observations make it difficult to evaluate the impact of these events. It is necessary to drill down into the circumstances of each exhibition, something beyond the ambit of this short overview. While the singular impacts of each exhibition need further research, in a cumulative sense they were undeniably important mechanisms alongside and interacting with a raft of other media for introducing, evolving and codifying town planning ideas and ideals in Australia in the first half of the twentieth century.

¹ The research for this paper was supported by an ARC Discovery Grant, DP120101732. The input of several research assistants is also gratefully acknowledged: Julie Collins, Margaret Park, Peggy James, Charles Rowe, Peter Mills, Michael Bogle, Ruth Morgan and John Holt. We acknowledge also the helpful comments of two anonymous referees.

² "Planning a City: Federal Capital Designs", *Argus*, 5 June 1912, p11.

³ "Capital City Plans", *Evening News*, 15 July 1912, p5.

⁴ "The Key to Griffin's Canberra". <http://blog.naa.gov.au/preservation/drawings/>

⁵ "Town-planning Exhibition", *Advertiser*, 2 September 1915, p10.

⁶ "Town planning exhibition", *Register*, 16 September 1916, p8.

⁷ "The Key to Griffin's Canberra".

⁸ "Town planning", *Sydney Morning Herald*, 19 December 1917, p14.

⁹ Commonwealth Offices, London to The Secretary, Prime Minister's Department, 28 October 1919. National Archives of Australia, 1620/8.

¹⁰ "Country News", *Argus*, 22 May 1929, p18.

¹¹ "Regional Plan", *Sydney Morning Herald*, 4 March 1924, p8.

¹² "Town-planning. Suggested exhibition to be held in 1930". *Sydney Morning Herald*, 5 March 1924, p8.

¹³ "Town Planning: The Associations' Work". Clipping in RGC Coulter, Book of Me, National Archives of Australia, M1535.

¹⁴ "Town planning: exhibition opened", *West Australian*, 17 December 1929, p18.

¹⁵ "Town planning: value of exhibition", *West Australian*, 31 December 1929, p3.

¹⁶ "Coming Events", *Sydney Morning Herald*, 7 February 1938, p8.

¹⁷ "Novel Features in Plans for Towns of Tomorrow", *The Mail*, 9 October 1943, p5.

¹⁸ "US Town Planning Exhibition", *Argus*, 30 September 1944, p14.

¹⁹ 'Planning for Better Living' (c1944), Newspaper clipping [no details] in John Oldham file, 'Planning for People 1937-1954'. Courtesy Tish Oldham, January 2012.

²⁰ AA235/1/34, Town and Country Planning Commission General Correspondence Files, 1 Jan 1944 - 31 Dec 1959: Exhibitions and Film Production 1 Jan 1949-31 Dec 1957. Memo R.A. McInnes to Hon Minister for Lands and Works Hobart, 12 Feb 1948.

²¹ "City Plan Show", *Courier-Mail*, 12 May 1948, p12.

²² "County Scheme Exhibition", *Sydney Morning Herald*, 2 March 1948, p4.

²³ Planning Scheme As Exhibited by C.C. Council 8 March 1948, NRS 13418 Cumberland County Council, Maps and plans relating to planning and development c1940-80, AO Map Nos 52869-52883 Planning Scheme as exhibited by C.C. Council at C.E.N.E.F 8 March 1948, Sheet No.1 – Sheet No. 15, State Records of NSW.

²⁴ Minutes of the Cumberland County Council, 3 December 1947, NRS 13384, 11/15133: State Records of NSW.

²⁵ "On Exhibition in Melbourne", *Daily Herald*, 6 June 1912, p2.

²⁶ The British Council – Fine Arts (General) Committee. "Report of Progress", April 1949, British Council records, Public Record Office, London.

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Temporary Use 2.0

A tool for planning and developing the new urban context

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Temporary urban spaces are gaining even more footing and acceptance on the political agenda as a result of their potential for creating eventful, cultural and creative urban environments. This political focus on temporary urban space is an indication of general urban regulations and development tendencies characterized by cultural planning, leisure, economy, collaborative planning and an increased focus on everyday life. Particularly economic parameters related to leisure such as creativity, culture, urban life and experiences are highly prioritized on the urban municipal agenda, with temporary uses as a concrete development tool. An interesting dichotomy has also arisen between the use of temporary space as a tool for social planning by urban designers as opposed to the use of temporary spaces by politicians as a vehicle for economic gain through leisure spaces.

This paper focuses on the phenomenon of Temporary Use as a city-political focus area now and in the future as well as the use of the temporary as a planning tool. Several case studies are used to illustrate these topics.

Keywords: Temporary Use as a strategic urban planning tool, Temporary Use as an extension of democracy, Temporary Use as a way to test out ideas, Temporary Use as a political focus area

What can temporary use do in urban planning?

Temporary urban spaces and land uses are gaining more and more interest in the field of urban planning in both theory and practice. Temporary uses are often implemented on former industrial sites, which hold great potential for the development and testing of new ideas. Temporary planning is less restricted and allows one to think more freely, maybe even to dare a little more? It is also a way to test ideas out in full scale, before making permanent solutions.

In practice, the growing focus on the development potentials in temporary urban spaces has triggered increased political awareness and thereby ensured the subject of temporary uses a place as a future focus area in municipal planning.

Temporary urban spaces are gaining ever more footing and acceptance on the political agenda as a result of their potential for creating eventful, cultural and creative urban environments. This political focus on temporary urban space is an indication of general urban regulations and development tendencies characterized by cultural planning, leisure, economy, collaborative planning and an increased focus on everyday life. Particularly economic parameters related to leisure such as creativity, culture, urban life and experiences are highly prioritized on the interurban municipal agenda, with temporary uses as a concrete development tool. An interesting dichotomy has also arisen between the uses of temporary space as a tool for social planning by urban designers as opposed to the use of temporary space by politicians as a vehicle for economic gain through leisure spaces.

This paper will focus on the phenomenon of Temporary Use as a city-political focus area now and in the future as well as the use of the temporary as a planning tool. Several case studies will be used to illustrate these topics.



In its direct definition the 'temporary' represents the non-permanent, something that has a time restriction. When we talk about 'temporary use' in urban planning it becomes more than just the non-permanent. It becomes something less restricted, which allows you to think more freely and allows you to dare a little more. The temporary also becomes an opportunity to test ideas out, in the open and is a great kick-start in the process towards the more permanent. It is dynamic and can even stimulate local economies. It is gaining greater interest in the field of urban planning as a tool in the strategic planning process.

The temporary use of urban space holds great potential for the development and testing of new things. It has the ability to activate empty urban space, former industrial sites and other run-down areas, providing a new perspective on redundant spaces.

For many reasons the temporary use of urban space is gaining more and more political interest. It is becoming a trend in urban planning and urban development in general.

Why has it become such a political focus area?

As our societies are changing from industrial to knowledge-based societies, the physical layout of our cities are changing to. The post-industrial society left a great amount of centralized, unused and run-down areas within our cities. In our current time of economical crisis, financial resources are limited for the redevelopment and investment of these redundant brownfield sites. This is when the application of the 'temporary' is at its best, offering a cost-effective and easy opportunity for activating and bringing life into these empty areas.

The increased political focus on temporary use is due to the dynamic and less expensive nature of the term in activating otherwise dead areas. It is easily implemented and just as easy to reverse it if it doesn't work. It shows empowerment and it is a great opportunity to gain knowledge on local societies.

The increased political awareness is also an indication of general urban regulations and development tendencies, and an increased focus on everyday life. Especially leisure economic parameters are highly prioritized.

But all of this political interest also brings challenges. The political agenda adds another value to the 'temporary', providing a greater focus on the leisure-economical potentials, rather than on the social and urban possibilities. The risk of the increased political popularity of the 'temporary' is also linked to various forms of urban transformation with everything being a temporary project without it pointing forward towards the more permanent.

What can we use it for?

The 'temporary' can be used as an effective tool in the planning process, expanding the sites "opening hours", providing a safer environment and inviting people to use the area in a new way.

The temporary can help *kick-start* the transformation of a place - creating a living, creative and innovative urban environment. It can be used in *testing an idea*, a transformation of an urban space. Staging *temporary events* is also an effective application of the tool. Temporary use is a generator of

new activities, giving a place new identity, playing a new role in people's mind. It offers a freedom. It can easily be changed or moved, if it is not successful. Even though the term is linked to something non-permanent, with a time restriction, it does give some long-term possibilities. It presents an opportunity to test and gain knowledge on a proposed project. This ensures that the project has a greater chance of success than of failure. The temporary can strengthen communities and stimulate local economies, particularly user-driven initiatives.

How did it become so popular?

The temporary is giving today's city planning a positive discourse but also holds a paradox in being both a product of times of transformation, uneven social growth and the stagnation of the global economy. And on the other side a producer of new urban and political tendencies.

Temporary offers a less expensive, easier and more dynamic way of developing cities, which is in the interest of the political and municipal planning. It presents the opportunity of developing areas, in spite of economical stagnation.

Political support for the 'temporary' can also be stimulated by personal gain and possible re-election for a politician. A politician can be the one that introduces a temporary project and then be responsible for its success. However he or she can also revoke the idea, gaining community support and respect should the project be unsuccessful. It is a political win-win situation.

On the other hand the temporary gives the everyday user of the urban space a sense of involvement and ownership, which provides a feeling of democracy. The temporary in its informal and self-governing environment also appeals to certain resourceful group in our society, called the urban pioneers.

Can we use it as a planning tool?

What temporary use brings to the table is that it makes it possible to work with several aspects in urban planning at once. Instead of traditional planning - just working with the physical layout of a place, it is possible to also work with the use of it, and its story at the same time. This enhances the opportunity for the successful transformation of a place that is not only focusing on the physical level but also puts people in the equation of planning.

It seems that all parties in urban planning including politicians, landowners and citizens all agree that it is a good idea and holds great potential and possibilities. The temporary adds social, cultural and economical value to an area, however we have to realize and be ready to accept that there are two sides to the coin.

These include the self-grown temporary activities, with their informal and non-controlled character and the traditional top-down urban planning. These two sides will challenge each other. To prevent them working against each other, we need to take the best of both worlds and use it, in order to find new ways for successful urban planning. It has already been made possible in several different types of projects all around the world on both macro and micro-scales, some of which will be discussed in this paper.

Who are the potential players?

As described earlier, temporary urban space offers cultural, economical, social and physical potentials. It is creating possibilities for developing new sustainable urban structures, cultures and networks that lead to many different platforms of creativity and innovation, and also tie in with new contact to the everyday life in the local community. This is a constellation that holds great potential in creating more lively and eventful environments in the urban space.

Historically the potential players temporary use interventions consisted of urban pioneers – those that are drawn by the open undefined character of these often forgotten and leftover spaces.

However, with its increased popularity of the past few years, the spectrum of game players has expanded. These include politicians, municipalities, citizens, community groups and property developers.

Are there different types of temporary use?

The term temporary use is becoming more and more complex as some activities only take place in a transition period while others become more permanent. This paper has categorized temporary uses into three key areas: A activating tool, a testing tool and an event tool. The temporary use does not have a scale, it can affect smaller places or lead to a transformation of larger urban areas.

This paper will provide some real life examples of Temporary Spaces in Copenhagen, Denmark.



Case study; EVENTS – Bernhard Bangs Summer Street Camp festival. Location: Frederiksberg, Copenhagen, DK. Source: www.arkilab.dk.

Imagine being able to design, make and host your own music festival, in your neighborhood, as a twelve year old. Some local kids, living in the Frederiksberg area, were given the opportunity to be involved in the creative design and building process for the Bernhard's Bangs Summer Street Camp festival. Using the remnants of a former playground, wooden palettes and other recycled materials, the kids-come-designers together with the Architecture and Urban Entrepreneur firm arki_lab developed a hybrid temporary public art installation, equipped with a bar and lounge area for the festival guests to use and enjoy.

The Summer Street Camp was primarily an educational project, providing an opportunity for kids between 12-16 years old, to be designers, whilst also being educated on the benefits of waste reduction and recycling. The kids were provided with a design brief, site and deadline, in which they had to work within the project constraints - utilize recycled materials from the site and neighborhood, in rejuvenating a disused industrial site for the Bernard Bangs music festival. In the lead up to the construction week, the students participated in workshops, sketched and collaged concepts for how the event could run and how the site could operate. A tour of their neighborhood allowed them to select materials and gather further ideas for construction phase.

This project gave the kids an insight to the professional design process, from concept development to construction phase. In addition to building the temporary site many of the kids were also involved in other activities throughout the week. This included preparing lunch with 'ReGastro' a local organization that had formalized the 'dumpster diving' phenomenon, partnering up with a number of local supermarkets, collecting and using their close-to-date expired food in their cooking. The kids learnt about the benefits of waste reduction.

The Temporary Summer Street Camp is a great example on a temporary event, which links education through involvement.



CASE STUDY; EVENTS - Inflatable Community and Performance Space. Location: Nørrebro, Copenhagen, DK.

During the month of August 2013, a large inflatable bubble popped up in the streets, urban spaces and even religious buildings around Copenhagen. They attracted curiosity, excitement and questions. More importantly they attracted people to some redundant spaces across the city. This temporary transparent bubble breathed new life into these dormant spaces, *'making the invisible, visible'* (www.plastique-fantastique.de).

Plastique Fantastique, a Berlin-based creative collective, play with the potential of an urban context, unveiling a new perspective of a space for a limited time. They create aesthetically pleasing, inflatable plastic constructions, acting as sculptural interventions in the city. Established in 1999, the collective see the city as a laboratory for temporary spaces.

Exploring the performativity possibilities of urban environments through temporary architecture, the collective created *'aeropolis community center'*, in collaboration with Copenhagen International Theatre and the local communities.

Featured as part of the Metropolis Festival in Copenhagen, the inflatable 100m² transparent bubble travelled across thirteen different locations, adapting its theme to each new physical setting and community.

'The scenography changes with the specific environment: there's meditation and yoga by the lake, it opens up towards the sky above us in a cemetery, it invites us to a soundless discotheque at one of the noisiest intersections in the city, it provides performance at Islands Brygge, martial arts at Superkilen and table game room in Vesterbro, it blows up inside a church and shows a future cultural center in Valby'. (www.plastique-fantastique.de)

Regardless the way people view a bubble, walk around its exterior or move inside it, the pneumatic structure is a medium to experience the same physical setting in a temporary extraordinary situation. It has the ability to remove a subject from its surrounding context and transfer them into a new spatial realm. Their interventions change the way we perceive and interact in urban environments.

What is so successful about these 'pop-up' interventions is that it changes the way people perceive and interact with their city and surrounds. It mixes varying landscapes, creating a strange absorption between public and private spaces - creating new hybrid environment. The ephemeral structure acts as a medium to experience the same setting. The lightweight material and movement of the bubble has the ability to remove a subject from its surrounding context and transfer them into a new spatial realm. The fluidity of the structure also ensures that it's a subtle and sympathetic intervention in a public space. It occupies and mutates according to the context it is situated in.

This form of temporary use invites people, of all ages, to use the area in a new way. It offers the long-term possibilities of what a redundant space could look like.



Case study; KICK-STARTER – Prags Boulevard and PB 43. Location: Prags Boulevard 43, Copenhagen, DK.

PB43 and the upgrade of Prags Boulevard is a great example of how a government led project has complemented a non-profit organization initiative, in kick starting an area of renewal.

Renewal of parts of Amager, a southern inner neighbourhood of Copenhagen has been on the Copenhagen Municipality's agenda for many years. Prags Boulevard, a key east-west artery road, connects many land uses and destinations within Amager. It runs through residential areas, industrial precincts and takes users to the oceans edge, at Oresund Sound.

The Municipality engaged a local Landscape Architect to redesign Prags Boulevard, leveraging of its connectivity to key areas within Amager, and saw its potential to bridge the gap between these areas - improving pedestrian and cycling's permeability through the area and social meeting spaces. A new elongated urban park was created to bind the areas together. The landscape architect emphasized importance of the proposal to 'not let it become a traditional recreational areas, but a green area with high value of people of all ages' (www.dac.dk). The space contains biking infrastructure, seating areas, 120 new trees and green areas. It also provides an opportunity for people to socialize in new ways. Seven activity areas have been arranged with the linear park and include a different experience to the user. For example the 'garden' areas is a space to sit, reflect amongst the fragrant flowers and plants, something that the elderly people wished to see for the area. Early engagement with the local residents has assisted in gaining significant support and ownership of the project.

Prags Boulevard 43 contained a large redundant paint factory for many years before "*Giverum.nu*" (*Give space now*), a local non-profit organization discovered its potential to bring new life into an area of renewal. This is how PB43 was born.

Two months after liaising with the Dutch landowners, Akzo Nobel, the organization was able to take temporary ownership and management of four buildings and the outdoor areas, free of charge until 2016. The buildings were given a minimal renovation, with the basic necessities such as lighting, heating, water and electricity installed in the buildings. The spaces within PB43 were then made available to a number of creative and emerging professionals such as artists, architects etc at a low rental rate, in supporting life for the spaces.

Since its beginnings in December 2010, the site has continuously been transformed into a creative, user-driven environment with workshops, offices, studios, galleries, café, urban laboratory and urban farm. This conversion has entailed a rethinking of the functions of the buildings and open spaces at the site. In this process a strong emphasis has been placed on the active involvement of tenants and local residents, together with an open dialogue with the municipality and the landowner (www.pb43.dk). In recent months PB43 officially registered as a cooperative with a focus on non-profit activities, formalized a new board of directors, and has taken over the legal responsibility for the lease. These new arrangements were negotiated collectively between all the tenants at PB43 and Akzo Nobel ushering in a new, more user-orientated form of organization.

The two initiatives have brought life into kick starting an area of renewal. The public realm changes to Prags Boulevard have created the physical invitation for people to use the area, whilst Givrum.nu's PB43 project provides the social invitation, giving people a reason to occupy the spaces and visit Amager.



CASE STUDY; KICK-STARTER - Carlsberg's old brewery site. Location: Vesterbro, Copenhagen, DK. Source: www.carlsbergbyen.dk.

To many, Carlsberg is usually known for having '*probably the best beer in the world*'. To those in the built environment world, it is known for its progressive approach in developing 'the Masterplan'.

Located in the western borough of Copenhagen, Vesterbro, the Carlsberg Brewery has been an active part of the Copenhagen's economy, social history and urban fabric for over 160 years. After the decision was made to close the brewery in 2006, it left a 330,000 m² industrial site open for redevelopment.

An international design competition was called to help Carlsberg achieve its vision for the site - create a new residential and employment area in Copenhagen, in harmony with the sites rich historic fabric and surrounding residential neighborhoods. Any future masterplan for the site should draw on inspiration from Copenhagen's urban structure - dense city centers with short, winding streets, passageways and small squares.

A Danish multi-disciplinary firm, *Entasis Architects*, concept called 'Our Town' was awarded the contract. They sought to create a new sustainable and multi-functional district in Copenhagen. A point of difference with their project provided short term and long term programming for the site. They wanted to invite people to enjoy urban living and a multitude of activities in the area even before construction of the new buildings began.

There were two elements to the short-term programming - the development of temporary urban spaces and the 'quick-fix' building maintenance to allow short term, affordable rentals of the existing buildings. Both programs had the same agenda. Bring life and activity into a redundant industrial space, during the planning and construction of the new town for Carlsberg.

Affordable short term leasing

Shortly after the winning concept was announced, a selected number of buildings were restored to meet basic safety standards and ensure it was operational (i.e. ensure water and heating was running). These buildings were then subdivided and leased out on short-term (2-7 years) leases, at a much lower rent than the normal market price. This was a driver to get small businesses, artists and community groups into Carlsberg immediately and create life within the site - which worked. They also engaged an internal committee to organize and host events in the spaces.

Temporary Spaces

The relocation of the beer production to Fredericia in Jutland, in 2006, meant that the Carlsberg site contained many spaces, but no people places.

The solution from the designers was to create three key temporary spaces, with different programs to bring people into the area and use the space. It is hoped that these temporary interventions can help in determining future development.

The temporary spaces will be instrumental in ensuring a smooth transition between the planning, construction and development of urban life during this period of transition. They serve as exploratory spaces for different functions, design and zone divisions. These spaces focus on physical activity, relaxation and urban life, and are expected to thrive side-by-side with the ongoing planning, construction and restructuring efforts of Carlsberg.

Tap E Plads (Tap E Square) was the first site to take on its role as a temporary urban space in Carlsberg. Located next to the Dansehallerne (Dance Hall), a well-utilized art centre, the temporary space is an outdoor square with a twist. It provides outdoor street furniture using recycled materials including railway sleepers and wooden palettes. Playground equipment provides physical activities for the children. Markings painted on the asphalt divide the square into zones, and a white gable wall can be used for film projections, football matches and other creative activities. A cafe has also leveraged off this area being the first temporary space, by setting up shop. It provides outdoor seating in the square, further contributing to the life of the area.

Boble Plads (Bubble Square), adjacent to the Boblehallen (Bubble Hall) is the 'active and physical' multi-functional temporary space. Asphalted bubbles have been created for the skaters and BMXers, street basketball and soccer can be played on the half court and others can test their balancing ability on the climbing frames. This space has direct access to J C Jacobsens Park, adding another dimension to the space.

The latest addition to the temporary spaces within Carlsberg is *Ny Tap Plads* (New Tap Square) - the creative hub of Carlsberg. It acts as a temporary art gallery/installation space. A key art installation to widely promote the area was the installation to 3,500 pieces of white rope, suspended at varying lengths from the 5.5m high roof canopy. This installation invited people of all ages to climb, swing, do as the please, with the ropes. It was successful in providing a challenging, fun-filled space that encouraged movement. For a seven-month period in 2011, *Kraftverket*, a municipality driven workshop for young people occupied the space. This program gave young people an opportunity to engage in creative projects with artist and bureaucratic freedom.

So what made this approach a success?

Carlsberg took a risk, which fortunately has paid off. The temporary space programming has created a sense of place and raised its awareness amongst Copenhageners. It is a dynamic place, where things are always 'happening'. There is life at all hours of the day.

Economically it has been smart business move. Having more life and people in an area, has raised the property values, and provided a greater return-profit for the landowner, should they wish to sell off the land.

The timing of this short-term programming was also strategically economic. Carlsberg announced plans to redevelop the site in 2006, then sooner after the GFC hit, causing economic stagnation. This potential economic stalemate has set off creative urban development. The temporary space project has provided a life-boosting and economic injection into a potentially dormant site.

It has also played a greater role in truly merging the Carlsberg site into the city, breaking down barriers and letting people in. It is no longer the brewery where visitors are only allowed in via a guide tour. You can now wander and get lost in its streets, just like other part of the city. It has gone from being an introverted player to an extroverted player. It has gone from private to public, from not visible in the city grid to being part of the city.



CASE STUDY; TESTING – Upgrading the street, Nørrebrogade. Location: Nørrebro, Copenhagen, DK.
Source: www.kk.dk.

Nørrebrogade is a unique street with a lively city environment. It also has enormous potential for development. The physical make-up of the street reflects the endless compromises between conflicting approaches. Even though Nørrebrogade has a number of advantages and qualities to play around with, it is not especially pleasant to move around in.

Nørrebrogade has been arranged to suit car traffic, as the street is an important access road for private cars into the inner parts of Copenhagen as well as a local-street for residents and users of Nørrebro.

Meanwhile the physical street layout, is in no way a reflection that for every 24 hours, 17,000 cars drive along Nørrebrogade, 33,000 cyclists bike along it and 30,000 bus passengers get on and off the buses, and 27,000 pedestrians between 7 - 18 who walk up and down Nørrebrogade and spend time there.

In general terms, Nørrebrogade is characterized by the numerous pedestrians and cyclists, even though these groups have had many causes for suffering: it has been difficult for them to reach their destination on the pavements and cycle tracks, there have been conflicts between cyclists and people getting on and off the buses and they have had very limited opportunities to experience attractive city life.

The overall plan

Against this background, the politicians in the City of Copenhagen decided back in 2006 that an overall plan should be developed for Nørrebrogade. This work was carried out in the autumn of 2007 and the spring of 2008, when the municipality invited a number of local interested parties into a dialogue, after which the proposal for the overall plan was developed.

The following three goals were the main focus of the plan:

1. That, Urban space will be made more attractive and city life strengthened
2. That, Conditions for cyclists will be improved on overcrowded stretches of cycle track
3. That, Public transport will be strengthened so as to create the possibility of shorter journey times and increased punctuality of buses

Nørrebrogade was to become so to speak the main nerve running through Nørrebro, where the pulse of Copenhagen can be felt and where there is place for variety, a place where Copenhageners as well as visitors live and breathe.

In total, there were four different proposals worked out for the overall plan. All of them required that car traffic be reduced to gain more space for pedestrians, cyclists and buses. In summer 2008, the politicians prioritized from among the four proposals for an overall plan. At the same time, it was decided to carry out the first stage of a traffic experiment in autumn 2008 which would throw light on the consequences to overall traffic of a 50% reduction in car traffic. It was decided that stage two of the traffic experiment would continue in 2009, when the opportunities for city life arising from a reduction in car traffic would be tried out.

The traffic experiment

The first stage of the traffic experiment was carried out from October to December 2008. As well as reducing car traffic, the experiment also covered widening the pavement along some stretches of road as well as moving the bus stops out onto the road. This resulted in improved pedestrian flow on the pavement, where bus passengers had previously stood and waited. At the same time, the cycle tracks were doubled in width on some stretches whereas there had previously been congestion on the cycle tracks.

The municipality's assessment of stage one shows that it is possible to reduce car traffic by 50% without it having negative consequences in the surrounding residential streets. The assessment also shows that pedestrians and cyclists feel considerably safer and buses arrive more punctually, which saves bus passengers about 100,000 hours annually.

In an opinion poll carried out among the inhabitants of Nørrebro, 67% stated that they wished the experiment to become permanent.

When stage one of the experiment was carried out in the autumn and winter, it was not possible to experience the full potential of the experiment's possibilities for affecting city life. Until March, the City of Copenhagen was involved in dialogues with local interested parties about the wishes and opportunities to show and brand Nørrebrogade as a modern and environmentally friendly street, including the street and pavement layout as well as the holding of various events. The results of this dialogue process took place in spring and summer 2009.

All experiences gathered from the traffic experiment was assessed and integrated into the proposal for the overall plan, which was inaugurated by the politicians in August 2009.

The upgrade of Nørrebrogade, was a great example of testing out ideas, before making the more permanent change. It allowed the planners to dare a little more, aiming higher and ensure a more successful outcome.

Conclusion

Working with temporary use in urban planning there are five things we need to remember:

1) It should be a long-term process, meaning that the temporary planning must stretch over a longer period of time so it is worthwhile investing personal, social and economical capital in the area. The landowner should also dare to let some of the spontaneous and unplanned gain root, without necessarily gaining more land area and value straight away. Setting up an open end goal for the area also indicates focus on the process and the users, which typically generates a larger support and a feeling of ownership from the users.

2) It should be user driven innovation, meaning that the users are not just involved but are also a major part of the transformation of the space.

3) It should have an independent catalyst unit, meaning that it can be a good idea to establish a local unit of some sort that has the responsibility to facilitate temporary activities and catalyze new users. It is important that it can work as a credible link between the landowner and the users and ensure a common understanding in the network.

4) It should encourage the landowner to invest in area capital, meaning that the landowner should develop the area in the light of its existing values and possibilities, not from a bulldozer's point of view.

5) It should contain a common meeting place, a place that can strengthen the interaction in the network, a place where resources and competences are exchanged, creating openings for new inter-collaborations and a possibility for strengthening the common identity of the place. The common meeting place could be combined with the independent catalyst unit, or connected in relation to some everyday facilities, like lunch, printing and meeting areas. This also makes it possible to use it for coordinating events, receptions, workshops etc.

So is the temporary here to stay?

In our post-industrial society where economies are collapsing and the environment is suffering as a result of our on-going consumer behavior the temporary can act as a bridge connecting space and people.

In times of transition the temporary can be an innovative way of bridging between design, planning and urban life, and activate space in a way that the more permanent cannot. Often urban design and planning happens too fast, but life takes time and people need time to adjust.

When testing something out in the open in 1:1 scale, we gain knowledge and at the same time give people the time to adjust to the change and even have a say in the matter. In urban design as well as

planning, temporary use in general offers an opportunity to test out ideas before making a more permanent change.

In every other profession such as Car manufactories and Pharmaceutical companies, products are tested in order to learn about their shortcomings before putting them on the market. Remember that all scientific data is based on testing. Urban design needs to be tested more out in a 1:1 scale instead of just being forced on the users.

In a way the temporary then becomes an extension of democracy because people and the everyday user of the urban space feel that they have been given the opportunity to be heard and a responsibility. This will create the feeling of ownership in many people, a feeling that makes people care more about our urban space and even promote it, as if it was their own.

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Great Expectations

Mobilising histories and transforming the city through mobile technology practices

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When we consider ways of moving through the urban environment the tendency is to focus on how the material ‘fixities’, such as a city’s morphology, infrastructures, and built forms, calibrate such movement(s). In this way the practices of movement are reductively understood as vectorial, and as those produced by, or secondary to urban space. Yet as Cresswell (2006) notes, “movement is rarely just movement; it carries with it the burden of meaning...” (p19). Given the significance of this, and in relation to a time of unparalleled mobility and connectivity, it is argued that new ways of being mobile, together with new forms of informational movement, are forcing us to confront dominant and deep-rooted notions of urban space; how it is produced, and transformed, and by whom. Thrift (2011) describes this as a “transformation in the production of space, brought about through new practices of organising, analysing, displaying, storing and communicating information” (p6). He adds that our ways of sensing the world have also changed, and, as a result, it might be suggested that new types of perceptions and reflexive practices are also emerging.

This paper considers how the behaviours and ‘mobilities’ associated with forms of Internet-based informational access, production and interaction – referred to here as ‘mobile technology practices’ – are ‘reconfiguring’ the histories and meanings of urban spaces. This intends to establish a critical approach to how such practices facilitate ways of interacting with information, people and urban space; and to consider in what ways these constitute new – or perhaps alternative – forms of both urban historical practice and experience. Beginning with a broader discussion on mobile technology practices and urban spaces, behaviours, and experiences, this paper will then draw upon examples of mobile urban interpretive projects, including those local to inner city areas of Sydney, Australia.

Keywords: Urban mobility, urban history, mobile technologies, locative media

"...I continue to be troubled by the unsettling spectacle offered by an excess of memory here..."
Paul Ricoeur (2004: xv)

Introduction

When we consider ways of moving through the urban environment the tendency is to focus on how the material 'fixities', such as a city's morphology and its infrastructural networks and built forms, together offer an understanding of such movement(s). Yet, as Cresswell (2006) notes, "movement is rarely just movement; it carries with it the burden of meaning..." (p19). This suggests not only that the movement of people, objects, and information can be understood in terms of displacement, connection, proximity and transmission, but also that such movements are relationally implicated in the production and performance of social, spatial, political and cultural processes. Similarly Merriman (2004), drawing on a range of views that conceptualise space and place as progressive and dynamic, asserts that movements should be understood not simply as occurring "across landscapes", but rather as "integral to the construction and performance of landscapes and places" (p146). For Cresswell, then, the concept of 'mobility' acknowledges the role that a host of movements play in the construction of place, and, in so doing; bring into focus *how* movement is made meaningful. Given this, the concept of 'urban mobility' is taken here to reflect not only on the movement of people and objects in relation to fixed locations in the urban environment, but also on how, *through* movement, information and meanings – and thus memories and histories – can be continuously re-produced, emplaced, displaced, and, potentially, erased.

A more recent shift in mobility practices can, in part, be attributed to the wide-scale adoption of and engagement with personal Internet-enabled portable communication and computing devices, also known as 'smart devices'. This suggests that the interface created by a smart device enables mobilities *to be practiced in new ways*. For Farman (2012a) this is the "emergence of mobility through mobile computing" (p11). Yet it is important to recognise that this does not simply concern how a new piece of technology operates, but rather that, as people adopt and integrate such devices into their behaviours and experiences, they become enfolded into everyday practices. For this reason the behaviours and 'mobilities' associated with the use of smart devices in urban space – from forms of social communication, to informational access, production, and interaction – are referred to here as 'mobile technology practices'. In this context, adopting the reference to 'practice' seeks to dispel a technologically determinist approach, and to recognise that while devices operate within a spatial environment, more significantly they are part of broader fields of spatial, social, and cultural action. Following de Certeau (1984), mobile technology practices are also considered here to constitute *critical acts of spatial production* (p97). This, in turn, suggests that such devices are not simply implicated in the production of urban spaces from a *physical* perspective, but simultaneously within a *perceptual, intellectual, associative and interpretive context*.

This paper thus considers the ways that emergent mobile technology *practices* can represent a restructuring of the relationships between people, information, and urban space. More specifically, this seeks to examine how, in representing new ways of 'being mobile' – and thus potentially new

ways of interacting with information and urban space – such practices might also provoke epistemic shifts. Of particular interest here are how mobile technology practices contribute to the production and interpretation of urban ‘histories’, such that individual and collective understandings of location and place are (re)constructed through both ‘everyday’, and ‘novel’ mobile technology practices. By novel, here, we are referring to the use of the smart device to access mobile location-based services (LBS) that host location-aware and context-specific media content, such as text, images, voice, and video; that is, media content that relates specifically to a defined geographical location in urban space. It is suggested here that the assemblage of such mobile media content can be understood as a form and method of urban history interpretation, that is made accessible and in some cases interactive, through a personal mobile smart device. In this way urban history interpretation, but also its very production, is considered as performed *through* mobile technology practices. From an institutional perspective, Tebeau (2013) has referred to this form of mobile media based urban history interpretation as the “mobile interpretive project” (p25).

The intent of this paper is thus to establish a critical approach to how mobile technology practices facilitate ‘new’ ways of interacting with information, people and urban space; and to consider how the mobile interpretive project might constitute new – or perhaps alternative – forms of both urban historical practice and experience. To date, a range of scholarly sources have addressed the relationships between urban space and mobile technology practices (Foth 2009; de Waal 2011; Shepard 2011; de Souza e Silva & Frith 2012; Farman 2012a, 2012b;), while other material has directed more specific attention to practices of communication (Ito, Okabe & Matsuda 2005; Fujimoto 2005; and Campbell & Ling 2009); navigation and wayfinding (Willis 2008a, 2008b, 2009); locative media (Galloway & Ward 2006, Galloway 2008, 2013; Buschauer and Willis 2013); and objective-based gaming and social networking services (Wardrip-Fruin and Harrigan 2004; Hampton, Liovio & Goulet 2010; Humphreys 2010; Gazzard 2011; Humphreys & Liao 2011). More recently this discussion has extended to include examples of mobile interpretive projects such as the Museum of London’s *Streetmuseum* (Farman 2012a); *that way app* (Willis et al., 2012), the *Fort Vancouver Mobile Project* (Vogt 2012; Oppegaard & Grigar 2013), and the *Cleveland Historical Project* (Tebeau 2013). Projects such as these were preceded by the notable global [*murmur*] project¹ that exploited earlier mobile phone technology to generate and access site-specific stories in cities such as Toronto, Edinburgh and Melbourne since 2003 (Orpana 2009; Micallef 2010; Farman 2012a; Galloway 2013).

In what follows, and with consideration of the aforementioned literature, this paper will begin with a broader discussion on mobile technology practices and urban spaces, behaviours, and experiences. It will then draw more specifically upon examples of mobile urban interpretive projects including those local to inner city areas of Sydney, Australia, such as the institutionally conceived and based Power House Museum (PHM) Augmented Reality *Layar* app², and the mobile-based gaming app *Razorhurst*³, developed privately by new-media artist Richard Fox. The inclusion of these two particular examples presents the opportunity to comparatively reflect on the motivations, design approaches, and outcomes and experiences of mobile media based urban interpretation projects from arguably alternate approaches.

Mobility as a Spatial Practice

The attention to mobility, and specifically to mobile technology practices, is intended to draw upon the ways urban histories can be understood as *performative*; that is, how urban history can be

understood as being *produced* through action and movement, and, conversely, how such histories can be represented and communicated *through* movement. This therefore suggests a shift in urban interpretation from outcome to process. Indeed, over the past two decades, mobility theorists have sought to reposition mobility practices as central to both historical and contemporary conceptualisations of social, spatial, economic, and political relationships; c.f., for example Thrift 2004; Sheller & Urry 2006; Urry 2007, 2011; Canzler et al., 2008; Cresswell 2006; 2010; Cresswell & Merriman 2011. Cresswell (2010) argues that the mobilities approach “brings together a diverse array of forms of movement across scales ranging from the body to the global” (p18).

This centralisation of mobility within relational frameworks of understanding can be argued as a response to the increasing range and speed of mobilities that have created expanded networks of complexity and contingency. This is further articulated by the ways digital information and communications technologies have been deployed to facilitate these possibilities, but also responsively to sense, track, and map the complex relational movements of people, goods, and information. A key attribute of these systems has been the networking of connections on a global scale, yet more recent developments in micro computing has brought greater focus to mobility practices at both the local scale and the ‘everyday’ level. More specifically this concerns the integration of global positioning system technologies (GPS) with mobile smart devices and the development of location-based-services (LBS) that allow the device, and subsequently the user, to be both locatable, and ‘location-aware’.

‘Transformative’ Mobile Technology Practices

A host of scholars (Greenfield & Shepard 2007; de Souza e Silva 2006, 2012; Gordon & de Souza e Silva 2011; Farman 2012a, 2012b) attest to the transformative potential of mobile technology practices. de Souza e Silva (2006) makes the claim that mobile technology practices transform space into a hybrid condition. Kopomaa (2004), recalling Oldenburg’s (1989) concept, argues that mobile phone use creates a ‘third place’, as a place of withdrawal that is distinguished from either the home or the workplace (p. 268). Fujimoto (2005) refers to the mobile phone as a ‘territory machine’ capable of transforming a public to a private space – for its individual user, and/or perhaps far wider. Other writers (Greenfield & Shepard 2007; Willis 2008a, 2008b; Ito, Okabe & Anderson 2009; Willis and Geelhaar 2009; and Shepard 2011) have addressed the ways mobile technology practices influence how people make choices about navigation, undertake activities, and socially interact in urban spaces. Given these influences, Gordon and de Souza e Silva (2011) argue “[w]e are experiencing fundamental shift in the way we understand physical space” (p172). Willis (2008a) suggests this relates to a reconceptualisation of the bounded-ness of space, formerly definable by geographic extent, and now additionally conceived as a territory inscribed by patterns of networked informational and social access.

More specifically de Souza Silva & Frith (2010), de Souza e Silva (2012), Farman (2012a; 2012b), Humphreys & Liao (2012), and Tebeau (2013) has each argued that location-awareness extends this influence over the relationships between information, people, and place. Location-based services (LBS) make it possible for a mobile device user to geographically locate themselves in relation to urban space, to access context-specific information about their location, to locate ‘connected’ people nearby, and to contribute and share information with other people. de Souza e Silva (2012) describes this as the translation of location-awareness into “useful services, such as navigation,

locating the nearest gas station, locating a nearby friend, and calling a cab in the vicinity” (p117). Subsequently, against earlier critiques that pointed to the association between mobile device uses and decreased situational awareness and social and physical disconnectedness, many scholars now argue that location-awareness and the associated geo-based forms of mobile media, support a renewed attention to, and prioritisation of, the local environment (Farman 2012a: 19).

In a similar reversal, several more recent studies have addressed how mobile technology practices can positively influence forms of urban sociability, and how, in some cases, the smart device has been overtly engaged to subvert the very social behaviours it has previously been accused of producing. Galloway & Ward (2006), Humphreys & Liao (2011), de Souza e Silva & Frith (2012) and Willis (2012) have all drawn attention to the ways locative–media based mobile technology practices can affect the processes and patterns of urban sociability. Willis et al., (2010) have emphasised how the act of socially *sharing* place-based information can transform sites from being merely informational, to sites that then “gain meaning through social exchange” (p303). Given the shifts in the way people connect and interact both socially and spatially, this similarly implies changes to how people might interpret, consume, and produce cultural objects (Farman 2012a: 19). Zeffiro (2012) following Bourdieu extends this idea to propose that mobile technology practices constitute their own “field of cultural production” (p250).

Mobile Information: ‘Taking it to the streets’

While, more generally, mobile computing has enhanced the movement of digital information in larger quantities and at greater speeds, the corollary of this has been the need for mechanisms to filter and curate this vast quantity of data and information. In this sense, de Souza e Silva & Frith (2012) describe how mobile technology practices constitute “new interfaces” to public spaces that assist people to “control and manage their interactions with their surroundings” (p14). Improvements in GPS capability, and developments in mobile computing applications (“apps”) that integrate LBS, has granted the mobile device user access to increased levels of ‘located-awareness’ in terms of their own geospatial position, and potentially that of others. Additionally, certain apps allow access to, but also the production of, digital information and media content relative to a smart device’s geographically identified location. The term ‘locative media’ commonly refers to these forms of information and media that can be virtually ‘tied’ or ‘tagged’ to a specific geographic location in urban space.

Locative media is also described by Tarkka (2010) as a “loose common nominator for artists, developers and activists who explore the possibilities of mobile, location-based, and other pervasive technologies” (p133). Zeffiro (2010) points out that experimentation in this field has only recently emerged from an “insular milieu” of niche interest groups and “continues to be redefined and reproduced across varying social groups and institutions” (p250). Yet LBS now figures significantly in the commercial realm of mobile application development and has become an everyday feature available to the mobile device user. The scope of projects across institutional, educational, and arts-based sectors that have leveraged the mobility of technology and LBS are, to date, extensive. Coupled with this is a growing vocabulary that variously describes such services and projects as “urban computing and locative media” (Galloway 2006; 2008; 2013); “GPS enabled mobile narratives” (Raley 2010: 312); “mobile location-based media”; “location-based story-telling” (Paul 2013), “transmedia story-telling” (Jenkins 2003), “mobile stories”, “locative narratives” and

“information landscapes” (Farman 2012a; 2012b; 2013). Broadly speaking, each of these descriptors can imply a service or project that combines fictional, semi-fictional, factual, recent and historical content. To draw a distinction between these aforementioned variations, this paper considers ‘mobile interpretive projects’ as those that draw more explicitly on historic places and events.

In the field of urban historical interpretation, the development of mobile interpretive projects that integrate LBS have been both keenly – and cautiously – embraced by institutional, educational and arts-based sectors. In one sense the growing interest in location-based technologies and locative media for institutional and educational projects has tended to parallel the increasing affordability of smart devices and their globally high uptake rates (Galloway 2013; Google 2012). Yet, as Galloway (2008) notes, interest in adopting location-based technologies has also been driven by certain assumptions and expectations around notions of “playful or transformative experiences...” (p3). Drawing particular focus to this issue she notes that “...urban computing and locative media are...characterised by their desire and ability to *extend* and transmit urban experience, either by providing greater depth of knowledge and awareness of a space or by overlaying information on existing places and objects” (2013: 359-360, our emphasis). Further she adds, that as a result such projects – intentionally or otherwise – tend to position “everyday places and social interaction as...lacking or in need of improvement” (p360).

The expectation of increased awareness or ‘a-where-ness’ of urban space through mobile technology practices is typified by sentiments that claim they can “strengthen [the] users’ connections to the space they inhabit” (de Souza e Silva 2006: 270). Further studies have attributed the social aspect of sharing location-based information and media to ‘enhancing’ and ‘deepening’ the experience of locations, and additionally that such practices ‘motivate’ and ‘influence’ people to explore places (Humphreys & Liao 2011: 410). Extending this notion of newness and transformative potential Gazzard (2011) argues that mobile technology practices are also capable of changing the way people perceive urban spaces. In particular she notes that mobile applications that combine LBS with augmented reality (AR)⁴ features, such as the AR browser *Layar*⁵, offer the device-user a “new way of viewing existing spaces” (p417). Perhaps of greater significance are claims that locative media can change the very meaning of locations and that, by engaging with mobile locative media, those locations become “more visible”, “more personalised” and “increasingly meaningful” (de Souza e Silva & Frith 2012: 197-198).

For mobile technology practices then, and, more specifically, locative media, several key rhetorical themes are evident including a more *personalised* experience: information tailored to the user’s preferences; a more *dynamic* experience: on-demand information that is also ‘real-time’, accumulative or readily updatable; and an *interactive and participatory* experience: the user’s ability to contribute information and data (knowingly and unknowingly). In digital media speak the experience is thus *immersive*. Brighenti (2012) argues that these assertions are a consistent feature of new media literature that “leans towards techno-enthusiasm” and embraces the ideology of so-called “user empowerment” (p400).

Yet, in terms of urban historical interpretation, the notions of ‘locating’ information-in-place, and the mobility of information are far from new. Similarly, the power of tying information to (geographical) place, and humanistic understandings of the experience of *meaning* through place, has been widely discussed by a host of scholars, notably Relph (1976), Casey (1997), Malpas (1999),

and Tuan (1979) who writes, “emotion...finds expression and anchorage in things and places” (p417). Equally, it can be argued that urban historical interpretation in the form of inscription or fixed-signage, the ‘analogue’, and mobile forms of printed media or the tour-guide experience, are all media that can ‘update’ or revise their interpretive content. To update or replace a fixed-sign, or repair or update a software link, could equally be seen as easy or frustratingly arduous tasks, each coming with their respective layers of ‘infrastructure’. Arguably forms of participation and socialising are also possible in each of these cases. Finally the notion of a deeper engagement with place via a mobile interface remains a contentious discussion and one that finds the existing literature favouring the notion of screen-based interaction as embodiment such as Farman (2012a), over discussions that treat screen-based interaction as an additional barrier. So the question becomes, what can the medium-specificity of the mobile interpretive project offer that is not already achieved in existing formats?

Mobile Interpretive Projects

Earlier approaches to mobile interpretation and those that have subsequently adopted LBS typically reflect ways to visually and conceptually straddle and hybridise past and present times, places, and information. Initially developed in 2009 using an early version of the pioneering augmented reality platform *Layar*, the *Sydney Power House Museum (PHM)* app sought to provide mobile screen-based access to historical archival data, namely photographs, relative to the geo-located position and camera view of a user’s smart device. The ‘map-view’ feature of the app situates the smart device user relative to nearby places that are geo-tagged with forms of *PHM* archival data. When activated the app links to, and searches for, a ‘similar view’ from the *PHM*’s archival photography databases – including the *PHM*’s *Flickr* database of places and buildings. In this way, the user can compare their ‘real time’ situated view [Figure 1.] with a screen-based display of a similar view, or range of views, corresponding to their geo-location and as recorded during an earlier time period [Figure 2.]. In this case, the *PHM layar app* refers more specifically to archival material ranging from the late 1800s to the 1930s.⁶ In terms of historical interpretation it is worth noting that while these archival images may potentially relate to places or events regarded as historically significant, likewise they may also be digital archival content that has simply been made accessible.



Figure 1: The Corner of George St and Hay St, Sydney, 2013 (By author).



Figure 2: The Corner of George St and Hay St, Sydney, no known date, between 1900-1909 (PHM Flickr commons archive: public domain).

The method of geo-located image retrieval and comparative viewing is one that has subsequently been adopted for a number of mobile interpretive projects, including most notably the *Museum of London's Streetmuseum* app⁷. *Streetmuseum* extends the possibilities of interpretation to include a range of features including an on-screen blended overlay of the past and real-time views. Discussing this project, Farman (2012b) argues, "...by experiencing a simultaneous layering of space and time, the user is offered a *deeper* sense of context and meaning for the place that defines their sense of self and body" (p20, our emphasis). Yet apps such as these that retrieve and display context-specific 'historical' material, to provide an *I'm here now, this was then* approach, are also akin to holding or placing a printed photograph close to the original position and angle of view from which the image was taken. Cultural venues, exhibitions, urban inscriptions, and literary works can and do employ similar techniques to construct a layering of interpretive material. The particular advantage for the mobile app user however is the provision of access to a potentially wider range of data through a single medium or interface. In this way the limitations of a physical display space are overcome. Nonetheless, the mobile interpretive experience remains contingent in respect of a range of issues namely the existence of location-relevant data, the successful linking of data to the host software, an operable Internet connection, the functionality of the mobile device, the software interface usability, and finally the particularly *choices* made by each user.

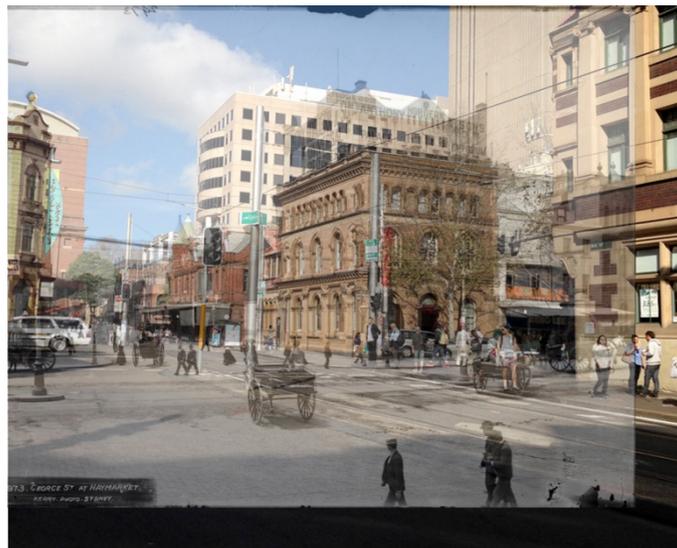


Figure 3: A 'blended overlay' of the images from Figures 1 & 2 (by Author).

While mobile interpretative apps such as those discussed can alert and guide the user to the proximate locations that are linked to geo-located content, they remain essentially free to devise her/his own route through the urban environment. Ultimately decisions about what to pay attention to concern personal preferences and choices, and while this is certainly a factor in any form of historical interpretation, the mobile experience suggests that individuals might exert greater control over the construction of *their* own interpretive framework. More significantly, however, are the ways this personal interpretive framework becomes one that is largely determined by, and contingent on, movement through urban space. Remediated through the mobile interface, urban

history may thus be geographically (re)contextualised, although not necessarily understood by the user who may lack a wider relational interpretive context. This might be considered as urban history ‘on-demand’, where information access is instantaneous, discontinuous and potentially disordered. Yet viewed in a more positive sense, such interactions constitute new and potentially more iterative and recurrent modes of urban historical interpretation. And this suggests, to paraphrase Bourriaud (2008), the possibility to “connect levels of reality” that would otherwise be “kept apart from one another” (p8).

From the perspective of designing and constructing mobile interpretive projects, Tebeau’s (2013) discussion of the *Cleveland Historical project* in many ways supports Galloway’s (2008; 2013) assertion that such projects – especially viewed through their technological guise – are *expected* to ‘extend’ and ‘transform’ urban experience. Tebeau (2013) similarly relates the well-worn trope that connecting information to place will result in “deepening the experience through making contextual meaning” and that “when experienced in situ, [mobile] stories enhance our sensory experience” (p26, 29). More convincingly, however, his case example explains how the mobile interface platform makes possible a “new way of building...history” (p34). This includes the ability to layer multi-media content, including text, images, video and audio, but also the opportunity to curate the project in a broadly collaborative way. Yet a chief objective for the *Cleveland Historical project* remains how mobile interpretation can provide ways to re-centralise ‘locative-listening’, in other words, the opportunity to shift the focus back to oral histories. While this spotlights an existing urban historical interpretation practice, for Tebeau (2013) the point of difference lies in the ways the mobile interface augments this practice to allow a continual and “collaborative storytelling process” (p28). He describes the project as a “community-orientated endeavour” where the key objective is to “build the project collaboratively” (p30). Yet it is worth noting here that ultimately the available app content, whether user-generated or otherwise, remains vetted by the app developers, in this case, the Center for Public History + Digital Humanities at the Cleveland State University.

While the *Cleveland Historical project* is committed to the telling of many stories from a range of voices, other projects, such as the privately developed *Razorhurst* app, represent a more specific focus, addressing a particular era, place, and set of events in history. While *Razorhurst* has been described as a “GPS tour” or “GPS adventure/game” (Timeout 2011) and can be equally categorised as a location-based game, its foundations are fundamentally historical. The app content is largely based on the publication, *Razor: a true story of slashers, gangsters, prostitutes and sly grog*, written by Larry Writer in 2001 and features multi-media content including archival images, and theatrical video re-enactments. The focus of the content is on the prominent crime-related personalities, and their activities and movements in and around the inner-city suburb of Darlinghurst, Sydney during the 1930s and 1940s.

‘Players’ of the app can assume the persona of a range of historical figures from the Razorhurst period, and participate in a quasi re-enactment of events. This has in some cases been more actively taken up as evidenced by the group of keen players shown in costume in Figure 4. As various features and content are triggered by geo-locations, users are motivated to move through the suburbs of Darlinghurst and Surry Hills. Equally the app is objective-based requiring users-as-players to collect and deliver virtual stashes of ‘sly-grog’ to and from various geo-tagged locations while also

slaying virtual assailants. In this way the *Razorhurst* app operates as a mode of urban historical interpretation that – literally – ‘plays’ on mobility.



Figure 4: *Razorhurst* players in costume, October 2011 at the Republic 2 Courtyard, Palmer Street, Darlinghurst (image courtesy of Richard Fox).



Figure 5: Playing *Razorhurst*: attempting to slay virtual assailants at the corner of Palmer Street and Liverpool Street, Darlinghurst near the former Tradesman’s Arms Hotel (photograph by author).

The *Razorhurst* app mobilises history in both its construction and interpretation through a ‘place-to-place’ activity-based logic. This can also be considered as an alternate form of collaboration or participatory experience, one that is more *performatively* based. In this case the historical narrative is not simply ‘released’ at a corresponding geo-location, but rather is sought out and constructed by the participant’s journey, in this way both tracing and re-tracing past histories and new histories *through* urban spaces. This constitutes an incentivising form of game-play that – at the time of

‘playing’ – operates to concurrently communicate and ‘interpret’ a particularly period of urban history.

“The wondrous thing about the hive of suburbs once known as Razorhurst is that today, seventy-odd years later, it requires only a little imagination to mind-travel back to those long-gone wild years” (Writer 2001: xxii)

While the geo-locations of the *Razorhurst* app cover a reasonably extensive area, the expectation/assumption is that this is to be largely experienced on foot. Given that there is no pre-defined order of places, the app can be accessed multiple times in order to visit each geo-location and review the interpretive content. It is argued here that the focus on how people historically behaved and moved *between* places serves to construct a more relational understanding of the urban historical context and this operates as a spatialisation of history. With examples such as *Razorhurst*, and similar crime-history focused projects including the *Chicago Gangland Tour app*⁸, the curatorial process, but also the experiential process, is transformed through relational movement not only between places, but also temporally, between times. The *Chicago Gangland Tour*, for instance, highlights the locations of currently open businesses that were previously linked to the Chicago mob (Mikel 2010).

‘Mobilised’ interpretation practices such as these shift the emphasis from ‘emplaced’ information, to the construction of an informational field; in other words, from historical content (stories) to historical contexts (place) understood through movement. As Turnbull (2002) writes “[s]patial history is...the reconstruction of the narratives of movements and ‘dwellings-in’, through which knowledge and space are brought into being” (p133). The medium specificity of the mobile interpretive project then can be regarded as one that is particularly aligned to a performative understanding of history.

Conclusion

This paper has briefly argued how mobile technology practices represent a host of new and different ways that people communicate, interact, socialise, and significantly move through urban space. Extending this influence, are the possibilities afforded by location-based-services (LBS) that promise to further shape the changing relationships between people, place, and information. Significantly while mobile technology practices involve screen-based interactions, these do not simply result in access to a vast digital informational field, but rather constitute spatialising practices. Following Manovich (2013) it is recognised that mobile technology practices form part of a larger cultural shift that has heralded new aesthetic standards, forms, processes, and expectations. Given this it is understood that the ways in which people, places, artefacts, or situations are ascribed meanings – and how these meanings might be perceived – are also shifting.

For urban historical interpretation, addressing the everydayness of mobile technology practices has had a range of implications. Within institutional settings this has led to a suite of new curatorial approaches, practices, and services such as those described by Tebeau (2013) and evidenced by the digital tools now offered to the public at a range of prominent cultural institutions globally. Yet, outside of these institutional settings, these same mobile digital tools have similarly allowed a range of people and groups to experiment with and produce their own ‘do-it-yourself’ mobile

interpretative projects that can also be made available to a broader public. Whatever the origins and motivations, mobile technology practices such as these suggest a renewed focus towards not simply the ‘local’ in a geographical sense, but ‘place’, in the relational sense that connects people, mobility, spaces, and (hi)stories. Galloway (2013) describes this as a shift from “everywhere” to “somewhere” (p352).

Equally, however, mobile technology practices reflect a repositioning of the individual as a significant agent of interpretation in several key ways. In the institutional sense this is addressed in the popular adoption / focus towards ‘public authoring’ and participatory practices made easier with Web 2.0 developments and personal mobile computing. This approach aligns to Manovich’s (2013) discussion on the “aestheticization of [informational] interfaces” and the conceptualisation of (mobile device) interaction as a meaningful *experience* (p312-315). This also responds to what Jenkins (2001) regards as an emergent culture of “information hunters and gatherers” (p1) who expect information to be instantaneous – on-demand, dynamic, updatable and, in effect, iterative. Participatory modes of interpretation equally address a growing trend for individuals to record, re-tell, and re-distribute their everyday experiences as micro-(hi)stories of the city. In this way we might say that the historical narrative has shifted back into the everyday and reasserts the value of active human experience to the process of interpretation. In light of these factors the notion of historical interpretation can be considered extensible, with new and divergent insights on offer from a range of un-affiliated sources. Capitalising on these issues, mobile interpretive projects – official/institutional and everyday/personal – represent a renewed emphasis on the corporeal moving body as the “affective vehicle” for interpretation (Sheller & Urry 2006: 216).

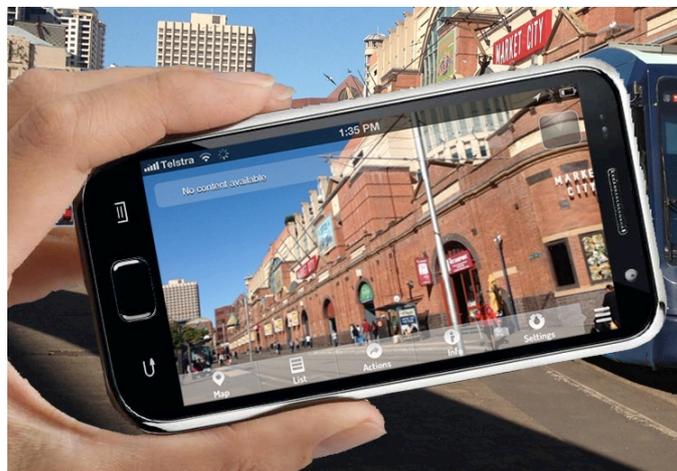


Figure 6: ‘No content available’ – the unavailability of information-in-place. (Image by author).

For historical interpretation practices, the adoption of a range of digital tools, within and outside of institutional settings, has ‘mobilised’ historical interpretation and has allowed for – or, perhaps, *caused* – the deconstructing, repositioning and/or disruption of the author-audience roles and relationships. Yet in accepting a narrowing of the distance between scholarly interpretation on the one hand, and the wider ‘authorial’ scope of the everyday mobile device user on the other, should

we also retain a more critical approach? While we may read these new ‘public authoring’ practices and the participatory annotation of urban space as a resistance to the threat of totalising narratives, historical or otherwise, can the pluralism of multiple voices adversely affect our interpretation, such that no stories can really be fully developed, heard or understood? Does this operate to flatten and devalue historical interpretive practice?

In terms of the mobile interpretive project we should remain critical of how and where historical information is geo-located and thereby typically accessed. Some stories, as Tebeau (2013) points out, “transcend locations” (p30), while others concern places or buildings that no longer exist. Further, he asks, on what basis do we geo-locate certain stories and not others? Hence the range of examples cited here suggests that mobile interpretation remains contingent on the vested interests of the institutional, education, or private auteurs developing them. In other words, histories will continue to be ‘selective’, and in some cases, again as Tebeau (2013) notes, this can result in the elevation of some stories and not others based on their popular or commercially regarded appeal (p27). Significantly, this contingency also extends to the do-it-yourself mode of urban historical interpretation, as public voices also come “each with their own intellectual and aesthetic baggage, moods, knowledge, and expectations” (Bal 2006: 525). In effect this reaffirms the tendency for any form of historical interpretation, regardless of its medium-specificity, to both reveal and erase.

The task of curating urban histories is not diminished then, but rather is ever more significant and continues to be one that is important to future interpretive practices. Expectations remain that such practices will extend, enhance, enrich, and transform historical interpretive experience. Given that these [great] expectations are not merely neutral, but rather can shape the way these tools and practices will be designed, understood, and used in the future (Galloway 2013:356), mobile interpretive practices look set to address the proliferation and plurality of voices and the emergent competitive informational landscape. It is the assertion of these less ‘official’ practices of urban historical interpretation that have captured our attention as those that will continue to challenge/reposition notions of historical interpretation and its practices.

¹ Refer to <http://murmur.info/>. By dialling the telephone number as shown on a green ear-shaped sign placed in urban space, corresponding site-specific or locational stories can be accessed and listened to, but also recorded.

² Refer to <http://www.powerhousemuseum.com/layar/>

³ Refer to <http://www.razorhurst.com.au/>

⁴ Augmented reality (AR) here refers to the use of the mobile interface as a means to overlay data and information to “augment real-world spaces with virtual objects or even layered spaces” (Gazzard 2011:411). Manovich (2006) describes AR as a paradigm that has existed since the early 1990s and as “the laying of dynamic and context-specific information over the visual field of a user” (p222) and one that is opposed to virtual reality (VR) where the user works on a virtual simulation; for AR “the user works on actual things in actual space” (p224).

⁵ Refer to www.layar.com – an augmented reality software application that can integrate with other apps and is used on smart devices.

⁶ The PHM Layar app splash screen refers to PHM Flickr archival material as ranging from the late 1800s to the 1930s.

⁷ Refer to <http://www.museumoflondon.org.uk/Resources/app/you-are-here-app/noflash/no-flash.html>.

⁸ For more information on the *Chicago Gangland Tour* app see: http://chicagoist.com/2010/04/21/chicago_gang_history_meets_iphone_a.php & <https://itunes.apple.com/us/app/chicago-gangland-tour/id365450715?mt=8>.

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Group-cum-Townscape?

Bruce Rotherham at Llewelyn-Davies Weeks Forestier-Walker & Bor

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The English firm of Llewelyn-Davies Weeks Forestier-Walker & Bor, formed in London in 1960, is best known for the master planning of the new town of Milton Keynes and for a series of hospital buildings and complexes, some so extensive that they can be analysed in urban terms.

Less known is the fact that the expatriate New Zealand architect Bruce Rotherham (1926-2004) worked at Llewelyn-Davies Weeks Forestier-Walker & Bor for much of the 1960s and 1970s. Rotherham is celebrated in New Zealand for his role in the Architectural Group, the Group Construction Co. and Group Architects, and for the house he designed and built for himself and his young family in the Auckland suburb of Stanley Bay in the early 1950s. He left the Group in 1952, and left New Zealand in 1955. He settled in London, where he remarried and had the bulk of his career. Little has been written about his British work.

This paper explores Rotherham's time in the reputable London office of Llewelyn-Davies Weeks Forestier-Walker & Bor. It has three aims: (i) to identify the key projects on which Rotherham worked while in the office; (ii) to establish whether or not these projects were consistent with his declared interest in housing; and (iii) on the basis of claims made by British architectural historian and critic Reyner Banham in 1968, to consider the projects within the framework of Britain's post-World War II Townscape movement. Townscape had its origins in eighteenth-century landscape design and the Picturesque movement, yet was also both distinctly modern and distinctly urban.

The paper shows that Rotherham was an important figure in what was a large and multi-disciplinary office, and that his work for the firm included commercial buildings as well as contributions to new towns and town centres. It was within the firm's new towns and town centres that he was given opportunities to work on housing. The paper supports Banham's suggestion that some of the firm's work accorded with Townscape and Picturesque principles. More specifically, it shows that Rotherham both maintained

an interest in pure geometries and also worked on buildings and projects that were characterised by asymmetry and irregularity, by varied and tactile material palettes, and by the making of explicit references to urban sites and contexts. The scale, complexity and recurrent use of brick and concrete all extend Rotherham's established reputation as a designer of detached, timber houses.

Keywords: Llewelyn-Davies Weeks Forestier-Walker & Bor; Bruce Rotherham; New Zealand expatriates

Introduction

One of the most quoted lines in New Zealand architectural history is the Architectural Group's insistence that: "overseas solutions will not do. New Zealand must have its own architecture, its own sense of what is beautiful and appropriate to our climate and conditions." (Architectural Group, 1946) This one statement is the basis on which much of the subsequent interpretation of their work rests. Yet in a 2003 letter sent from London to Auckland, former Group member Bruce Rotherham dismissed it, stating flatly that: "where they [articles on the Group] referred to me, i [*sic*] usually thought that what was being said, while interesting, would not have occurred to me: and if it had, my buildings would have been different." (Rotherham, 2003) He was referring to the Group's associations with New Zealandness and the creation of a local or indigenous modernism. These were acknowledged group leader Bill Wilson's interests: Wilson was the one who wrote about them. Rotherham clarified elsewhere that his main interest in the early years was in the creation of "space (for the enhancement of human activity) formed by building", or "space formed by building (materials)" (Rotherham, n.d.).

To further the understanding of Rotherham's work, this paper considers the fifteen years he spent in the London office of Llewelyn-Davies Weeks Forestier-Walker & Bor, from 1961 to 1976, and the projects to which he contributed while there. This large and multi-disciplinary firm is best known for the master planning of the new town of Milton Keynes in the late 1960s. It is also remembered for a series of hospital buildings and complexes, some so extensive that they can be analysed in urban terms.

The paper uses Rotherham's CV and his own archive of drawings and files as the basis for identifying key projects on which he worked while with the firm. It benefits from site visits conducted in 2013. Access to the archives of the firm, however, which now operates under the name Llewelyn-Davies, was denied during the period of the research. If this access is granted in the future, these archives have the potential to enhance the paper considerably.

The paper reveals that Rotherham was an important figure in Llewelyn-Davies Weeks Forestier-Walker & Bor, and that his work for the firm included commercial buildings and contributions to new towns and town centres. It discusses three key buildings – the Zoological Society Building in Regent's Park; the London Stock Exchange in the City of London; and the Metal Box Head Office Building in Reading – and three urban planning and multi-building projects: the Sunderland Town Centre near Newcastle; a housing scheme at Charlton Park in Cheltenham; and Stantonbury B at Milton Keynes.

In 1991, Rotherham commented that he had “not stopped thinking about housing” since the early 1950s when Group Architects completed their Navy Housing scheme at Devonport. In view of this statement, the paper considers the extent to which these projects for Llewelyn-Davies Weeks Forestier-Walker & Bor were consistent with, and provided him with opportunities to develop, his particular interest in housing. Further, on the basis of claims made by British architectural historian and critic Reyner Banham in 1968, that some of the firm’s work accorded with the Townscape movement and Picturesque principles, the paper also considers whether or not the projects to which Rotherham contributed while in the office can be described in these terms.

The paper shows Rotherham was given several opportunities to work on housing while with the firm. This includes housing schemes within the bigger new town and town centre projects being undertaken by the firm. The paper supports Banham’s suggestion that some of the firm’s work can be described as Picturesque. More specifically, it shows that Rotherham both maintained an interest in pure geometries and also worked on buildings and projects that were characterised by asymmetry and irregularity, by varied and tactile material palettes, and by the making of explicit references to urban sites and contexts. The scale, complexity and recurrent use of brick and concrete all extend Rotherham’s established reputation as a designer of detached, timber houses.

Llewelyn-Davies Weeks Forestier-Walker & Bor

Lord Richard Llewelyn-Davies (1912-1981) and John Weeks (1921-2005) formed their partnership in 1960, initially calling it Llewelyn-Davies & Weeks. The pair had worked together in the 1950s, at the Nuffield Provincial Hospitals Trust, a charitable trust undertaking research on Britain’s healthcare system (McLaghlan, 1992). They worked in a multi-disciplinary team researching and designing a new hospital at Corby in England’s East Midlands (Harwood, 2005). The research findings were published in 1955 (Nuffield Provincial Hospitals Trust). The research report, the Corby buildings and various research articles that decade (Llewelyn-Davies, 1954; Llewelyn-Davies and Weeks, 1959) were highly influential, leading to more commissions and consultancies and to the formation of the partnership.

Llewelyn-Davies & Weeks grew rapidly from the outset, designing hospitals and soon also developing expertise in the planning of new towns and town centres, known at that time as master planning. Former staff members remember the firm numbering some 50 people in the 1960s (Plumb, 2013; Wren, 2013). It had offices in London’s Euston Road, where staff were spread across several floors of the one building, separated according to the projects on which they worked. With the rapid growth, new partners were appointed and in about 1968, the firm changed its name to Llewelyn-Davies Weeks Forestier-Walker & Bor. The new partners enhanced the firm’s two specialisations, with Gwent Forestier-Walker (1919-1994) having expertise in hospital design (Glendinning, 2008, p299; “Robert Jestyn Gwent Forestier-Walker”, n.d.); and Walter Bor (1916-1999) in urban planning (Glancey, 1999). In addition to these two specialisations, the firm also undertook housing, hotels and office buildings, with commissions as far afield as the Middle East.

In the partnership, Llewelyn-Davies worked initially on hospitals while increasingly shifting his attention to urban planning (see Llewelyn-Davies, 1965 and 1967). In the mid-1960s, this included a study of a large part of Oxfordshire and the master planning of the new town of Washington, near

Newcastle, followed in the late 1960s by Milton Keynes and in the 1970s by the redevelopment of the Birmingham inner-city area (see LDW & Partners, 1966a, 1966b; LDWFWB, 1977, 1980).

John Weeks, on the other hand, continued to focus on hospital design. One of his most important projects was Northwick Park Hospital and Research Centre in Greater London. When designing the Northwick Park facilities, Weeks formulated and wrote about an “indeterminate architecture”, by which he meant buildings designed to accommodate change and growth with minimum disturbance to services and ongoing use (Weeks, 1963-64). With this approach, the initial design architect was unable to determine a building’s final architectural form. Weeks also drew a parallel between hospital design and that of a town or village, and used the word “street” to refer to hospital corridors. Through designing, writing and lecturing on hospital design, he developed an international reputation for the building type, worked as a consultant on hospitals in a range of different countries and lectured when he travelled (Harwood, 2005; “John Weeks”, 2005; Moss, 2005).

Concurrent with running their practice, Llewelyn-Davies and Weeks both taught at University College London, Llewelyn-Davies as Professor of Architecture from 1960 and then Professor of Urban Planning and Head of the College’s School of Environmental Studies from 1970 to 1975 (“Richard Llewelyn-Davies”, 2013), and Weeks as senior lecturer in architecture from 1961 to 1972. Through their teaching, they were able to identify and employ talented young graduates from the school and developed a reputation for doing so (Plumb, 2013; Wren, 2013).

Following Llewelyn-Davies’ death in 1981, Weeks assumed the position of chairman of Llewelyn-Davies Weeks Forestier-Walker & Bor and served as such until 1986. The firm was rejuvenated from about 2005 with the arrival of Ken Yeang, of bio-climatic skyscraper fame, leading to another name change to Llewelyn Davies Yeang, with offices in Kuala Lumpur, where Yeang is based, Madrid and Texas. Following financial difficulties in 2013, Yeang left, and HLM Architects bought the remnants of the firm and reinstated the name Llewelyn-Davies (*Llewelyn-Davies*, 2013).

Surprisingly, there is no book on the firm’s work and little historical analysis of it. The most detailed research and writing has been undertaken by Jonathan Hughes and is focused explicitly on the firm’s hospital buildings (Hughes, 1997, 2000a, 2000b). Other references are general, hinting at profile and significance but frustratingly short on detail. This, for example, from Ian Horton (2000):

As Banham noted, in his 1968 article “Revenge of the Picturesque: English architectural polemics, 1945-1965”, Townscape principles were initially opposed by a younger generation of architects still enamoured with the functional and modular aesthetic of International Modernism. The opposition was, however, short lived and by the early 1950s these architects – the Smithsons, Stirling and Gowan, Llewelyn-Davies and Weeks – were producing designs displaying Picturesque qualities. (p77)

Alison and Peter Smithson are the best known of Britain’s New Brutalist architects; Stirling & Gowan also remain well known, and were doing related work, particularly in the 1950s, even though they objected to the use of the word Brutalism to describe it. Llewelyn-Davies & Weeks, on the other hand, have fallen from the historical record.

That said, they operated in similar circles. John Weeks, along with the Smithsons, James Stirling and Reyner Banham, had been involved with London's avant-garde in the 1950s, through both the Constructionist Group and the Independent Group (Hughes, 2000a, pp90, 99). Hughes (2000a) traces Weeks' evolution of "indeterminate architecture" back to these associations and the groups' shared enthusiasm for D'Arcy Wentworth Thompson's *On Growth and Form* of 1917 (p94). He shows that Weeks deployed this approach in the design of the Northwick Park hospital buildings, using circulation spines and wings of fixed widths in conjunction with lengths imagined as "conceptually endless" (p97).¹ Hughes comments that the firm then developed the indeterminate approach from two dimensions into three (p101).

Beyond these connections, the suggestion that the work of Llewelyn-Davies & Weeks, and in turn Llewelyn-Davies Weeks Forestier-Walker & Bor, might be considered Picturesque and thus consistent with the Townscape movement warrants greater consideration. Townscape is often associated with architect and urban designer Gordon Cullen, on the basis of his books, *Townscape* (1961) and its smaller and more influential second edition, *Concise Townscape* (1971). Recent scholarship, however, has focused more on the writings and ideas of the prolific architectural historian Nikolaus Pevsner (Macarthur, 2007; Aitchison, 2010; Macarthur and Aitchison, 2010). Macarthur and Aitchison (2010) establish that for Pevsner, "Townscape was explicitly modernist" (p14). It evolved from English landscape design of the eighteenth-century and comprised the application of Picturesque asymmetry and irregularity to the design of urban buildings, complexes and public spaces after World War II. It meant looking at urban areas in the way that an artist would look at a landscape in order to paint it (Pevsner in Aitchison, 2010, p179). It encouraged the use of the modern in conjunction with the retention of the historic (Macarthur and Aitchison, 2010, p17); sequences of changing views (p20); free planning and the external expression of the different functional parts of a building or building complex (p24); and "a mixture of materials, synthetic and natural, rough and smooth" (Pevsner in Aitchison, 2010, p168). Neither Brutalism nor Townscape was concerned with beauty; both accepted incongruity and impropriety, even ugliness, as part of the everyday condition (p177). Pevsner argued that such attributes were embedded in English aesthetics and taste. Macarthur (2007) adds that they were "endemic and diffuse" (p2) in post-war English architecture, with Brutalism being a Picturesque development (p107). Yet Pevsner and Banham were in disagreement: Pevsner promoted Townscape in positive terms, to popularise modern architecture post-war, while Banham opposed it, preferring an avant-garde modernism to one which he considered to be second rate (p106).

In the 1968 article referred to above, Banham cited the Smithsons' Economist Building, London (1960-64), and Stirling's Engineering Building at Leicester University (1959-63) as examples of buildings with Picturesque attributes (p272). He also interpreted Weeks' 'indeterminate architecture' as Picturesque, combining as it did "[s]uch 'scientific' concepts as open-endedness, the promulgation of growth and change as qualities to be incorporated in building-designs, the acceptance of expendability and impermanence" (p272). Of Llewelyn-Davies & Weeks' buildings, Banham only mentioned the *Times* headquarters in Printing House Square, London (1960-65).

Bruce Rotherham at Llewelyn-Davies Weeks Forestier-Walker & Bor

Bruce Rotherham (1926-2004) is well known in New Zealand as a key member of the Architectural Group, the Group Construction Co. and Group Architects, and for the house he designed and built for himself and his young family in the Auckland suburb of Stanley Bay in the early 1950s. He left the Group in 1952, and left New Zealand in 1955. He settled in London, where he remarried and had the bulk of his career.

Rotherham studied architecture at Auckland University College from 1945 to 1948. He did not complete his degree, but instead joined the Group Construction Co. in 1949 to design and build experimental houses. The Group developed a reputation for detached houses for everyday New Zealanders. The houses were exercises in efficiency, both in spatial planning and material usage, with exposed timbers, informal living arrangements and close connection between inside and out. But housing, as distinct from detached houses, was a shared interest among Group members from the outset, as demonstrated by the many design variants produced for their Navy Housing scheme at Devonport in the early 1950s (Gatley, 2010, pp149-53). With reference to this scheme, Rotherham wrote in 1991: "I have not stopped thinking about housing since".

Rotherham moved to London in 1955 and after three years working as an architectural assistant in the Hampstead office of Oswald P Milne & Underhill (Milne had served his articles with Edwin Lutyens), and nine months in a similar capacity with the Design Research Unit, he enrolled at the Architectural Association (AA) and there completed his fourth and fifth years of study (Rotherham, n.d.). He earned his Diploma of Architecture and one of the five fifth-year prizes awarded by the esteemed school in 1961. His ongoing interest in housing is apparent: he worked on this building type under tutor James Gowan in fourth-year design studio, and again in fifth year, when he produced a design for an eight-storey block of flats with complex planning, including non-orthogonal walls between adjacent units.

In September 1961, a short time after completing his studies, Rotherham joined the staff of Llewelyn-Davies & Weeks, where he remained until 1976 (Rotherham, n.d.). The first projects on which he worked for the firm were the Zoological Society Headquarters in Regent's Park, London (1960-1965; design collaborative with John Musgrove), and the London Stock Exchange in the City of London (1963-1972; design collaborative with Fitzroy Robinson & Partners).

The Zoological Society Headquarters is a three-storey office building. It was commissioned in 1960, before Rotherham had started working for Llewelyn-Davies & Weeks. A period journal article identifies Michael Huckstepp as the associate on the project and Rotherham, R. Attfield and B. Darvill as assistants ("Zoological", p501).² Rotherham worked on the detailed design and working drawings (LDWFWB Prospectus).



The Zoological Society Headquarters' north façade, Regent's Park.
Photograph by Julia Gatley, 2013.

The London Stock Exchange, a commercial high-rise, was a much bigger and more complex building. Former colleagues Clive Plumb (2013) and Murray Wren (2013) recall that Rotherham led the Llewelyn-Davies & Weeks team that worked on the building. He worked closely with the engineer and contractor on the poured concrete cores and precast concrete exterior wall panels (Rotherham, n.d.), the collaboration, technical difficulty and resolution all earning praise at the time of construction ("The New Stock Exchange").

His increasing degree of responsibility is reflected in his promotions to Associate in 1965 and Technical Director of Design in 1972. In this latter capacity, he was available for consultation on all projects (Rotherham, n.d.). Plumb, a more junior staff architect from 1963 to 1965, adds that Rotherham was "a big deal" in the office during the London Stock Exchange years.

His promotion to Technical Director of Design followed his success in a limited competition, in December 1971, to design the Metal Box Head Office Building in Reading (1971-1974), some 50 kilometres west of London. A Llewelyn-Davies Weeks Forestier-Walker & Bor prospectus (n.d.) records that "Michael Collins and Bruce Rotherham prepared the material for ... [the Metal Box competition] and were from the outset Project Architect and Design Co-ordinator." Rotherham's CV confirms his ongoing involvement throughout the project, including production drawings and site supervision.

None of these three buildings were specific to Rotherham's interest in housing, but all three accorded with Brutalism's enthusiasm for concrete in the raw and combined off-form and precast techniques. They also incorporate Picturesque elements and make references to their sites and contexts in ways that suggest affinity with Townscape principles.

The Zoological Society Headquarters is asymmetric, with differing form and materiality for the different functional parts of the building, notably the angled walls and off-form concrete of the ground floor auditorium compared with rectilinearity and exposed aggregate panels of the first floor

offices. The building neighbours and is aligned with the society's original headquarters and addresses both the Outer Circle of Regent's Park to its south and the canal on its northern flank. It had to straddle an existing tunnel providing subterranean pedestrian access between two parts of the zoo, with the tunnel kept open during the building's construction. The Zoological Society's consultant architect, Hugh Casson, recognised the firm's clever solution to this problem on two occasions: "I particularly liked the central cut-through which maintains a distant view of the North bank" (1960); and "The architects took advantage of these features and used them to dramatic effect" (1966). Above the tunnel, a ramp-in-the-air provides access to the building's west end.

The London Stock Exchange, like many commercial high-rises, combines a base, middle and top. Weeks' ideas about "indeterminate" architecture being applied in the vertical dimension can be read into the middle stretch of the building; its number of floors is conceptually limitless, but is contained by pragmatics such as cost, height bylaws and the strength of the structural system. Unlike many high-rises, it has an irregular footprint and two central cores of differing size, both irregular in plan to echo, at smaller scale, the geometry of the overall footprint. Many of the streets in the City of London are irregular, including those on which the London Stock Exchange was built: Old Broad Street and, at an acute angle to it, Throgmorton Street. There was no city grid to demand rectilinear planning. Rather, the seven-sided building addresses the two streets and two neighbouring buildings, and then connects these four exterior walls with three more, all at obtuse angles from one to the next.



The London Stock Exchange, with its irregular façades, can be seen in the background. The entire building has been re-clad in glass.

Photograph by Julia Gatley, 2013.

The Metal Box Head Office Building is a landmark for those arriving in Reading by train. In Corbusian tradition, it is raised above the ground on pilotis, with a sculptural doughnut form derived from an octagonal footprint and courtyard. Rotherham and other members of Group Architects had experimented with geometric plans in the early 1950s. At that time, Rotherham's experiments had focused on the circle (Gatley, 2010, pp98-102). With reference to the use of triangular plans by John Soane and others, Macarthur (2007) reflects on the complex relationship between geometric plans, classicism and the Picturesque. He describes such plans as difficult and demanding, and as "*bravura performances*" to be viewed from all angles (p159). Unusually, the Metal Box Building's geometric form seems to take its lead from its context, and more specifically from a large gasometer located a short distance down the railway lines: both have exposed framing, a multi-sided footprint and a hollow centre. The Metal Box Building's courtyard windows ensure that parts of the building's exterior can be viewed from inside. Internal functions are then expressed externally, in the low-rise staff facilities that originally projected outside the octagon and through the use of regular fenestration for the office floors, with differentiation between the "typical" office floors and that above, where the directors' offices were located. Weeks' ideas about "indeterminate" architecture were inverted in this building's internal "streets": being octagonal, they were literally endless, but the building was not conceptually so, as the addition of more offices would have compromised the purity of its geometric form.



The Metal Box Head Office Building, Reading, following the demolition of low-rise staff facilities from the foreground.

Photograph by Julia Gatley, 2013.

These three buildings all demonstrate a considered response to urban landscapes, sites and contexts, and more specifically to streets, waterways, railway lines, pedestrian pathways and neighbouring buildings. There is no attempt to imitate the old, but rather to make carefully considered new buildings that were decidedly site and context specific, with the different functions

being given external architectural expression, including varied concrete surface treatments and textures.

New Towns and Town Centres

Rotherham's CV articulates his role on the Zoological Society Headquarters, the London Stock Exchange and the Metal Box Head Office Building, but is briefer with regard to his work on new towns, town centres and master planning projects. It records that he prepared planning studies (feasibility studies) for the Lion Yard and Fitzroy Burleigh Street development areas of central Cambridge; worked on housing schemes for Stantonbury in Milton Keynes, Charlton Park in Cheltenham and Wood Green in London; and was project architect for the housing complement of the Sunderland Central Redevelopment Area (Rotherham, n.d.). His archive contains no further information about the Cambridge feasibility studies or the Wood Green housing. The other three projects are discussed below. It is with these that Rotherham worked on housing, the building type with which he had a long-standing and particular interest.

The Sunderland Central Redevelopment Area (1966-69) was a major project for Llewelyn-Davies Weeks Forestier-Walker & Bor, in collaboration with Ian Fraser & Associates. It covered a 10-acre site and comprised 245,000 square feet of retail space; a 25,000 square foot department store; a market hall with a multi-storey car-park; a 60,000 square foot bus station with roof-top car-parking; 7,500 square feet of office space; and three 19-storey blocks of flats comprising 270 units ("New Town Centre", 1969).

Entries into the complex respond to the established street pattern. These take the form of pedestrian malls zigzagging through it rather than bisecting it like classical axes would have done. Stairs lead to first-floor streets-in-the-air. Vehicular traffic is separated from the pedestrian pathways, with driveways leading to car-parking at second-floor level. This demonstrates consideration of context, but beyond it, the Sunderland Central Redevelopment Area project was so big that it became the context for the individual buildings within it. The various functional parts are given individual architectural expression, in blocks of varied widths, lengths and heights. The material palette combines brick and concrete and is cohesive across the complex as a whole yet varied close-up, in its details and textures.

As noted, Rotherham was project architect for the housing complement of the redevelopment. The three housing towers are located irregularly and asymmetrically within the overall area and are raised on pilotis above the upper-level car-parking. Rotherham's file on the project includes a series of sketches showing experimentation with geometric footprints, from square and rectangle through to triangle, hexagon and circle. A short rectangle was decided upon, perhaps because it was most cost effective. There are five flats at each level, three with one bedroom and two with two bedrooms. The planning is strictly orthogonal, but this is contrasted by the employment of the 45 degree angle in pilotis, chamfered corners and projecting spandrel panels.

In 1969, Llewelyn-Davies Weeks Forestier-Walker & Bor were commissioned to design housing for a site known as Charlton Park in the Gloucestershire town of Cheltenham. The site of almost 30 acres was formerly owned by Cheltenham College. The brief demanded that the "parklike character" of the site be retained in a housing development that would comprise blocks of flats, possibly including

high-rise (LDWFVB, 1969, p1). Local authority guidelines allowed a density of 30 persons per acre. It is believed that Rotherham prepared the firm's "Outline Study" in response to the brief, articulating the aim "to limit the horizontal spread and the vertical height of the buildings ... so as to leave the more visually attractive part of the site untouched, as also the trees on it", and emphasising that: "It is important that this project should be designed to a standard in keeping with the high architectural character of historic Cheltenham." (LDWFVB, 1969, p3) The report thus conforms to Townscape's use of the modern in conjunction with the retention of the historic. The author resisted high-rise blocks of flats, on the grounds that a house with a garden was the preferred building type in and around the township of Cheltenham. He instead proposed a mixture of detached and semi-detached houses and low-rise blocks of flats, and, following the allowable density of 30 persons per acre, developed a formula to accommodate 958 people, in units ranging from two to four bedrooms.³ Rotherham's archive contains no drawings of the housing development. Google Earth images suggest that even if it did progress beyond "Outline Study" stage, it ultimately remained unbuilt.

The expatriate New Zealander worked on further housing developments for Llewelyn-Davies Weeks Forestier-Walker & Bor. His archive includes ten A1 and four A3 sheets of drawings for a scheme known as Stantonbury B in Milton Keynes. Stantonbury is a suburb north of the new town's central business district. Rotherham's drawings are undated, but can be assumed to have followed the firm's development of the master plan for the new town centre (1968-70). The drawings are schematic. They are concerned with the suburban layout of almost 300 low-density homes rather than with the design of the individual units. They utilise an established street pattern, although they do not identify any streets by name. Like much of suburban Milton Keynes, they combine terrace housing with semi-detached units, although they differ in their complexity, with rows at a range of angles to each other rather than located on a grid, and attempts to interlock individual units across courtyards. The scheme remained unbuilt. However, six smaller housing schemes were built in Stantonbury in about the 1970s. It seems that none of them were designed by Llewelyn-Davies Weeks Forestier-Walker & Bor. They were numbered Stantonbury 1 to 6 at that time and Milton Keynes Council continues to know them by these numbers today. The origins and meaning of the "B" that follows the name of the suburb on Rotherham's drawings are not known.

Like the three buildings discussed in the previous section, these three multi-building projects again demonstrate an allegiance to the Townscape principles of reference to site and context. The irregularity and asymmetry of the Picturesque are used in favour of strong axes, symmetry and hierarchy. External expression is given to architectural function, and a range of materials, colours and textures is deployed. This is a strategy of journey and surprise rather than of order and regularity. Thus the paper adds evidence to Banham's claim that the firm sometimes worked in a Picturesque manner, even though much of their best known project, the master planning of central Milton Keynes, was strongly axial and dominated by major pathways and vistas.

After Llewelyn-Davies Weeks Forestier-Walker & Bor

Bruce Rotherham left Llewelyn-Davies Weeks Forestier-Walker & Bor in 1976, shortly after the completion of the Metal Box Head Office Building at Reading. He continued as a consultant to Metal Box, working on its next building, a Research and Development facility in Wantage, Oxfordshire (1975-80). Rotherham describes the Wantage building as having been designed by the Metal Box Building Department, of which he was consultant architect, working on it "from inception of building

to furnishing” (Rotherham, n.d.). A Llewelyn-Davies Weeks Forestier-Walker & Bor prospectus also mentions the building, suggesting that it started out as one of their projects. This might also explain why a start date of 1975 has been suggested for the design (Chaplin, 2013), compared with 1976 for Rotherham’s departure from the office and arrival as consultant to Metal Box. This building provided a different design challenge from most of Rotherham’s work for Llewelyn-Davies Weeks Forestier-Walker & Bor in that the site was semi-rural rather than urban, on the outer fringe of a village and on the flat land of a former airfield. A plaque in the building records that it was opened in October 1980.

It is not clear why Rotherham left Llewelyn-Davies Weeks Forestier-Walker & Bor. His contemporary Murray Wren (2013) recalls that Rotherham was happy in the office and that it had a culture of freedom that suited his independence. Son Jeremy Rotherham (2013) suggests that finances may have been a contributing factor, with his father and second wife, Shirley, receiving a series of inheritances from about the mid-1970s, enabling them to spend two or three months in Italy on a regular if not annual basis; such activity did not fit well with the demands of full-time employment. From 1976, concurrent with his work on the Metal Box Building at Wantage, Rotherham began teaching studio on a part-time basis at the Bartlett School of Architecture at University College London, where Lord Richard Llewelyn-Davies and John Weeks had been heavily embedded, suggesting that there was nothing acrimonious about his departure from the firm. He later worked for various smaller offices and for himself, becoming more interested over time in heritage conservation and adaptive reuse. Never again did he work at the urban planning scale of Llewelyn-Davies Weeks Forestier-Walker & Bor, but housing, the focus of his involvement with the firm’s urban planning schemes, stayed with him as an ongoing interest and concern.

¹ Hughes notes that Weeks told him that he actually wrote the 1951 that appears under Llewelyn-Davies’ name, emphasising that this was Weeks’ idea.

² Before joining Llewelyn-Davies & Weeks, Michael Huckstepp had had an earlier – 1950s – partnership with John Weeks.

³ The “Outline Study” allowed for occupancy rates of 0.9, meaning an overall density of 29.5 persons per acre.

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The Social Life of Public Space in Theory and Practice

Study of a small urban space in Wellington

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Current behaviour is something that has its origins in history, and yet design normally places emphasis on innovation rather than learning from what works. Often the design of an urban space fails because reviewing and evaluating designed past design has been forgotten. The same mistakes are repeated without considering similar unsuccessful examples. Over time theoretical and practical research in urban design has attempted to answer the question of what makes a successful public space. Approaches to the study of place have focussed on its different aspects. Theories interested in the meaning of place have focussed on the link between meaning and physical setting while designers mostly look at the link between physical setting and activity. However, studies have rarely linked these two approaches together. This paper describes research that aims to fill the gap between theory and practice by investigating the influence of natural design attributes on behaviour in a small urban space. It does this through two studies within the framework of place theory using facet theory and behavioural mapping as the methods. The suggested model is demonstrated in a study of a small urban park (Glover Park) in central Wellington, New Zealand. This park was the hangout for those sleeping rough, then redesigned in 2006, and is now working well. While results of these two studies confirm each other they show the relevance and need to use both theoretical and practical research when designing place. Theoretical research with reliable predictive power is appropriate for investigating the subjective quality of place, although when it comes to design and detail the results should be tested in practice. Results of practical study, because of their dependence on physical setting and specific context, are inferential and cannot be used for predicting the link between behaviour and meaning and hence they are not generalizable. However designers can incorporate such results when designing in the specific context. This also shows that behaviour

setting, which is shaped by the time, is a valuable resource for designer to learn from the past.

Keywords: Small urban space, design, behavioural mapping, Theory of Place.

Introduction

The distance between theory and practice can be seen in two different approaches to the Theory of Place. Those interested in theory want to understand why something is happening whereas design practice wants to know what is happening. While both approaches are reasonable and understandable in the given contexts, application of the Theory of Place in design practice research will be enhanced when the different interests of academic and practical researchers converge.

This research addresses the gap between theory and practice by investigating the influence of natural design attributes on behaviour in a small urban public space (Glover Park in central Wellington) from both a theoretical study of place theory and through practical observation of behaviour. Both sets of research were conducted in the same location to see if there is convergence of theory and practice. The relevance of theory to practice for the design of a successful small public space requires an integrated approach using appropriate research methods. This model is demonstrated through the two studies conducted in Glover Park. Study one tests the linkage between the three components of place by using facet theory and study two is an observation of behaviour in relation to physical setting. It thus becomes a historical study of how people have learnt behaviour in this space. In turn, this study tests the criteria for successful urban space in a given design by investigating current behaviour that has accumulated over time.

Links between the components of place

In the Theory of Place, physical setting, meaning, and activity are defined as the three components of place (Agnew, 1987; Canter, 1977a; Dovey, 2010; Massey, 1994; Montgomery, 1989; Relph, 1976). Theoreticians argue places with meaning generate activity and they emphasise the experiences of place, but how this relationship can generate activity has not been clearly described. Figure 1a shows the strong link between physical setting and meaning and the weak links these have with activity in the three components of place.

Practical research that is used to inform design practice indicates place must fulfil human needs through the use of a physical setting (Carr, Francis, Rivlin, & Stone, 1992; Marcus & Francis, 1998; Whyte, 1980). These studies define sociable places as places to which people go in groups and for social activity (Whyte, 1980), but the relationship between physical setting and meaning is rarely discussed. Figure 1b shows the strong link between physical setting and activity and the weak links both of these have with meaning.

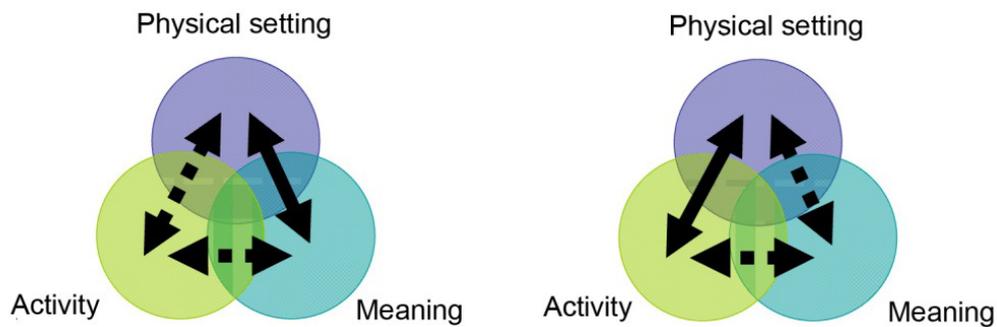


Figure 1a (theory research)

Figure 1b (practice research)

Figure 1: links between three components of place in research

While the components of place are similar in both approaches the interactions between these factors have not been adequately addressed in the design of urban public spaces. Designers are interested in tangible and objective properties of space (Mongomery, 1989; Whyte, 1980) while theoreticians dwell on the intangible properties of that same space, such as meaning and sense of place (Relph, 1976; Tuan, 1977,2001).

To enhance the design of space, the link between meaning, activity and physical setting, as emphasised in the theory, needs to be tested in practical research. The results of studies focused on meaning and activity should also be considered in the design process. However, studies have rarely linked these two approaches together.

Study one background: Theory of place

Canter (1997b) emphasised the need for a methodology for the study of Theory of Place in design research that stresses the need for understanding the complex linkage between activity, physical setting and meaning, rather than only looking for a link between any two of these components. He integrated aspects of behavioural environmental psychology with architectural issues by putting the same value on the components of place. He claimed

“The theory of place draws attention to the essentially multivariable nature of that experience. This is central because the personal, social and cultural aspects have to be studied together. Furthermore, the studies have to be carried out in such a way that it is possible to identify any existing dominated core of such experiences for any particular setting. Another demand of the theory is that comparison can be made, from one architectural discourse to another, between the patterns of relationships between components” (Canter, 1997b, p. 122).

In the study of place the relationship between constituents is tested and no prior assumption made about how they link together. To overcome this problem Canter also proposed facet theory as one methodology to study place theory. Facet theory, first introduced by Guttman in 1954 (Guttman & Greenbaum, 1998), is a systematic approach to constructing a theory, and then designing data collection and analysis methods to investigate the theory, especially in behavioural research dealing with complex issues. This approach can be used for testing the theory formulated or drawn from examination of previous research and is used when multiple variables need to be considered.

A particular facet theory is a hypothesis about the relationship between a defined system for observation and aspects of the empirical structure of these observations. In fact this theory is based on a defined framework for observation, empirical structures for observation, and the search for relationships between the defined framework and empirical structures. In short, a facet theory approach defines a relationship between an abstract theory and empirical research used to find evidence to support the theory. The device used to test and make the link between theory and empirical research is a mapping sentence. The mapping sentence defines the population of interest and their range of possible responses to a number of conceptually distinct facets reflecting the content of the hypotheses, with the elements in each facet being mutually exclusive.

Study one: Methods and results

In this investigation of small public parks in Wellington (Ghavampour, Vale & Del Aguila, under review 2013) facet theory was used to survey preferences for natural and artificial elements in small urban spaces in the centre of the city. The mapping sentence (Figure 2) was formed of 48 items: two materials (natural and artificial) x three design elements (features, furniture, surface); two types of behavioural affordance (alone, with friends); in combination with two affective affordances (relaxing, exciting) and two cognitive affordances (special character, clear structure). Responses to the 48 items were indicated on a seven-point scale ranging from (1) strongly disagree to (7) strongly agree.

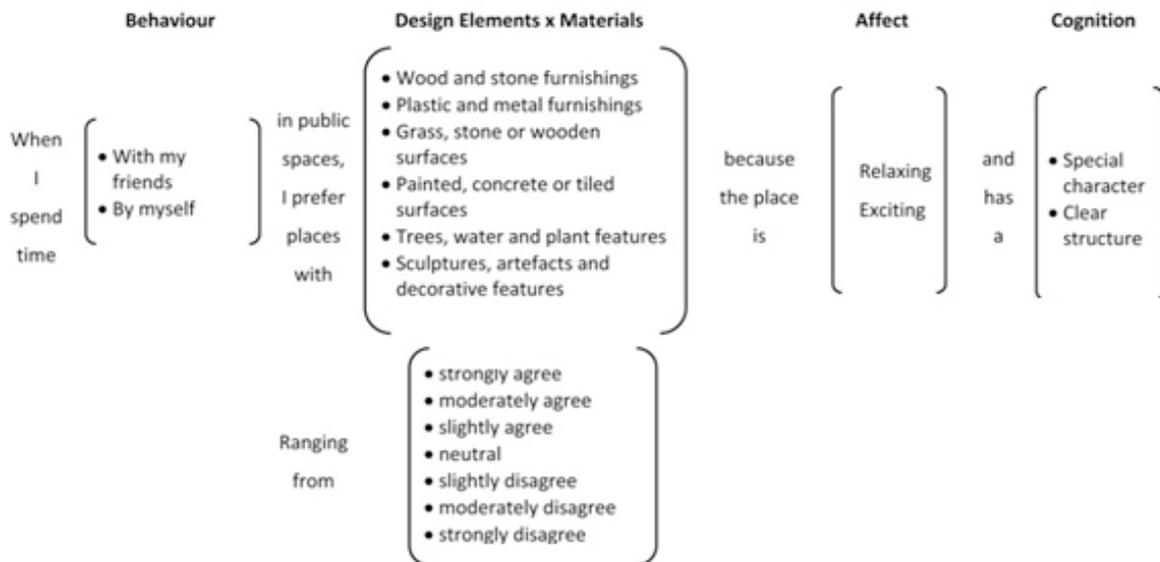


Figure 2: mapping sentence

The survey was conducted over five weeks in October 2012 in four small public parks by approaching users and asking them to complete a questionnaire. These four parks (Glover Park, Te Aro Park, Midland Park, Civic Square) are the data collection sites and all included natural and artificial design

features that enable preferences for those two types of element to be compared in one space. As comparison of how each of the four spaces is used is not the aim of this study.

The results of 160 questionnaires found:

- A preference for natural elements over artificial elements whether alone or with friends for both weekdays and weekends.
- Natural features and natural surface are the first two preferred elements, over natural furnishing and artificial elements.
- The preference for an artificial feature is considerably higher than other artificial elements, being close to the preference for natural elements.
- In descending order preferences are for: natural feature (trees, water), natural surface (grass, stone, wood), natural furnishing (wood and stone), artificial feature (sculpture, artefacts, decorative features), artificial surface (painted, concrete or tiled), and artificial furnishing (plastic, metal) (Table 1).
- Different preferences when people are alone and in groups show the link between type of activity and affective-cognitive affordance of place.
- When people are alone affective affects (relaxing, exciting) are preferred over cognitive affects, whereas people in groups pay more attention to the cognitive effect of elements. In other words, usability is important when people are alone.

Table 1: break down of preferences by mean scores for natural/artificial material by behavioural affordance

	Alone				With Friends			
	Natural		Artificial		Natural		Artificial	
	Workdays	Weekends	Workdays	Weekends	Workdays	Weekends	Workdays	Weekends
Furnishings	4.86	4.74	3.32	2.34	5.21	4.77	3.34	2.46
Surfaces	5.42	5.41	3.53	2.83	5.34	5.35	3.93	3.40
Features	5.68	6.06	4.80	5.08	5.86	5.40	4.87	5.06
	5.32	5.40	3.88	3.41	5.47	5.17	4.05	3.64

Study two background: Urban design and behavioural research

Since separation between people and their environments has been recognised in urban studies, urban designers have turned to sociology and environmental psychology to discover more about the link between people and physical setting, including use of environmental behavioural based studies (Vernez Moudon, 2013). However, the need to incorporate the results of these studies into the design process is still being stressed (Golicnik & Thompson, 2010). The fact such an approach is primarily positivistic has also become an area for criticism, especially from theoreticians in place studies (Vernez Moudon, 2013).

Two different methods have been developed using the psychological viewpoint. The first focuses on visual perception and second on usage patterns of space. The former uses simulation to investigate the cognitive-affective influence of the environment on people's behaviour. Through use of film, modelling, or photographs the responses of research participants exposed to images of various

landscapes under evaluation are gauged (Daniel & Meitner, 2001; Kaplan, Kaplan, & Brown, 1989; Karjalainen & Tyrväinen, 2002; Thompson & Travlou, 2009). However this method has been criticised for its focus on visual character and also for being laboratory based (Gibson, 1979). Being in the laboratory is claimed to put an artificial limit on individuals because they are not in a space and have no chance to engage in activity and see other people. Gibson (1979) also looked at perception of the environment and used the word affordance. In this view the person – environment relationship is immediate and based on practical activity rather than the analytical: “The affordance of the environment are what it offers the animal, what it provide or furnishes, either for good or ill” (Gibson, 1979, p. 127). In his ecological perceptual psychology activity and perception are not separate. This approach is objective because its existence does not depend on the actor’s existence, values, interpretation, experience, or mental state, but is also subjective because specifying affordances needs an actor as a frame of reference. Affordances are real ecological entities with the potential to be used.

Barker (2005) introduced the second method, which is the concept of behaviour setting in the field of ecological psychology, formed based on a behavioural circuit. It is similar to Gibson’s approach. This approach sees that the effective way of understanding human needs and preferences is by observing them empirically. Behavioural mapping was developed by Ittelson et al. (1970) and shaped based on behavioural setting and the affordance approach (Cosco, Moore, & Islam, 2010). This concept is focused on everyday human activity in relation to physical settings. Behaviour setting includes the particular layout of the environment (the milieu), a standing pattern (a recurrent behaviour of a group, such as a football game or a piano lesson), and the congruent relationship between behaviour and physical setting. This is a study of behaviour occurring in the same space regularly which indirectly shows how people use the space over the time. As stated above, affordance is a property of a physical setting supporting the activities of people (Gibson, 1979). Study of affordance can help in understanding how physical setting attracts people. These two supporting approaches make behavioural mapping a valuable method for gaining insight into the problem of how space is used.

Behavioural mapping has been used in place studies to investigate the simultaneous link between physical setting and activity (Bechtel & Zeisel, 1987, p. 23). It uses context defined codes to record human activity in a physical space and is a valuable method for gaining insight into how spaces are used. Designers can also use this type of observation when they want to know how their designs work (Bechtel & Zeisel, 1987). This method is used for post occupancy evaluation which reviews what has been designed in the past to see how well it works as an important part of any design. Marcus & Francis (1998) noted this type of mapping as a method for gaining accurate information in minimum time. Behavioural mapping is mostly used at the micro scale and applied to indoor and outdoor space (Bechtel & Zeisel, 1987). Different observation techniques have been used based on the aim of the particular study, including verbal description, a pre-coded checklist, still photographs, floor plan table (a table of elements on a particular floor plan), drawn behavioural maps, marking up a printed map, and film or video tapes (Zeisel, 1984) and digital techniques like GIS. Golicnik and Marusic (2012) and Van Andel (1984) used paper-based methods and GIS. Rostami (2013) and Joardar (1977) mixed photographs and paper based maps.

Study two: Method and results

Behavioural mapping was selected for Study two, using still photographs for collecting data and GIS as the tool for representation and analysis. In addition direct observation and written descriptions were used to capture the context of the case studies, initial understanding of patterns of behaviours and type of activities in the space.

Procedure

Glover Park is a small urban park in the Wellington CBD. It was selected for the previous preference survey and forms the focus for behavioural mapping in this paper. This park was once a hangout spot for those sleeping rough. The park was neither safe nor attractive except to homeless people without any accommodation. This park was upgraded and now is mostly used by teenagers.

To identify preferred design attributes a second survey using the facet theory approach was conducted as the preliminary stage. The results helped to identify different subspaces in the park, which can then be used as a base for the analysis of behaviours in relation to natural artificial design attributes. The survey was based on eight natural and artificial design attributes and their contribution to sense of place, in combination with two activities that occur in the place (having people around and having a café nearby) to test the effect of these on three types of social activity (spending time with family, chance contact, spending time alone). The results show:

- A preference for natural design attributes over artificial, whether with friends and family, or chance contact with new people, or being alone.
- A place with well-maintained grass with shade of trees which has well-kept surfaces, with seats around public art, all in combination, are the preferred spaces.
- Seats around trees or a fountain, native plants, small spaces defined by natural design elements, places with trees around their edge, entrances, and places which provide different benches, all received similar preferences.
- Places with shelter, with buildings around the edge and with specific building style around, and small spaces defined with steps and low walls, received the lowest preferences.

Using the results of survey two and after several observations during weekdays and weekends, the site was divided into a number of subspaces within four categories (Table 2). Note that the behavioural study of Glover Park is part of research with a focus on four data collection sites, so some categories (code 5 and code 8) do not exist in Glover Park. (Seating excludes sitting wall by grass and seating situated in other subspaces.

The park was investigated to select the best points for taking photographs. These should be taken from a distance in order to have less effect on the users. They should cover spaces from different angles to record all the data. The chosen points are shown in Figure 3.

One sunny weekday was chosen for photography, with photographs taken from 08.00 to 17.00 at 10 minutes interval from each selected point.

Table 2: categories and subspaces

Category	Code
A) natural/artificial seating	A-code1-1, 1-2: Grass and sitting wall by grass A-code 2: Benches
B) natural/artificial edge	B- code3: Outside edge B-code4: Edge passage way
C) seating around natural/artificial focal point	C-code6: Seating by sculpture
D) natural/artificial entrance	D-code7: Entrance with natural elements

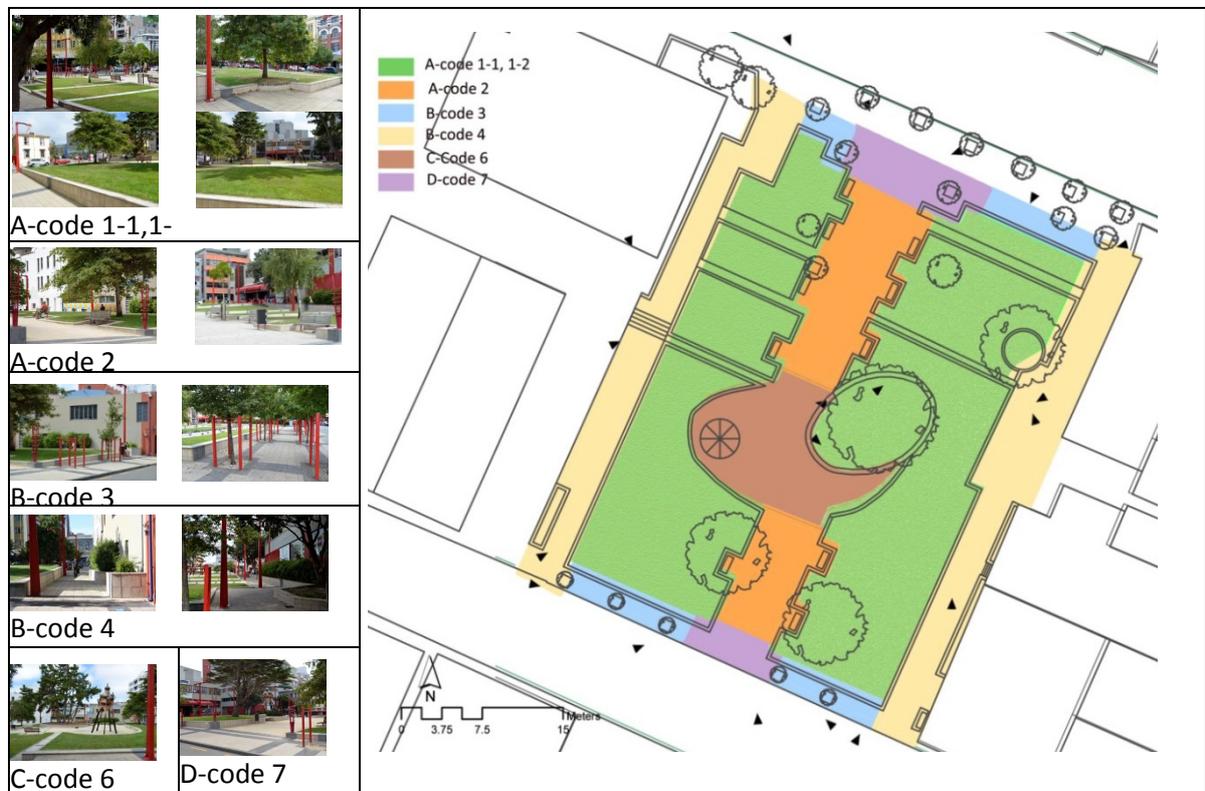


Figure 3: map of subspaces and photography points

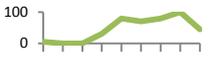
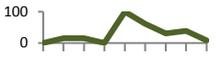
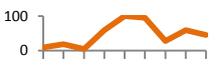
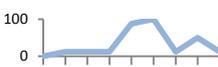
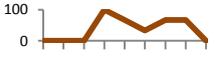
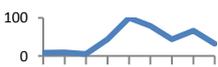
Analysis

Each person is represented by one dot in the Arc map 10.1. The contribution of mapped natural design elements in the sustained use of space was measured by looking at: length of stay, number of users, size of groups, type of activity (diversity in activity shows affordance), and gender and estimated age (diversity in user groups). In addition to these quantitative analyses, preferred space and order of occupancy and effect of quality of design on users is discussed.

Results¹

Data were collected from the 765 photographs taken on 27th March 2013. The number of photographss shows a total 276 people in 193 groups² used the park. The three busiest hours were 12.00-13.00, 13.00-14.00, and 15.00-16.00, with least users from 08.00-11.00 (Table 2). Comparison between subspaces indicates that except for grass use of all subspaces follow the pattern of total users, and have their own maximum occupancy between 12.00-13.00 or 13.00-14.00, with a dramatic decrease by 15.00 followed by a slight increase to reach a second peak around 16.00. Unlike this pattern, use of the grass area starts from 08.00 and gradually increases to reach its maximum use during 15.00-16.00.

Table 3: number of users during one day of observation, Glover Park

Subspace use as percentage of MO over one day		08.00-09.00	09.00-10.00	10.00-11.00	11.00-12.00	12.00-13.00	13.00-14.00	14.00-15.00	15.00-16.00	16.00-17.00	Total
 A-code 1-1	N	1	0	0	6	16	14	16	20	9	82
	P	5%	0%	0%	30%	80%	70%	80%	100%	45%	
 No A-code 1-2	N	0	2	2	0	13	8	4	3	1	35
	p	0%	15.38	15.38	0%	100%	61.54%	30.77%	38.46	7.69%	
 A-code 2	N	2	4	1	13	22	21	6	13	10	92
	P	9.09%	18.18%	4.55%	59.09%	100%	95.45%	27.27%	59.09%	45.45%	
 B-code 3	N	0	1	1	1	7	8	1	4	1	24
	P	0	12.5%	12.5%	12.5%	87.5%	100%	12.5%	50%	12.5%	
 B-code 4	N	2	0	0	8	8	4	1	3	2	28
	P	25%	0%	0%	100%	100%	50%	12.5%	37.5%	25%	
 C-code 6	N	0	0	0	3	2	1	2	2	0	10
	p	0%	0%	0%	100%	66.67%	33.33%	66.67%	66.67%	0%	
 D-code 7	N	1	0	0	0	3	0	1	0	0	5
	P	33.33%	0	0	0	100	0	33.33	0	0	
 Total Park	N	6	7	4	31	71	56	31	47	23	276
	P	8.45%	9.86%	5.63%	43.66%	100%	78.87%	43.66%	66.20%	32.39%	
MO: Maximum occupancy MO N: Number of users P: Percentage of MO			100 %	100-80%	80-60%	60-40%	40-20%	20-0%	0%		

Diagrams on the left of Table 3 represent subspace use as a percentage of its maximum occupancy (MO) in one hour over the whole day. For example grass had its maximum occupancy at 15.00-16.00 with 20 persons. The percentage between 12.00-13.00 is calculated as (number of people in space between 12.00-13.00*100/maximum occupancy over a day), $(16*100/20)$. The diagrams illustrate that while grass, sitting wall by grass, seating in paved area and seating by sculpture were used over the day, entrances, edge passage way and outside edge were left vacant after the two busy periods (Table 3).

Occupancy and preferences

Overall out of the 276 total uses, 92 people occupied benches at some point and 82, the next biggest single group, used the grass. There is then a big drop to the next biggest user group of 35 who used the sitting walls.

Early use of space shows seating in a paved area was preferred. From 11.00-12.00 benches and sitting wall under the shade of trees were occupied and around midday grass and outside edges started to be used. The preferred grass areas and entrances are close to trees and borders. At midday almost all grass areas were in sun and the grass to the east side with more trees was well used. From 13.00 onward grass areas at the west side had more users and maximum occupancy was reached from 15.00-16.00, which corresponds with the second peak occupancy for the whole park.

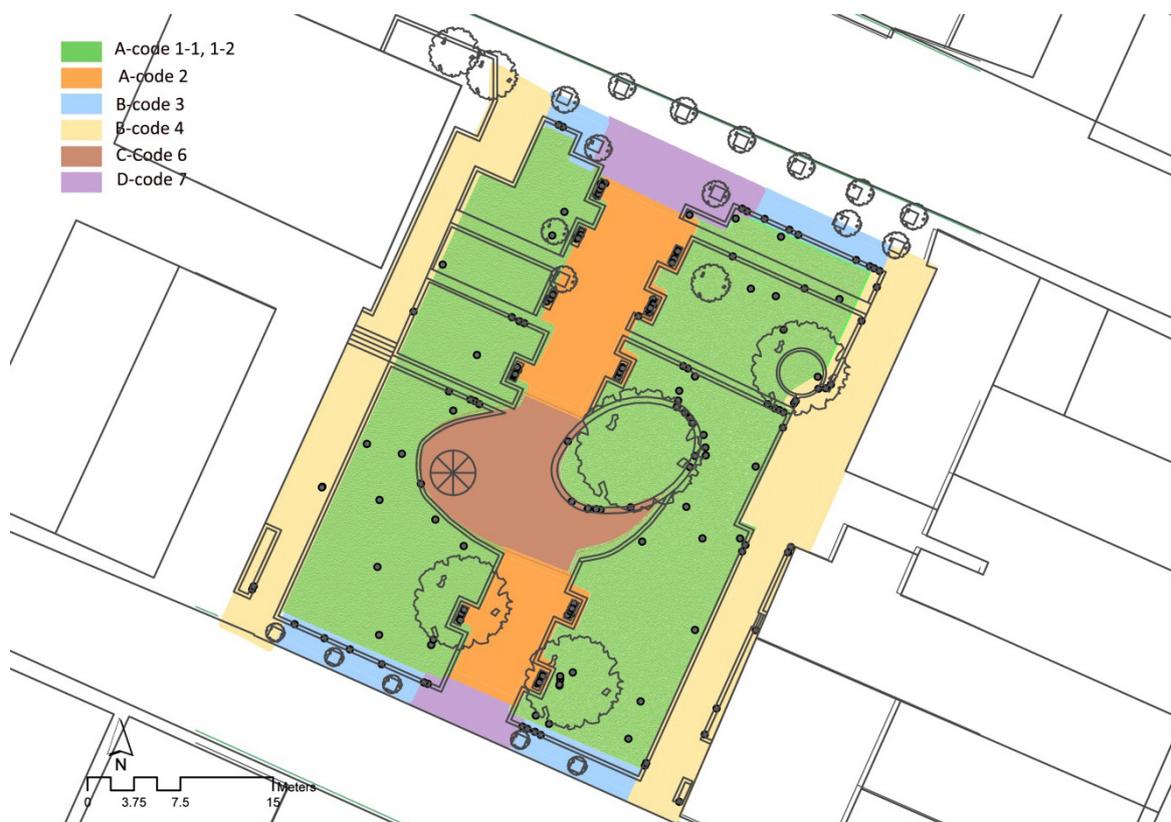


Figure 4: occupancy in one day.

The map of the last hour of observation shows benches not under shade and sitting wall close to trees were still preferred but benches under shade were not occupied. The grass area in the NW corner that is shaded by the adjacent building was rarely used, which suggests a preference for natural shade over artificial.

The occupancy map also shows that in all subspaces people used places which are close to trees and have a degree of enclosure, or that receive natural shade created by trees. A combination of natural shade, benches, sitting wall and grass seem to be the favourite subspaces (Figure 4).

Size of group

The percentage of people alone (group of one) as part of total occupancy ($T \cdot 100/A$) for each subspace during the day demonstrates the preferred subspaces for people alone are seating, seating around sculpture, entrance, and sitting wall by grass, at 65.22%, 60%, 60%, and 60% respectively. While the number of people alone (group of one) and in groups using the outside edge are equal, there is a preference for groups to use edge passage way and grass more than people alone (Table 4).

	Group of one	Group of two	Group of three	Group of four	Group of five	Total
A-code 1-1: Grass	15	36	15	16	0	82
Percentage of total (82)	18.29%	43.90%	18.29%	19.51%	0%	
A-code 1-2: Sitting wall	21	14	0	0	0	35
Percentage of total (35)	60%	40%	0%	0%	0%	
A-code 2: Benches	60	32	0	0	0	92
Percentage of total (92)	65.22%	34.78%	0%	0%	0%	
B-code 3: Outside edge	12	8	0	4	0	24
Percentage of total (24)	50%	33.33%	0%	16.67%	0%	
B-code 4: Edge passage way	13	4	6	0	5	28
Percentage of total (28)	46.43%	14.29%	21.43%	0.00%	17.86%	
C-code 6: Benches around sculpture	6	4	0	0	0	10
Percentage of total (10)	60%	40%	0%	0%	0%	
D-code 7: Entrance with natural elements	3	2	0	0	0	5
Percentage of total (5)	60%	40%	0%	0%	0%	
Total	130	100	21	20	5	276
Percentage of total (276)	47.1%	36.23%	7.61%	7.25%	1.81%	

Separate occupancy maps for people alone (group of one) and people in groups (Figure 5) show people alone used seats and sitting walls close to the pedestrian passage while grass area and sitting wall by trees was the favourite place for groups. In fact people alone used space that is situated by ways through, which enable them to observe others. Inspection of the maps also shows most use was made of sitting walls under trees. It seems trees are being used not just for the shade they give,

since the grass shaded by the building was not very used. At the same time people sit by trees even in the early morning or late afternoon when it might be more pleasant to sit in the direct sun. This suggests trees are valued for other reasons.

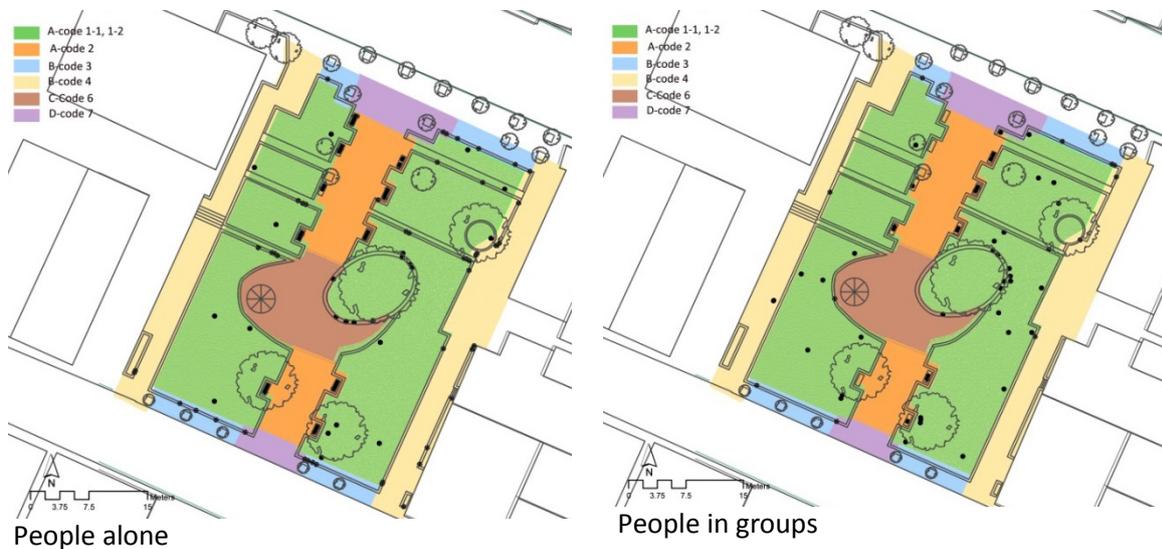


Figure 5: use of space by people alone (group of one) and people in groups (more than one)

Uses of space by different ages and gender

Analysis of photographs shows teenagers and young adults make up 79.72% of users, while adults and the retired account for 19.2%. Females were observed more than males. Grass and edge passage way are mostly used by teenagers and young adults. Seating and sitting wall are used most by young adults, then teenagers, followed by adults. Teenagers also used the edge passage twice as much as adults and young adults.

Activity

Activities recorded for each group show Glover Park is mostly used for sitting, eating, and reading. Standing and short time activity like smoking were observed in a few cases. Vigorous activity and other activity, like sleeping, are also represented suggesting Glover Park provides a relaxed and flexible environment.

Length of stay

To an extent the time people spend in a place reflects the quality of the place. Although calculating the accurate length of stay is not possible using snap shots, it is possible to observe the number of times a person appears in a series of photographs and use this for measuring sustained use of place. People used the entrance, edge passage way, and outside edges for a short stay. Users of sitting walls and benches were observed mostly in one or two photographs, and grass attracted people for a longer time (Table 5).

Table 5: length of stay

Number of time group ³ observed		One	Two	Three	Four	Five	Six	Seven
A-code 1-1	N	18	13	3	5	1	1	1
	P	42.86%	30.95%	7.14%	11.90%	2.38%	2.38%	2.38%
A-code 1-2	N	21.00	4.00	2.00	1.00	1.00	0.00	0.00
	P	75.00%	14.29%	7.14%	3.57%	3.57%	0%	0%
A-code 2	N	48.00	18.00	6.00	2.00	2.00	0.00	0.00
	P	63.16%	23.68%	7.89%	2.63%	2.63%	0%	0%
B-code 3	N	15.00	2.00	0.00	0.00	0.00	0.00	0.00
	P	88.24%	11.76%	0%	0%	0%	0%	0%
B-code 4	N	13.00	5.00	0.00	0.00	0.00	0.00	0.00
	P	72.22%	27.78%	0%	0%	0%	0%	0%
C-code 6	N	5.00	2.00	1.00	0.00	0.00	0.00	0.00
	P	62.50%	25%	12.5%	0%	0%	0%	0%
D-code 7	N	4.00	0.00	0.00	0.00	0.00	0.00	0.00
	P	100%	0%	0%	0%	0%	0%	0%

Occupancy maps also indicate places occupied longer are close to trees.

Discussion

Results of behavioural mapping show that after using benches there is a preference for grass. Figure shows that use of grass in Glover Park is associated with the shade from trees. Observing that the grass may be damp early in the day could explain why benches and sitting walls are initially preferred over grass which begins to be used after 11 am. These preferences for natural elements are in line with the preferences found in study one for natural feature and surfaces. Use of seating around sculpture also indicates a preference for artificial features, and for closeness to natural materials as found in study one. Bigger groups also used grass more than benches, and again are another finding showing preference for natural surfaces over artificial. Use of spaces close to trees with a level of enclosure ensures the affective and cognitive affordance of natural features. Preference was seen by groups for places close to natural and artificial features, confirming the finding about the importance of legibility for groups. Preference for seats by people alone shows the importance of usability for them. Use of the grass for a long time and for different activities is another indicator for the affective-cognitive affordance of natural elements.

Less preference for entrances, edge passage way and outside edge compared with grass, sitting wall by grass, shady areas with natural elements and seats around sculpture also confirms the results of the second (preliminary) survey.

A combination of natural shade, benches, sitting wall and grass seem the favourite subspaces in the behavioural mapping of Glover Park. However, the results of the second survey show less preference for benches compared with grass and natural shade. Seats around sculpture received more preference than benches in the surveys, but the behavioural mapping shows a preference for

benches over seats around sculpture. This shows the abstract question might not always receive the right answer and the combination of design attributes in a real context affects behaviours in ways which are not reflected in surveys.

Conclusion

The two approaches to research on the theory of the place focus on different aspects of place. Results of the two studies using theoretical and practical methods emphasise the necessity of using both approaches in an investigation of place. Investigation of the link between meaning and activity through observation is an inferential interpretation which gives rise to the need to use complementary theoretical research with reliable predictive power. A preference for natural elements over artificial as found in the survey research (study one) based on the theory indicates the link between meaning and activity emphasised in place theory. The intense use of places close to natural elements as observed in behavioural mapping is further evidence for this finding.

However, results of survey one indicate preferences for use of natural material but some differences in preferences for design attributes and detail were found between the second (preliminary) survey and behavioural mapping, showing the role of design layout and physical setting in uses of space, which indicates a need for behavioural study focused on context of place. While designers should consider theory in design they should also be aware of the importance of creating a good combination of design attributes, as vacant grass in building shade is an unsuccessful example compared to similar grass areas shaded by trees.

Although facet theory is good for having a theoretical understanding of place when it comes to design for people, research based in experience is essential, as is learning from history about what works in making successful small public spaces.

Acknowledgements: I would like to thank Dr Mark del Aguila (markdelaguila@gmail.com) for his helpful advice on the structure of this paper.

¹ Ethic approval for both study provided

² Group here means group of one, two, three or more persons.

³ Group here means one person or group of two or more people

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Regulation Challenges Hindering the Revitalisation of Commonwealth Land

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In the past most areas of Commonwealth land were reserved for specific defence purposes or managed as conservation areas designed to protect natural heritage features. In recent years, however, the identity of Commonwealth land has undergone a dramatic change as the impacts of corporate liberalism have resulted in the Commonwealth Government seeking out uses for these sites that not only assist in providing public access to these areas but also activities that can produce an income. In the past the Commonwealth Government relished its exemption from State legislation, allowing it to make decisions about land use without the restrictions of State or Local planning requirements. However, many of the new activities that the Commonwealth Government is now approving on its sites require other licences or certificates that are generally only issued by the State. The Commonwealth's exemption from State laws means that the Commonwealth Government is unable to utilise State legislation related to a whole range of management and compliance issues, from occupation certificates to licences for specialised services. A regulation "gap" has appeared in situations where the Commonwealth Government does not have the resources to regulate a particular land use but the State is unable to assist, as the land does not fall within State jurisdiction. This paper, proposes a number of possible solutions to this regulation problem, which has become prevalent issue on Commonwealth land.

Keywords: urban regeneration, Commonwealth land, Sydney, planning law

Introduction

The planning system in Australia is fragmented, with all three tiers of government playing various roles in the determination of Australia's land use. Under Section 51 of the Commonwealth of Australia Constitution Act 1900 (the Constitution) the States hold the residual power to make decisions about the environment, including land use planning. Though the Commonwealth Government is often seen to play a minor role in land use planning, it is generally responsible for the

planning and management of many areas of Commonwealth land, as stipulated in the Constitution. When managing areas of Commonwealth land, the Commonwealth Government often has exemption from State laws, including those related to the environment and planning, as well as Local Council planning instruments and processes. This exemption is often criticised as it allows the Commonwealth Government to make decisions about land use, without being subject to the same State or Local planning restrictions that apply to adjacent areas of land. Often the physical boundary indicating where Commonwealth managed land ends and State managed land begins is not clear and the general public cannot distinguish between the two. For example at Middle Head in Sydney, the Sydney Harbour National Park is comprised of adjacent areas of land managed by either the Commonwealth Government or the New South Wales (NSW) State Government. The area is a patchwork of land controlled by different levels of government, with public roads and paths running through a number of jurisdictions. This situation makes even simple capital works projects such as the resurfacing of roads a difficult task, as a number of agencies are involved, each with their own development assessment processes.

Commonwealth exemption from State laws

In the past, the majority of areas of Commonwealth land were used for specific defence purposes or managed as conservation areas to protect natural heritage features. Commonwealth bodies that managed land use were given exemption from State laws to allow the Federal Government to manage unique land requirements without the restrictions of State legislation. For example, the land uses of the Department of Defence are unique to the requirements of the armed forces and would generally not comply with or come within the scope of the legislative requirements of State laws.

However, uses on Commonwealth land are now changing as former defence sites are decommissioned and areas of land are being 'returned' to the public. The Commonwealth is free to choose land uses that it feels are suitable for each individual site, exempt from State and Local planning legislation and regulations. However, in recent years, the Commonwealth Government has approved a range of land uses that had not existed on Commonwealth land before, including childcare centres, cafes and restaurants, as well as leasing buildings to general tenants for office space and other commercial businesses. For some land uses, legislative requirements continue beyond the development approval and construction process. Land uses such as restaurants, cafes and childcare centres often require further approvals and licences before they can operate and it is generally the State Government that oversees these regulatory matters. Additional approval requirements are generally put in place where there are specific safety measures that must be maintained at all times, such as food safety standards, or to protect the rights of people who work or visit these sites, including the welfare of children. A new issue related to the management of Commonwealth land has surfaced: land uses that are being approved by the Commonwealth would benefit from these further approvals that are granted by the States to help guide the nature and delivery of these uses. Often the Commonwealth Government has not passed equivalent legislation in these areas, and so bodies that manage Commonwealth land do not have the support of Commonwealth laws to guide their activities. In addition, the Commonwealth Government has no legal access to the departments and agencies that assist the State Government in ensuring that certain uses are properly managed and regulated. Some Commonwealth agencies that manage land

in NSW have been developing methods to ‘mirror’ NSW legislation, to help align their operation with State requirements.

Issues arising for Commonwealth exemption from State laws

Smith (1998 p1) argues that the exemption of “Commonwealth activities on Commonwealth land” from State or Local legislation is one of the main areas of conflict between the States and the Commonwealth. Creswell (1998 p1) agrees with Smith’s argument and suggests that as a result of this legislative exemption, “activities conducted by federal agencies on these lands can give rise to conflicts between a federal government agency seeking to implement a national program and a local government attempting to protect a uniquely local concern”. A number of issues have emerged as a result of the Commonwealth Government’s exemption from state laws:

- Commonwealth Government seen to ‘do as it pleases’
- Areas of adjacent land are subject to different sets of legislation
- Establishment of more land management authorities
- Commonwealth law prevails over State law
- Land use choices and access to legislation

Each of these issues is considered in more detail below.

Commonwealth Government seen to ‘do as it pleases’

Whilst this exemption provides the Commonwealth Government with the freedom to plan for unique land uses in specific parts of Australia, there has been much criticism that this exemption allows the Commonwealth Government to ‘do as it pleases’ without any regard to the laws that apply to adjacent land areas. Smith (1998 p1) argues that this exemption means that Commonwealth bodies can in effect “do as they please in relation to their land and their use of that land”, without being regulated by existing State legislation and restrictions that apply to areas of adjacent land. In addition, relevant Local and State Government bodies have “no legal right to intervene or participate in the planning and development process for that piece of Commonwealth land” (Smith 1998 p2). This is particularly problematic in areas where land regulated by the Commonwealth and areas of land regulated by the States are in close proximity to one another.

This exemption from legislation also means that the Commonwealth Government is not required to lodge development applications with State or Local planning authorities when works are proposed on areas of Commonwealth Land. This allows Commonwealth bodies to carry out works without consulting with other planning authorities that many operate in close proximity to Commonwealth land. For example, Freestone et al (2006 p492) note that in relation to the development of airports in Australia, local and state planning authorities are excluded from any “effective determining involvement in the process”, despite the “local and metropolitan context in which they sit” due to the Federal exemption from State laws.

Areas of adjacent land are subject to different sets of legislation

Areas of Commonwealth land vary greatly in size and are most often bounded by areas of land subject to State laws. Therefore, situations can occur where Commonwealth and State managed areas of land are in close proximity to one another, and for members of the public it is difficult to distinguish where one jurisdiction ends and another begins. Foss (1987 p xvii) notes that one of the chronic problems in land management has been the “continuing presence of intermingled federal, state and privately owned lands”. He argues that when federal, state and private lands are intermingled “a high degree of cooperation is necessary if management is to be at all effective” (Foss 1987 p xviii), though this is rarely the case. In addition, “State and Local Government will have no say over any of the planning and management of the land” (Martyn 2000 p1) that is under Commonwealth control. To effectively manage areas of land under their control, Commonwealth Governments not only pass legislation to guide development on their sites, but special authorities are also established to oversee land use administration.

Establishment of more land management authorities

In order to manage areas of Commonwealth land, the Commonwealth Government has had to establish special authorities and agencies to oversee the planning of such sites. The establishment of the Sydney Harbour Federation Trust (the Trust) was met with criticism from the Sydney Harbour Foreshore Authority (SHFA), a NSW State agency, which commented that the creation of another land management authority “does not assist in the integration of good urban design and planning decisions for the Harbour, but continues the ad-hoc management of neighbouring pieces of land” (Martyn 2000 p1). SHFA stated that the creation of the Trust would only “contradict the positive steps taken recently by the NSW State Government to provide greater coordination in the planning and management of Sydney's harbour foreshores, including a decrease in the number of authorities” (Martyn 2000 p1). Martyn (2000 p1) notes that there were already “a number of government bodies responsible for Sydney Harbour foreshore land”, which had similar land areas to those proposed to be handed to the Trust and the establishment of another land management authority was “not in the best interests of the people of NSW”. Ironically, in 2008 the NSW State Government announced the establishment of the Barangaroo Delivery Authority, a new land management authority with the responsibility to “manage the city waterfront development at Barangaroo” (Barangaroo Delivery Authority 2009).

Commonwealth law prevails over State law

Under Section 109 of the Constitution, “when a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid”. Therefore Commonwealth legislation will always prevail over State made law if there is inconsistency (Smith 1998 p2), regardless of the merits of each set of legislation. Smith (1998 p2) states that this over-riding power of the Commonwealth has only further fuelled friction between the Commonwealth Government and State and Local planning authorities. Farrier and Stein (2006 p112) note that there is no requirement that the Commonwealth Government must pass legislation for the matters for which it is responsible under Section 51 of the Constitution, and thus, where the Commonwealth does not pass laws related to these areas, State law “continues to operate if the state parliament has legislated on the matter in question”.

The Commonwealth Government is also not obligated to make laws in regard to environmental matters for areas of Commonwealth land. Farrier and Stein (2006 p13) note that in the past the Commonwealth Government had chosen “not to legislate generally in relation to matters of land use and pollution control” but instead focused on “specific land-use issues”, such as World Heritage protection. Lyster et al (2007 p 13) note that whilst “most environmental legislation is enacted by the States” the “Commonwealth is playing an increasingly important role” as highlighted by the creation of the Environmental Protection and Biodiversity Conservation Act 1999.

However there are still many matters related to land use management issues that the Commonwealth government has not legislated for. This has become problematic for Commonwealth agencies that manage areas of Commonwealth land: there is no Commonwealth legislation to guide and protect their actions and they are unable to access equivalent State legislation due to their exemption from State laws. Commonwealth land management agencies do not have access to legislation to support their role in the administration of land use.

Land use choices and access to legislation

For some land uses, legislative requirements continue beyond the development approval and construction process. Land uses such as restaurants, cafes and childcare centres often require further licensing before they can operate and it is generally the State Government that oversees these regulatory matters. Additional licensing requirements are generally put in place where there are specific safety measures that must be maintained at all times, such as food safety standards, or to protect the rights of people who work or visit these sites, including the welfare of children. At present the Commonwealth Government has not passed legislation that deals with these issues, and as the Commonwealth is exempt from State legislation, it means that the Commonwealth Government is unable to rely on State legislation related to these management and compliance issues. It has emerged that when it comes to the more practical management of uses and tenants on Commonwealth land, there may in fact be a number of areas of State legislation that the Commonwealth would find useful and beneficial. In addition, the Commonwealth Government is not required to access departments and agencies that assist the State Government in ensuring that certain uses are properly managed and regulated. These additional licensing requirements help to ensure that people’s rights are protected in certain situations and that there are certain standards for a particular use. This has become an increasingly important issue for Commonwealth agencies that have uses on their sites that are similar to uses that are generally regulated by the States.

Legally, Commonwealth agencies that manage areas of Commonwealth land are required to rely on Commonwealth legislation to support and guide their actions. However, as mentioned previously there are many instances where the Commonwealth Government has not passed laws for issues related to land management and thus Commonwealth agencies have no laws to direct their actions. At present, the Commonwealth Government has not indicated whether it will pass legislation in these areas. For these agencies, a gap has been created – land use management issues that are generally legislated by the States are not applicable and the Commonwealth Government has no equivalent legislation on that matter. These issues tend to be related to the delivery of human services, such as licensing requirements for bars, restaurants and childcare centres, as well as the issuing of occupation certificates. Commonwealth agencies that have relished this exemption are now realising that in fact, for some land uses, it might actually be easier to be subject to State

legislation, so that they do not have to come up with alternative ways to ensure compliance with State laws. This is to ensure that the level of protection on Commonwealth land is consistent with State controlled land.

Mirroring the States

As it would be impractical and irresponsible for a Commonwealth agency to operate without meeting some legislative requirements, Commonwealth agencies have had to develop solutions to help them address the legislative gap that has emerged. Generally, where no Commonwealth legislation exists on a matter, Commonwealth bodies look to the State system for guidelines and regulations to control land use. For some agencies, a system of contracts and Commonwealth-issued licences has been established to 'mirror' the State system, in an attempt to meet the commonly recognised standard set by the State and retain consistency within the State that the area of Commonwealth land in question is located. However, as there is no legislative basis for the Commonwealth to issue licences and occupation certificates, it is impossible to enforce the acquisition of these further approvals. In addition, the requirement by the Commonwealth Government for tenants on areas of Commonwealth land to acquire such approvals could be subject to legal challenge.

On the surface, the mirroring of State legislation may appear to be an appropriate solution to assist Commonwealth agencies to meet State standards. However, as the Commonwealth Government is not required to comply with State legislation, there is no obligation that the Commonwealth agency 'mirrors' all areas of State legislation. The Commonwealth may choose which areas of legislation with which it wishes to comply, resulting in an incomplete application of State legislation and when State laws change, there is no requirement that the Commonwealth Government updates its practices. In addition, without access to State auditing and evaluation systems, the Commonwealth is unable to ensure that it is meeting the standards set by the States, without the use of external auditors and consultants. An important aim of State legislation that licences and regulates certain land uses is to ensure that the rights of people who occupy or visit these sites are protected. Without the obligation to follow State legislative requirements completely and with no access to resources to enforce these requirements it is impossible to be certain that the desired regulatory outcomes are achieved on Commonwealth land.

Solutions to the problem

As the Commonwealth Government continues to increase its role in land use planning and approves uses that require further levels of approval from the States, the problems associated with current methods employed to assist Commonwealth agencies in aligning themselves with State requirements need to be resolved. Whilst agencies like the Sydney Harbour Federation Trust are able to manage the contracts and licenses of the small number of uses on its sites that require further levels of approval, once the number of operators reaches a certain level, this approach will no longer be feasible. A number of methods to assist Commonwealth agencies meet the relevant state standards are discussed below. However, if the Commonwealth Government was to pass legislation in these 'gap' areas, there would no longer be the need for the Commonwealth Government to try to 'mirror' State legislation.

Development of Commonwealth Legislation and relevant Commonwealth Departments

The development of legislation that gives the Commonwealth Government the power to issue licences and approvals for special land uses would eliminate the need for Commonwealth agencies to develop methods to mirror State legislation. No longer would the Commonwealth Government have to look to the standards set by the States to address issues such as childcare licensing and occupation certificates. There is however, a lack of political will for the Commonwealth Government to pass laws that will only apply to small number of sites. At present, there are only a handful of Commonwealth agencies that have land uses on their sites that would require legislation related to the licensing of childcare centres or food businesses and the Commonwealth Government has not indicated that it will pass legislation to support these uses. However, as the Commonwealth Government continues to increase its role in land use management, and the uses chosen for areas of Commonwealth land require further levels of approvals and licenses, this situation will need to be addressed.

Though the Constitution states that the Commonwealth Government may pass legislation for areas of Commonwealth land, if the Commonwealth was to legislate in areas such as childcare licensing, there might be criticism that the Commonwealth Government is legislating in areas about which it has no experience. The new Commonwealth legislation would be compared to the legislation of every State and may appear to be much stricter or more lenient than the equivalent State standards, as these vary from State to State. Whilst the development of Commonwealth legislation would help to achieve consistency between areas of Commonwealth land, it would be difficult to ensure that this one piece of Commonwealth legislation ensures consistency with all individual State systems.

Land use choices

In order for the Commonwealth to avoid State legislation mirroring, it could restrict the types of uses it approves on Commonwealth lands. When making decisions about land use, planners working for Commonwealth agencies should take into account the possible licensing requirements that a land use may require and be more aware that there is not an automatic process to obtain further levels of approval needed for certain land uses. Planners who plan for areas of land under State control often have the luxury of knowing that other government departments are responsible for the later management of these uses, including the issuing of licenses and the carrying out of any routine inspections related to that license. However, the restriction of land uses approved on Commonwealth land will not prevent the need for Commonwealth Agencies to mirror State legislation, as the Commonwealth Government does not have access to legislation that allows it to issue occupation certificates, which are required for all types of use, regardless of any additional licensing requirements that may be associated with a special use.

Development of a Land Management Support Unit

The Commonwealth Government could establish a Land Management Support Unit to provide assistance to Commonwealth agencies who manage areas of Commonwealth land. This unit would have access to licensing officers, inspectors and consultants that could assist in ensuring that a range of uses on Commonwealth land meet State standards. A legal team, forming part of the unit, could work on standardising contracts between tenants on Commonwealth land and Commonwealth

agencies and developing more concrete ways of 'mirroring' state legislation. The inspection and evaluation of services on Commonwealth land could be monitored by a team that is separate from the planning authority, helping to provide an independent auditor for activities on Commonwealth sites. Whilst there would be little political will to set up this unit for the benefit of only a small number of Commonwealth agencies who need support in these areas, this solution would be much more feasible in terms of resource efficiency than the development of individual Commonwealth Departments. As the number of uses on Commonwealth land that require some form of contract or Commonwealth issued licence to help them achieve State standards increase, there will be more need for a centralised assistance group, such as a Land Management Support Unit.

Land could be subject to State legislation

Areas of land that require not only additional approvals from State legislation, but also rely heavily on the support of State Departments, could become subject to State legislation. In some situations, this would require areas of Commonwealth land to be transferred to the State, to ensure that State departments had jurisdiction to manage these sites and their relevant uses. However, as childcare centres and food outlets may only occupy one building on a large ex-Defence site, it would be difficult to transfer single dwellings to State control. In addition, these uses may be subject to short-term leases and thus the specific use that initiated the land transfer is not permanent and may change. Whilst this solution would ensure that land uses that required further State issued approvals and licences would validly be within State jurisdiction, it is difficult to imagine that the Commonwealth Government would want to give up or sell any of its land to the States to simply ensure compliance with State legislation. Furthermore, the sale of Commonwealth land is a highly contentious issue, there would be strong public outcry if the States gained control over areas of Commonwealth land.

It is possible for certain uses on Commonwealth land to be subject to State legislation, without land having to be transferred from the Commonwealth to the States. Farrier and Stein (2006 p13) outline the case of *Commercial Radio Coffs Harbour Ltd v Fuller* (1986) 60 LGRA 68, where the operator of a commercial broadcasting station argued that they did not need development consent as required under NSW legislation as their operations were covered by the Broadcasting and Television Act 1942 (Cth). The High Court dismissed this claim, as the Commonwealth legislation "did not purport to state exclusivity or exhaustively the law that commercial broadcasting station operators must comply with...it concentrated on the technical efficiency and quality of broadcasting services and left room for the operation of other laws, such as planning and environmental legislation". Using this case as a precedent, legislation regulating the planning and environmental issues exists without claiming to be responsible for the issuing of operational licences and approvals. Therefore, the Commonwealth Government is able to submit to State laws in areas where the Commonwealth government has not legislated.

However, before State agencies can begin to take on certain responsibilities on areas of Commonwealth land, the issue of the States not having jurisdictional power to act on Commonwealth land needs to be resolved. The signing of a bilateral agreement between the Commonwealth and the State Governments would permit certain activities on Commonwealth land to be subject to State legislation, without the need for land to be transferred from the Commonwealth to the States. Bilateral agreements "allow the Commonwealth to 'accredit'

particular state/territory assessment processes and, in some cases, state/territory approval decisions” (DEWHA 2009). Under the agreement, relevant State departments would be required to oversee any approvals that were necessary for uses on Commonwealth land, to the same standard uses on State land. The agreement could make specific reference to the areas where state legislation would be used, such as Part 4A of the Environmental Planning and Assessment Act 1979 and the Children and Young Person (Care and Protection) Act 1998.

DEWHA (2009) note that a “key function of bilateral agreements is to reduce duplication of environmental assessment and regulation between the Commonwealth and states/territories”. Therefore, the signing of a bilateral agreement between the States and the Commonwealth would reduce the pressure on the Commonwealth Government to pass laws in areas that are already legislated by the States. In the future, if the Commonwealth Government were to pass legislation in areas that the State had already passed laws for, Section 109 of the Constitution would come into play.

In addition to the signing of the bilateral agreements, as a small amendment recognising the existence of the agreement would need to be made either to the EPBC Act or to the specific establishing Act for each Commonwealth agency.

Remain with the current system

Commonwealth agencies could continue with the current program of licences and contracts to help mirror State legislation for uses such as childcare centres and food businesses. However, a more streamlined approach needs to be taken, in the form of standard contracts or licenses, to avoid the need to micro-manage each individual situation. However, the issue of occupation certificates needs to be resolved, as compliance with the Building Code of Australia (BCA) is a fundamental requirement for any new building or new use of an existing building. Without some form of legislative backing, there are no penalties for an applicant who commences use of a building on Commonwealth land before a final compliance report with the BCA is obtained. The current arrangement relies heavily on the close management of the relationships between tenant and Commonwealth agency, which is a very time consuming process for staff members. The current system also relies greatly on the work of external consultants, who are able to provide support to Commonwealth agencies, but only to the extent that the agency dictates – thus there is no assurance that all aspects of an area of legislation are being met. The cost of consultants is another factor to be considered and each time a new use is approved, additional consultants must be paid to manage new compliance issues. The current system does not support growth in the area of Commonwealth land management and restricts the number of new uses that could successfully occur on Commonwealth sites

Conclusion

This paper has highlighted a number of possible solutions to help assist in aligning Commonwealth practices with State legislation to ensure consistency across areas of adjacent land. However, there are a number of advantages and disadvantages associated with each solution. A lack of political will from the Commonwealth Government will hinder the implementation of any of these solutions. However, the Commonwealth Government must realise that if it wishes to keep expanding its role in

land use management, the issues associated with the Commonwealth exemption from State laws need to be resolved.

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What's it all About, Monarto?

John Andrews, Boris Kazanski and the centre of South Australia's unbuilt second "new town".

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In December 1974, when the Monarto Development Commission's Town Planning Division asked this question, the new town of Monarto – arguably Australia's last such project to date – had less than a year left as a serious proposition. Monarto was to be South Australia's second such development after Elizabeth, and it was hoped its creators would learn from the mistakes and drawbacks not only of that city established two decades earlier; but also from the perceived mistakes of Australian urbanism in the postwar era. The new city was often described as incorporating remnant natural features and swathes of rugged open space; innovative ecologically sensitive design; and in its "fresh start" a "reconsideration of the role of technology" particularly for transport. The new city's proponents aspired to "pre-empt... social problems, or dysfunctions" with design.

While Monarto continues to generate interest in its environmental innovations, most of the studies were either done by people directly involved or in the aftermath of its failure: this paper seeks to offer a fresh perspective. It examines the social research underpinning the Monarto plans, and the expectations regarding the role of education, family and community in the new city; and offers a more complex understanding of the national and international influences operating on the city designs by Boris Kazanski and John Andrews. It asks what we can learn from the Monarto plans about the state of knowledge on ideal city design in Australia in the early 1970s.

Introduction

In 1975 the Town Planning Division of the Monarto Development Commission set about answering the question “What’s it all about, Monarto?” with an idealistic treatise concluding:

Monarto is about quality of life, about extending and enhancing the South Australian’s traditional concern for the social, physical and cultural wellbeing of the average man... a city built to human scale which recognizes nature, which returns to traditional and relaxed living styles but is radical in its use of technology as a support and in true social development to enrichen [sic] the everyday lives of its citizens (Town Planning Division 1975, p.4).

The unbuilt new town of Monarto occupies an ambiguous space in the history of Australian urban planning. Although admired by some scholars for its early ecological concerns and environmental innovations including solar and wind power (Iwanicki and Jones, 2010) others have inscribed Monarto in a moral narrative of profligacy and political opportunism. Two years after the scheme’s demise, John Wanna (1982, p.266) was quick to condemn the exorbitant sums spent on land acquisition, funding of a bureaucracy and commission of architects and planning consultants as “a misappropriation of state funds on a grand scale”. The project cost \$30 million in total, some of which was Federal funding delivered under the Whitlam government’s New Cities programs. The broad suspicion that the city was never meant to be built – that it was nothing more than a political stunt for the electoral advantage of the incumbent state government – has attached itself to Monarto (Wanna, 1982; Forster 1990, p.33).

Launched shortly after the election of the South Australian Labor Government in 1970 (under the provisional title “Murray New Town”) and shelved officially one year after the Coalition assumed power in that state in 1980, the plans for the new city came to exemplify the failed Fabian socialist dream – not least because of the project’s role in the Whitlam government’s conceptualisation of urban Australia. While the failure to realise the new town was partially the consequence of the changed political climate and the economic conditions of the 1970s, Monarto’s development also took place through a period of ideological revaluation of the discipline.

Australia’s new towns

An important question, rarely asked, on the matter of Australian new towns is why more have not been built. The nation, federated for over a century, contains large areas of undeveloped country with small populations which nonetheless wield considerable power federally. Its largest cities are both ports and centres of government, much larger than its inland regional centres. Strong “new state” movements have risen and fallen over time, most of which include a platform of “new state capital” development, including decentralization from the traditional mercantile/distributor cities, at their hearts (Clark 1952, p.11; Sproats 1984, p.34). Yet despite these “pull factors”, and the prominent primary industry sector and long-enduring fears relating to the exposed and vulnerable nature of its coasts and their cities, only once has the nation embraced the value of drawing populations (or new settlers) from the state capitals to new purpose-built urban areas. But Canberra’s story is of a city built for reasons far removed from concerns over urban expansion.

In 1945 Walter Bunning wrote about satellite towns (as opposed to New Towns) in an Australian context: these he saw as “entirely practical”. They were also desirable as creating conditions for improved housing, “more open space and easier access to the countryside” and served to “reduce the congestion of industries and transport which has made city dwellers a race of “straphangers” on their way to and from work.” Bunning imagined a hypothetical town of one mile across for 10 000 people, including five suburban areas of 2000 residents each separated by a green belt from the town centre (Bunning 1945, p.91). Six years later Sir George Pepler suggested the Commonwealth Government “should set up a town planning ministry with finance, and found new towns to relieve overcrowded Australian cities” (Anon 1951). Between Bunning’s and Pepler’s ruminations the South Australian Housing Trust began to acquire the land to build what would become known as Elizabeth, “unique in Australia at the time as an example of comprehensively planned urban development” (Forster and McCaskill 2007, p.87) but for all intents and purposes an outer suburban extension to Adelaide rather than what it was dressed as – a “new town”. Despite the rare exceptions of comprehensively planned projects such as Elizabeth, throughout the 1960s and into the 70s many (particularly left-wing) politicians and bureaucrats as well as many planners continued to decry the traditional governmental approach of what Robert Lansdown (1966, p.175) described as “ad hoc unco-ordinated decision-making” in the face of “continuing population increase” leading to a “spread of suburbs lacking in basic services and natural centres around which some simple sense of community can develop”.

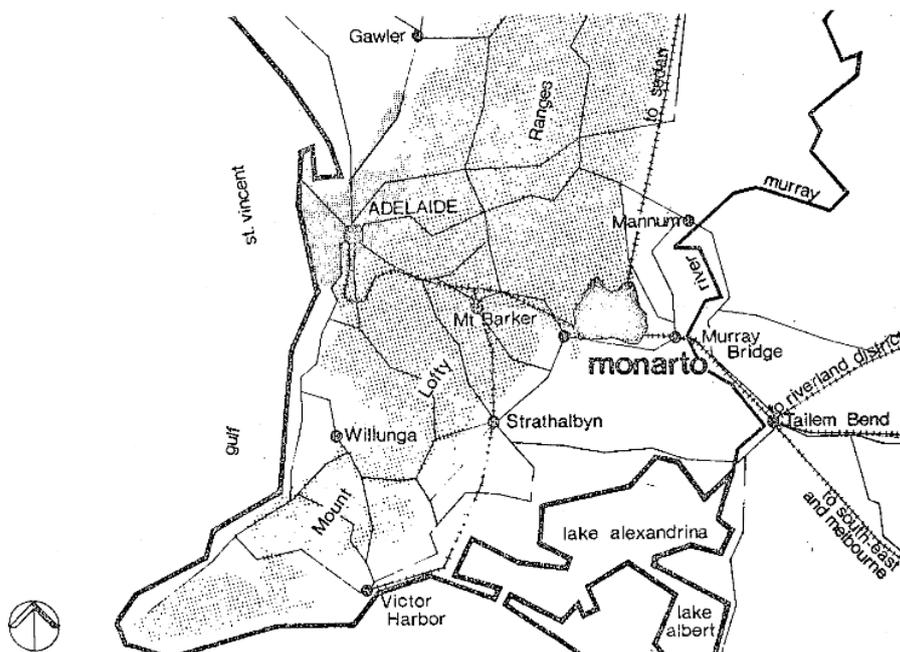


Figure 1: Monarto in geographical context. From Town Planning Division (1975) *Monarto Planning Studies* Adelaide, Monarto Development Commission, p. 13.

The closest Australia has come to a genuine “new towns” strategy comparable to European models is the period in the early 1970s during which the Whitlam government brought together a range of newly projected cities under the “growth centres” banner. Though the impetus for sites and

composition came largely from state governments in NSW (Bathurst-Orange, Albury-Wodonga, Campbelltown), South Australia (Monarto), Western Australia (Salvado) and Victoria (Albury-Wodonga), it was Whitlam's commitment to quality of life for urbanized Australia that furthered the discussion, and, despite the tensions inherent between State and Federal authorities, gave the state-based schemes the form of a network.

The machinations behind the identification of the Murray Bridge area as an ideal site for a "true" new town (Figure 1) lie in demographic projections: a 1966 Government report predicting population surge in Adelaide which would see the city reach one and a half million by 2000. Monarto was intended to draw away almost 200 000 residents (Forster and MacCaskill 2007, p. 95; Hutchings 1997, p.124). Fears that Adelaide's infrastructure would not cope with the surge, and that sprawl would encroach on arable lands to the east of the city supporting the increasingly valuable wine industry, were also key. Within months of the Labor victory of 1970 under Don Dunstan the Murray New Town Steering Committee was set up to undertake preliminary international research on social policy and environmental impacts and issues (Britton-Jones 2002, pp. 2-3).

South Australian architect Newell Platten was appointed Commissioner of the newly established Monarto Development Commission in 1972, and the site of 15 200 acres near the township of Murray Bridge, 60 kilometres north west of Adelaide was selected for the new town (Hutchings 1977, p.127). Forced acquisition of the land followed with the passing of 1972 the Murray New Town Land Acquisition Act (later renamed the Monarto Land Acquisition Act). Dunstan (1981, p. 191) would claim that "the planning was done with great care – no new city had had such careful study carried out for its establishment this century." His praise of the "care" involved notwithstanding, the project had a very short development trajectory and indeed most time spent was on "study". In 1974, urban designer Boris Kazanski published the *Concept Plan for Monarto*, and the following year John Andrews produced the *Monarto City Centre Stage One Design Proposal*. Kazanski and Andrews both had recent experience working on the Canberra suburban node of Belconnen for the National Capital Development Commission.

Andrews' Belconnen involvement had involved the Cameron Offices, a long term project which had drawn him back to Australia from his successful Toronto-based practice in 1969, but which was not complete until 1976. A vast complex in its own right – to house 4000 federal government bureaucrats – Cameron Offices was but a part of the NCDC's broader project for Belconnen, a new Canberra suburb including not only significant provision for government administration, but also its own town centre, shopping and commercial facilities, and transit centre to connect it to the rest of the city. Belconnen was a part of the NCDC's Y plan decentralising Canberra as it grew; Woden, another key location where new growth was to be concentrated, would also feature a major Andrews project.

The work of Kazanski's and Andrews' offices were not the only examples of importations and cross currents between the NCDC and the planning of Monarto. In 1972 former NCDC architect Hank Den Ouden was appointed Director of the MDC Architecture unit. The culture of the newly formed MDC reflected wider social questioning of traditional hierarchical and siloed managerial styles. Keen to distance himself from the centrally controlled bureaucracy of his former workplace in Canberra, Den Ouden was intent on developing an interdisciplinary approach to planning on Monarto¹ and worked

closely and consultatively with the social planning, town planning and engineering divisions of the MDC. He would be a conduit for these ideas and his influence would impact on designs produced.

To the public, at the time and in retrospect, the Monarto Development Commission planners promoted the Australian, and specifically *South* Australian, planning influences of William Light, Charles Reade and Hugh Stretton whose seminal work *Ideas for Australian Cities* had been published in 1970 (Hutchings, 1989). According to the MDC's Director of Town Planning Alan Hutchings (1977, p. 126) Monarto was to be a quintessentially Australian city for ordinary people where the buildings would not overpower "human scale". Preliminary research for Monarto begun by the Steering Committee in 1970, however, suggests an international focus which belies the self-confessed parochial focus of the later Monarto Development Commission. New towns in Britain and Scandinavia were the subject of one Steering Committee investigation, as were the social benefits of higher density: "I don't think it was *called* urban consolidation in those days" reflected former secretary to the Committee Sue Britton-Jones, who confirmed that the town "certainly" emphasised "more intensive development" (Britton-Jones 2007, pp. 2-3). Extensive international experience also informed the two consultancies responsible for the principal plans of Monarto.

Adelaide born and educated Boris Kazanski had recently returned to Australia from Germany where he had worked under the architect Rolf Gutbrod, bringing an impressive consortium of international architects and designers with him to the Monarto project. One of these, the British firm Shankland Cox, had wide European urban design experience (Shankland 1973, pp. 463-467) and an established interest in social planning. Prior to establishing their partnership, Oliver Cox and Graeme Shankland had worked for the progressive London City Council on the new town of Hook with sociologist Peter Willmott (Willmott, 1967). Gutbrod was another associate on the new project; together with Frei Otto, he had designed the German Pavilion for Expo 67 in Montreal, highly regarded for its innovative tensile structure. In 1974 Gutbrod and Otto were also working on the Mecca Conference Centre in Saudi Arabia, again deploying a tensile roof structure. Gutbrod, as Kazanski recently noted, "had vast experience in building in arid zones similar to flat and dry areas of Monarto".²

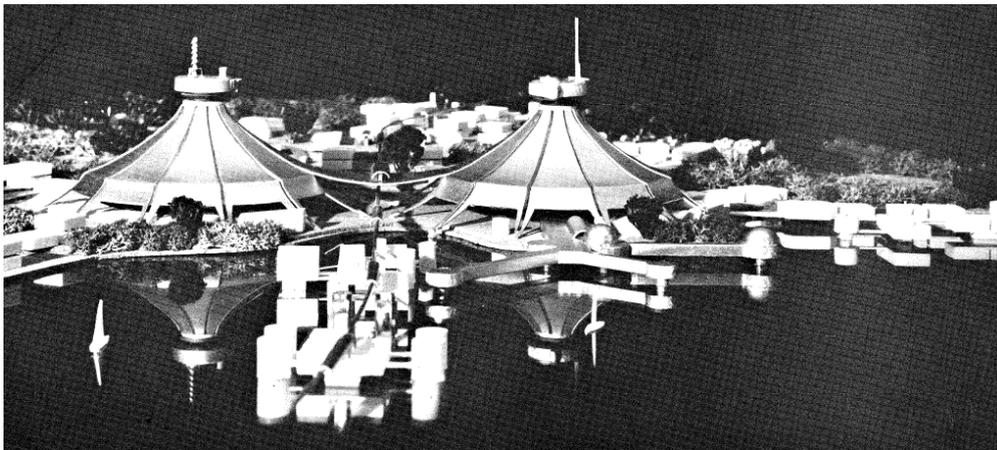


Figure 2: Kazanski's "Honky Tonky" entertainment precinct. Kazanski and Associates et al (1974) *Monarto Concept Plan* Adelaide, Monarto Development Commission.

The Kazanski plan was met with intense resistance from the Monarto Development Commission. Hutchings took particular exception to the plan's megastructures which would overshadow the people and the environment. He also objected to the more avant garde elements of the plan, in conflict as it was to the (imagined) ordinary Australians who would populate the new town: "the vast tent-like structures built over the proposed central lake which was to become "one of the two 'Honky Tonky' areas of the city centre" (Figure 2). These comprised the *urbanisme ludique* or "fun-city" concept of Archigram and similar groups' (Hutchings 1989, p. 172). One element of the plan which would survive through to the next design stage, led by Andrews, was the lake – a reflection, surely, of the success of the long-mooted, but recently filled, Lake Burley Griffin (Figure 3): this project would have loomed large in the minds of many directly connected to Monarto.

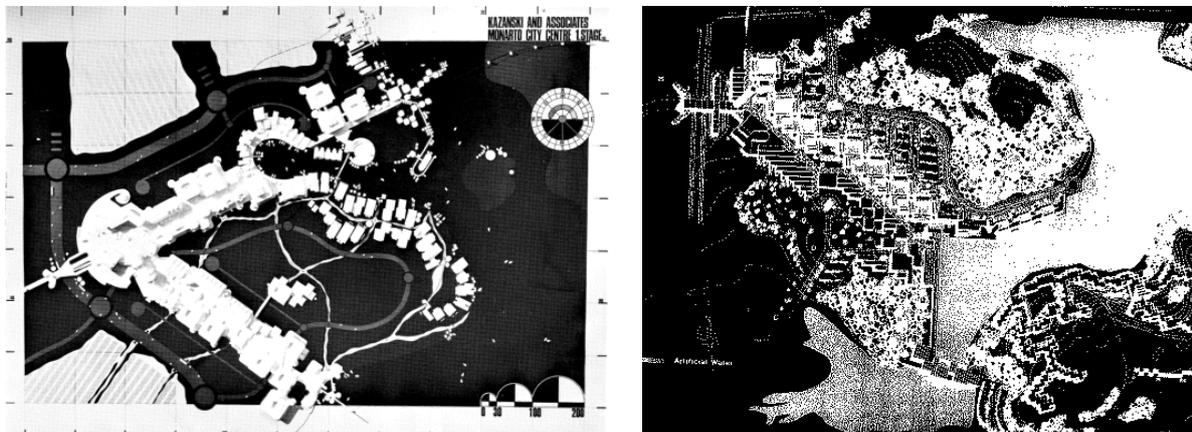


Figure 3: Kazanski's and Andrews' differing conceptions of the Monarto City Centre, from 1974 and 1975 respectively. Both centre on waterfront living.

Andrews' urban trajectory begins with his masters education at Harvard's Graduate School of Design in 1957-8. The GSD was then under the direction of Josep Lluís Sert, the Catalan architect who had been president of the Congrès Internationaux d'Architecture Moderne from 1947 to 1956. Sert had a strong intellectual interest in the phenomenon of the city, pursued not only in his own practice work but also in his institutional roles. While his 1942 book *Can Our Cities Survive?* reflects the urbanism of the second phase of CIAM from the formulation of the Athens Charter in 1932, under Sert's guidance the immediate post-war conferences of CIAM – particularly the 7th at Bergamo (1949) and the 8th at Hoddeston (1951) – had refocused on the question of the city centre and its symbolic role. This was in keeping with Sert's simultaneous promotion of a new monumentality for modern architecture, most famously formulated in the 1943 text "Nine points on monumentality" written with the architectural historian Sigfried Giedion and the painter Fernand Léger (1993, p. 29). In the 1960s, at Harvard, Sert would establish the first Master of Urban Design program (Mumford 2012) but this urban interest was already apparent in the architecture curriculum studied by Andrews under Sert in the late 1950s, when the design studio subject in the program Andrews undertook

focused on “Advanced problems dealing with (a) complex building of monumental character and (b) civic design” (Anon 1957).

A combination of focused research and prevalent ideology drove both Kazanski’s and Andrews’ central Monarto plans, and the broader conceptions of the overall urban form. The town was to feature dense population areas, yet be as spacious as possible; while it was to be an urban society with attractions of any city, it was not to stifle the purportedly innate desire of inhabitants to be close to nature, and it was not to be unrelentingly “new”. This was a period in which not only a planning backlash, but also a backlash against many elements of the urban (as opposed to “natural”, if not “rural”) environment, was in full swing: the cover of Kazanski’s report featured not a streamlined urban environment, but a decrepit rural farmyard. Few wanted to be party to a new town of “dulling... hectic newness,” to quote one critic of the British new towns (Brooke-Taylor 1972, p. 124).

The culmination of the processes at play can be seen in Leonie Sandercock’s 1975 report to the Monarto Development Commission, *Public Participation in Planning*, published contemporaneously with the demise of the Whitlam government – and effectively, of Monarto as a realizable project. A survey of the state of engagement between community, planners, and government, Sandercock’s text posited the notion that the new city might reasonably be developed in consultation with its residents-to-be. This was an unusual situation – generally speaking, the actual population is the last component of a new urban area – but possible in Monarto as it was to be peopled in large part by public servants working in administrative departments relocated from Adelaide. Sandercock wrote:

Since its establishment the M.D.C. has gone some way to fulfilling its legislative requirements with respect to participation by using the traditional techniques of exhibitions, leaflets, publicity, some questionnaires, addressing community groups, conferences and so on. This is now almost standard activity among planning authorities, and the difficult but potentially innovative role of the Commission is yet to come. This involves the attempt to identify future “stakeholders” in the new city and involve them both before they move, and once they are at Monarto (Sandercock 1975, p. 134).

Indeed, an extensive series of social research seminars, colloquia and consultations had been undertaken in the lead up to the unveiling of Monarto. Bruce Pennay (2005, p. 63) says of Monarto’s immediate forerunner, and would-be north-eastern older sibling, Albury-Wodonga that its “planning process was deliberative and consultative – and consequently slow”. Monarto was to be a much more speedily grown product, with six years between its formal beginnings in 1972 and the pioneers (aside from any extant residents) locating permanently in 1978.

The discourse surrounding the planning of Monarto in the first half of the 1970s reveals, then, a remarkable moment in Australian political and cultural history, as well as a period of a planning profession which was, if not in crisis, certainly gearing up for reassessment. Architectural discourse at this time also reflected growing environmental and sociological awareness. The city of Monarto was “to be planned at a time when concern for the environment and for the quality of life of the people are receiving growing attention,” Governor Mark Oliphant declared at the opening of a 1972 seminar to discuss its development (Whitelock and Corbett 1972, p. 1). At the same time, while its primary *raison d’être* was “to siphon off from Adelaide excess population,” (Bakewell 1972, p. 7)

recognition was also given to the push and pull factors of a town like Monarto. R. D. Bakewell suggested in 1972 that:

The development of any new town covers – but not necessarily in this order – firstly, planning, secondly, land management, thirdly, policy related to a leasehold control, and fourthly, the social development of the town and the social participation arising from the need to assimilate into the new town a rapid influx of people (p. 5).

Australia had made some headway with the construction of purpose-built regional centres, as well as with extensive “newtown”-styled suburban public housing areas added to extant cities (such as Sydney’s Green Valley, which like Elizabeth was “not strictly speaking, a New Town”) (Sorell and Gibson 1970, p. 13). It was now possible to identify social problems associated with such developments, some of them not dissimilar to those in other countries, such as in the UK where “problems” were “mainly of a sociological nature...” (Bakewell 1972, p. 4). Elizabeth was by this time two decades old; concerned citizens, NGOs and the town’s creator, the South Australian Housing Trust, hoped to learn from its experience. Its CEO Alan Ramsay suggested in 1972 that “even before a person lived in Elizabeth, the Trust was very conscious that the main difficulties in a new town would be social,” and that “anything we can learn today to apply to Murray will be of great use and significance” (Ramsay 1972, p. 15).

In line with much of the best participative planning, Monarto’s planners, and the planning fraternity and its fellow travellers, were propagandists for the project even as it took shape. The question of the specific attractions of the new town were key. Amos Rapoport, the Polish- Australian theorist who, in 1972, was lecturing at the University of Melbourne, suggested that:

The town must have an appropriate overall character or “image”. The study of images is developing, as is the appreciation of their importance. It may now be possible to discover, or at least get some inkling into, the appropriate images for the centre and the major symbolic elements as well as the overall quality of the town. This would give the new town a flying start which is a most important consideration for such a project (p. 15).

Ron Caldicott, who spoke at the same seminar, ruminated on the community value of the established 19th century suburb of North Adelaide, but saw many lessons to be taken from its particular successes:

I do not think that we should by any means create a facsimile of North Adelaide, but there we have an example of housing designed for the climate, shopping and other commercial activities, together with a small amount of industry and a ready access to parklands and other recreational facilities such as the Botanic Gardens, the Zoo and boating on the Torrens to mention only the most obvious (p. 39).

Education was to be a prominent feature of the new city. Caldicott suggested that Monarto “should certainly have its own educational and occupational complex, covering a whole spectrum of community needs, and this could be the focal point of the city” (p. 41). Other attendees, as members of a study group on “social problems” opined that Monarto should be “a completely new kind of town with a minimum of roads, houses facing onto common ground and plenty of walking areas for

children to walk to school, etc. There should be an integration of all resources such as educational and community facilities” (Whitelock and Corbett 1972, p. 58).

Large-scale investment in new facilities was, unsurprisingly, seen as core to a successful new town. Participants in social research NGO Australian Frontier’s consultation on “the New Town of Murray” expressed the view that as the town was “being developed to ‘save’ Adelaide, it should receive privileged treatment, even if this involved some penalty to Adelaide.” This including ensuring the new town would be “given the top headmasters and a disproportionate share of the good and experienced teachers” (p. 24). This approach was hotly criticized by social welfare organisations in South Australia “because of the adverse effects on the rest of the State if too many of the scarce resources in this area are put into the one project” (Rushman 1977, p.30).

Monarto: a distillation of 30 years of research and dialogue

The discussion over the values to be embedded in the Monarto plan was, then, ongoing; with 40 years’ hindsight, it reflects as much on South Australians’ opinions on Adelaide and Elizabeth as much as it does on the future new town. But how did such thinking impact on those called upon to create designs – however preliminary – for the place?

The role of John Andrews in the Monarto project was as principal architectural consultant. While Andrews collaborated with others on Monarto, in particular fellow architect Philip Cox, the part of the project that bears his imprint most directly is the plan for its centre which appears in the 1975 report *Monarto City Centre Stage One Design Proposal*. While somewhat schematic, the most architecturally resolved element of this is a cluster of office buildings for departments of the South Australian government organised along one side of a long pedestrian mall, which linked the lakefront at the southwest with a transit centre. A landmark tower is included, a nod perhaps to Rapoport’s suggestion of the need for a major, unifying symbolic element. Retail, commercial and educational services are incorporated into the mall design.

The Andrews work features aspects connected to the rest of his oeuvre. While the schematic organisation of the Monarto buildings is geometrically different from the contemporaneous Cameron offices at Belconnen – a series of wings connected around open square courtyards rather than the long building fingers of Belconnen – the principle of repeated geometry, staggered in section to fit to an underlying terrain which is then represented architecturally in the tiered forms of the building’s skyline, is common to both projects. So too is the sense that a single massive complex resolved into articulated parts gives multiple opportunities for entry points each with their own address: both Cameron offices and the Andrews buildings at Monarto were to accommodate multiple government departments, in the one case of the federal government in the other of the South Australian State. This articulation of the Monarto centre into building-scaled parts of equivalent compositional and planning significance distinguishes Andrews’ design here from that of meagstructural proposals for new urban centres elsewhere, such as the Cumbernauld Town Centre, outside Glasgow, by Geoffrey Copcutt, designed in 1960 and realized in phases subsequently, and perhaps also from Kazanski’s Monarto project. Reyner Banham associates Andrews’ career-making project, the design of Scarborough College in Toronto’s eastern suburbs (completed 1965) with Copcutt’s Cumbernauld as two key examples of the megastructure trend of the 1960s (Banham 1976: p. 167). However, Andrews’ subsequent work even when at urban scale is not based on

singular design gestures such as that at Scarborough, and as such is distinct from the megastructure trends of the 1960s and early seventies.

Andrews' Monarto centre appears also to have been planned to include some retail use at the ground level of its buildings, and apartments at upper levels of the wings away from the mall. The Monarto pattern of square courts would become a notable and rigorously explored feature in subsequent large scale Andrews complexes, the squares often chamfered to octagons, particularly the design for the Woden offices (designed 1973; only partly realised 1980), and the project from the 1980s for the Intelsat offices in Washington, where the courts are glazed at the top to become a series of atria. But residues of this planning approach – with square interstices between building nodes, usually disposed diagonally (both on the drawing and in relation to street grids on site) – can be found in many subsequent Andrews projects from the Hyatt Regency Hotel in Perth (1984), to the office building and hotel for the Adelaide Railway Station redevelopment project (1988), and the Octagon offices in Parramatta (1990). The cylindrical circulation towers at nodes between wings apparent in the Monarto drawings also became a key motif in many subsequent projects, but at Monarto they would house only stairs as the buildings were to be low enough to avoid the need for lifts.

All of the projects mentioned above demonstrate an ongoing investigation by Andrews of the urban potential of large building complexes; they also demonstrate an evolving interest in the environmental performance of architecture that was particularly significant both to Monarto's climatic context and contemporary concerns over pollution, energy and indeed urbanization in sum. While it is possible to at least provisionally trace the origin of Andrews' urbanistic concerns, the sources and influences of his focus on low energy strategies is much less apparent.

The potential for large scale buildings to play an urban role was consistently explored by Andrews, from Scarborough College, through African Place at Expo 67 in Montreal, to the student residences at Guelph (1968) where, at a very large scale, square diagonally oriented courts first appear in Andrews' work. The finer grained urban textures apparent in the residential areas adjacent to the Monarto town centre are explored by Andrews in the unbuilt project for Woolloomooloo Bay (1975) and the social housing at Little Bay in Sydney (completed 1975). Doug McKay, the principal architect from the Andrews office who worked on Monarto, had previously played an important role on the Little Bay design and had also worked on Belconnen.³ While these projects show kinship with the planning strategies explored by the CIAM-inspired Team 10 generation (Andrews would be an admirer of Team 10 member Aldo van Eyck when he got to know of him through his colleague Peter Prangnell at the University of Toronto in the late sixties) it is clear that Andrews' own urban orientation also owes a great deal to the take on urbanism developed in CIAM circles at mid-century, the very context from which Team 10 rebelled. The Monarto water tower is consistent not only with Rapoport's views but also with the monumentality suggested in Sert, Leger and Giedion's 1942 text, or Louis Kahn's (1944, pp. 48-54) essay on monumentality.

The source of Andrews' environmental interest is less clear than the origins of his tendency to think in urban terms, and warrants further investigation. However his experience in designing Scarborough taught him to take climatic information seriously (Taylor & Andrews 1982, p. 32-33; Scrivano & Lobsinger, 2008), and his academic involvement at the University of Toronto in the 1960s most likely made him aware of the pioneering environmentalist advocacy of the landscape architect-

cum-planner Ian McHarg. He has also cited Sym van der Ryn as someone who interested him⁴ but van der Ryn's work was not widely published until the environmental orientation in Andrews' own work was already well-established. This orientation is apparent in the green roofs of the Cameron offices at Belconnen (repeated at the Garden Island Parking Structure in Sydney (1980), and at Intelsat (1988)); an interest in passive cooling/ventilating systems, again culminating at Intelsat, in the atria which exploit the stack effect to draw air across pools of water and thereby increase its cooling effects), and in shading strategies consistently used in Andrews buildings, for example the light-weight triangulated steel rod screens, clad variously with polycarbonate or glass, used at the King George Tower, Sydney (1976), the Woden offices, and then Intelsat. Don Thomas (DS Thomas & Associates), the mechanical engineer with whom Andrews worked on several of these projects (significantly, both Belconnen and Intelsat) also gave advice for Monarto.

While the design of the Andrews building for Monarto did not develop to such levels of detail, the pools which were intended to feature in the courts of his town centre buildings were intended to have an evaporative cooling function, and the sight and sound of their sheets of moving water, as Jennifer Taylor has pointed out, would also have a psychological effect (Taylor & Andrews 1983, p. 155). A policy of using minimum energy resources led to the Monarto strategy of avoiding lifts for vertical transportation within buildings, and a plan to use solar energy for heating and air conditioning. More unexpectedly, the Monarto design apparently envisaged using the energy generated by the fall of water from its monumental tower to the lake to power an "electric trolley" that would run the length of the mall. The 1975 report on the city centre design in fact designates the tower as an "Energy Tower" that would with some unspecified technologies "take advantage of the year round energy availability of natural resources such as wind, solar energy and water." While Andrews had faith in the ability of Don Thomas to resolve inventive approaches to the environmental performance of buildings, and Kazanski's work with Gotbrud brought further technical expertise to the project, the idea of the "Energy Tower" entailed a technological leap of faith. This probably contributed to Andrews' sense that Monarto was unlikely to eventuate. Despite therefore not taking it very seriously (or so he claims in retrospect), Andrews' work on the Monarto city centre buildings is as outlined above an important link in the chain of development of urban and environmental ideas apparent in his work.

Conclusion

The final conception of Monarto's centre was the work of Andrews, for whom it was both a challenge and a showcase. No doubt the choice of Andrews as designer for the town was made not only for his architectural ability but also in large part for his showmanship, his ability to cultivate publicity. This was important, as if Monarto was to perform its functions it would first need to "sell itself" as a feasible, attractive and perhaps even exciting city centre which would both fulfill its purpose and provide quality of life for residents and visitors (Figure 4).

While direct connections can be drawn between the research relating to Monarto – particularly the seminar papers and focus groups – and designs for it, Andrews' in particular, it seems unlikely that Andrews was directly responding to the swathe of proposals from South Australian professionals and laypeople. Such connections as there are most likely came about through the agency of Den Ouden. The main motivations of the Andrews design, however, in aspiring to create a place both modern and socially and environmentally responsive, came from broader issues facing the built environment

disciplines. In this regard these interlinking concerns can be seen as exemplars of global issues of the period.

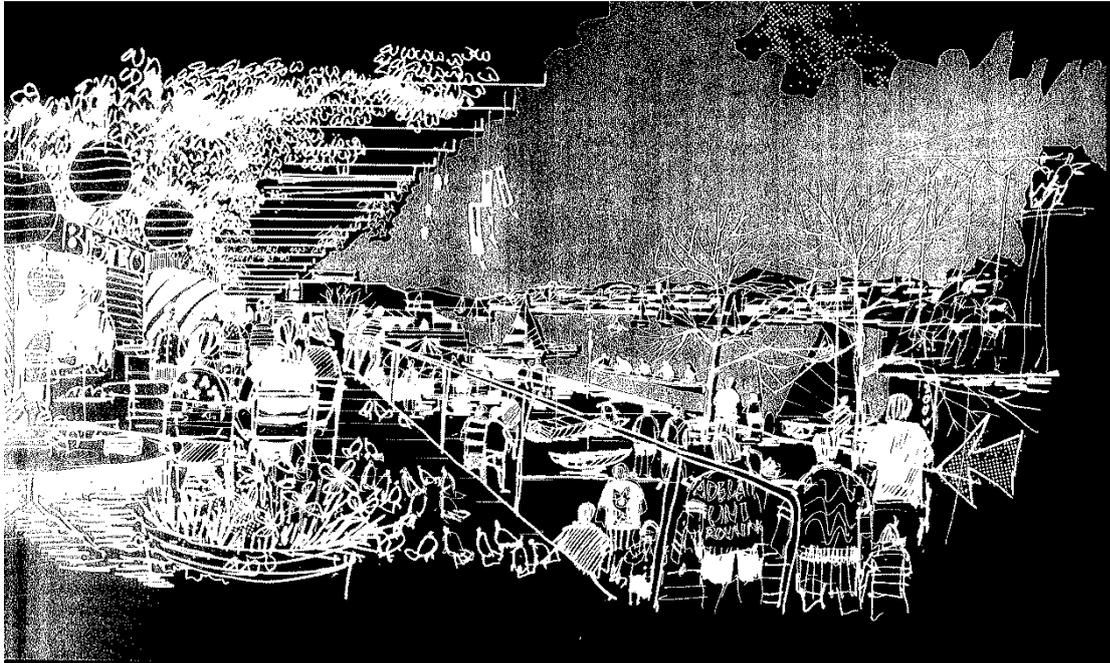


Figure 4: Conception of lakeside life at Monarto. From *Monarto City Centre Stage One Design Proposal* (1975) no page numbers.

In 1981, Dunstan wrote of regrets surrounding his time in state government. They included the failure to establish Monarto “and thereby protect... Adelaide from overdevelopment” (p. 316). However, if it was not clear in the early 1980s it would soon become obvious that Monarto was not needed, at least not for the purpose it was originally intended: to soak up overspill from Adelaide, preserving quality of life in the capital and producing a hi-tech, environmentally friendly new town blending old with new in an ecologically friendly environment.

Subsequent revisions of the Monarto story have sought to minimise its value. While the city was, plainly, never constructed in any form (Kazanski, in discussion with the present authors, takes credit for suggesting the site’s present use – a zoo) the talented individuals involved in its research, planning and design have left an extraordinary record of perspectives on best-practice city planning in that era; one in which international contributors positioned an ecologically sensitive, socially dynamic “new town” both in Australian and international contexts. Monarto – perhaps more than any other of the Whitlam “new towns”, and perhaps more than any other abandoned Australian “new town” – is surely worthy of further study and discussion.

¹ Den Ouden, pers. comm. 2013

² Kazanski, pers. comm. 2013

³ Andrews J pers comm 2013

⁴ Andrews J pers comm 2013

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“Learn From Yesterday, Live For Today, Hope For Tomorrow”

Attempting to plan for coastal change in South West Victoria

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“Learn from yesterday, live for today hope for tomorrow.” When Albert Einstein penned these opening words, the realm of planning was least on his mind despite the aptness of the thoughts. This paper, having regard to this quotation, questions whether demographic change in one coastal area is occurring at a faster rate than in non-coastal areas? The South West coastal area of Victoria, from 1981 onwards, has witnessed a dramatic increase in population and also major shifts in the social and economic characteristics of the region. What have been the historic demographic and employment characteristics of the area and has there been a shift in these characteristics leading to the rapid population growth?

These questions are considered using the City of Warrnambool, the largest urban centre in South West Victoria, as a study vehicle. The impact of a growing population on the municipal landscape can be demanding in terms of land use planning, land supply and the urban design.

This paper will review the population growth using a shift share analysis method compared against overall growth patterns in the Victorian state population and Australia overall. It will then examine government population forecasts for the City of Warrnambool and suggest those impacts upon the current City of Warrnambool landscape.

Keywords: coastal planning; urban design; South-Western Victoria

Overview

This paper begins with a brief historic overview of the City of Warrnambool followed by review of demography in coastal Victoria, land use planning in South West Victoria and the changing economic land scape in the area.

The second part of this paper looks forward to determine the future environmental and economic sustainability of Warrnambool.

Research Introduction and Methodology

The Australian coast and its thousands of beaches have an iconic status in the Australian culture and way of life. Most Australians live on or near the coast where there is continuing population and development pressure, particularly along non-metropolitan coastlines. (Victorian Coastal Strategy, 2006)

Australia reflects the rest of the world's love affair towards living near or on the coast. Agenda 21 (17.3) stated that in 1992 more than half of the world's population lived within 60 km of the coast, and that by the year 2020 this proportion could rise to two thirds. Hinrichsen (1998) quotes a figure of 3.2 billion people living within 200 km of the coast, on about 10% of the Earth's land area, and two thirds of the world's population already living within 400 km of the coast.

In addition to populating the coast, humans are highly dependent on coastal resources. (Victorian Coastal Strategy, 2006) Although the coastal ocean accounts for only 8% of the global ocean surface and less than 0.5% of its volume, it accounts for about 14% of its production; up to 50% of its gentrification; up to 80% of global organic matter burial; 90% of global sedimentary mineralisation; 75 to 90% of the global sink of suspended river load and associated elements/pollutants; in excess of 50% of present-day global carbonate deposition; and approximately 90% of the world's fish catch (Pernetta & Milliman 1995, p 16).

As Albert Einstein once said, "Learn from yesterday, live for today, hope for tomorrow:"

Since the 1990's Australia and its respective states have done extensive reviews into policy relevant legislation and strategies. The proposed research will review the past 60 plus years of land use activity as a precursor to looking forward to the year 2100. What will the coastline look like? What will be the land use activities and patterns and how will those patterns differ from what currently exists?

What is the future for Australia's and more specifically South West Victoria's coastline? Will there be hope for the South Western Victoria coastline? This study will shed some light on the usually cloudy and ever changing coastal landscape.

In the past ten years only 32 theses (Appendix A) have dealt with coastal planning issues around the world. This figure was obtained by doing a search on the Proquest dissertation and thesis database using variants of the search phrase 'coastal planning'. The search was further refined to determine what if any thesis had looked at the Victorian coastal planning and land using planning in general. The redefined search was unable to identify any relevant work.

The State Government of Victoria through its Victorian Coastal Strategy (VCS) set a long term vision for the Victorian coastline. The vision and strategy was in response to three issues facing the Victorian coastline namely:

- Climate change which will result in impacts on the coast including rising sea levels;
- Rapid population growth in coastal areas; and,
- The health of the marine environment.

The strategy was to provide policies, frameworks, coastal action and management plans as well as being a guide for decisions makers. The VCS provides a broad brush approach to coastal management but does not go in detailed analysis of any coastal region. As a strategic planner in a coastal south west Victorian shire coastal planning issues we experienced continual pressure to allow developments in environmental sensitive areas. One of the great deficiencies coastal planners in south west Victoria experienced was the lack of data or studies directly relating to the region.

The research explained in this paper provides a platform of knowledge which will allow planners to make better informed coastal planning decisions. To undertake a research project of this complexity a multi-step methodology was devised. The methodology had to take into account the following

Undertake Literature Search

Review all relevant literature on coastal / land use planning; sea level rise; climate change and its effect on coastal regions; Victorian demographic and economic development.

Determine Coastal movement

The steps in this process include:

1. Data acquisition and conversion of suitable data into a usable digital format
2. Load newly established digital data into the Digital Shoreline Analysis System
3. Develop a series of orthogonal transects or baselines illustrating where the respective relevant coastline line is at a certain point in time.
4. Run comparison of the different baselines to establish a time line series of actual coastline movements

Figure 1 highlights the digital data conversion process which transforms paper maps into digital maps which can be analysed through the GIS.

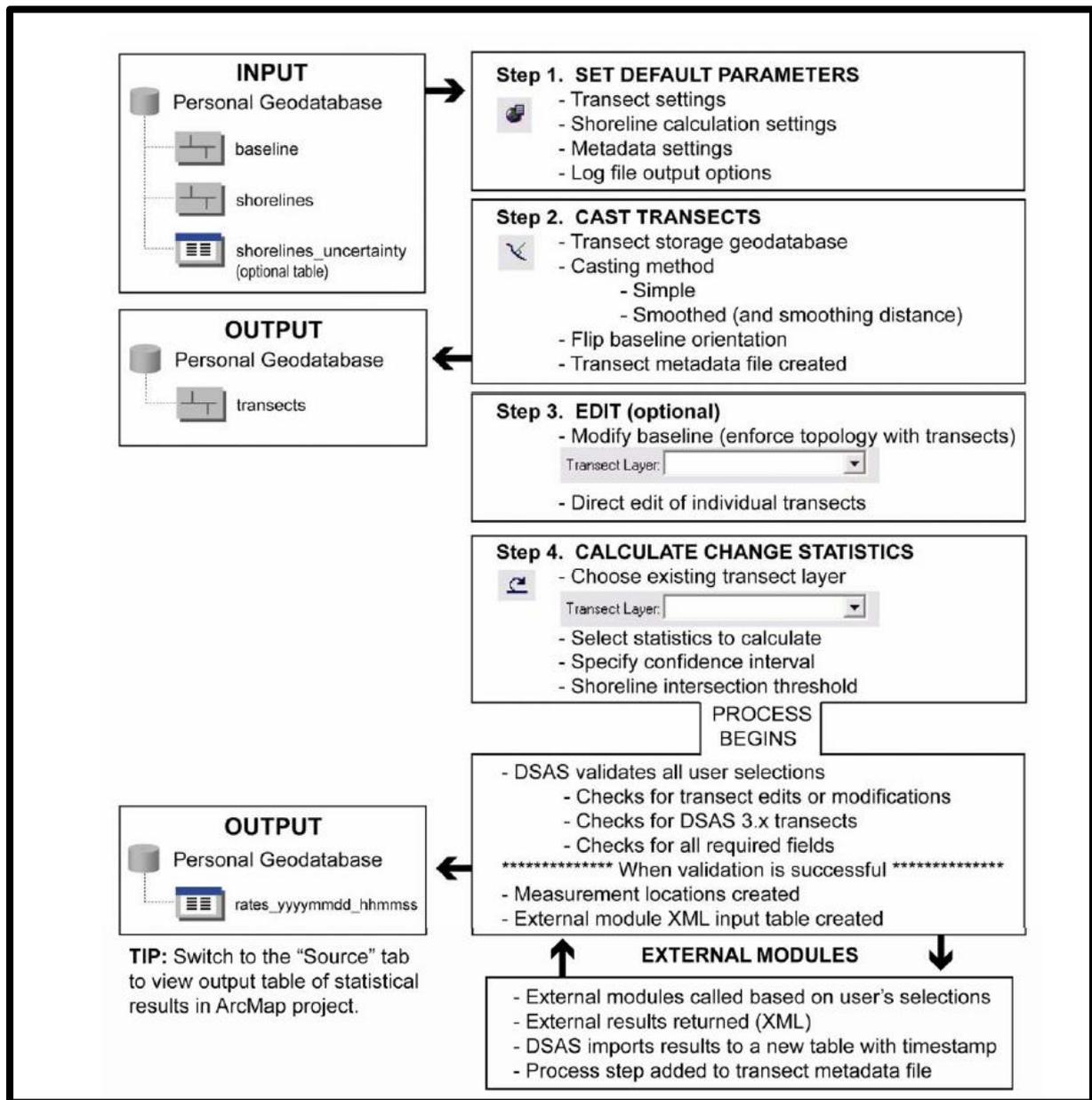


Figure 1: Digital Data Conversion Process for Estimating Coastal Change. Source : (U.S. Department of the Interior U.S. Geological Survey 2012).

Once the paper data was transformed into a digital database it was loaded into GIS. GIS uses a variety of models and supplemental programs. These programs include the Digital Shoreline Analysis System (DSAS) and Community Vis which is a land use planning software attachment to ESRI ArcView GIS software platform. Figure 2 is a schematic of the Land Use model that was developed for this study. As illustrated by the schematic, spatial data was processed through a matrix which examined the probability and validity of each of the data sets and set a priority relating to scenario development. Each scenario was then ranked by priority and land rezoned in accordance to the scenario.

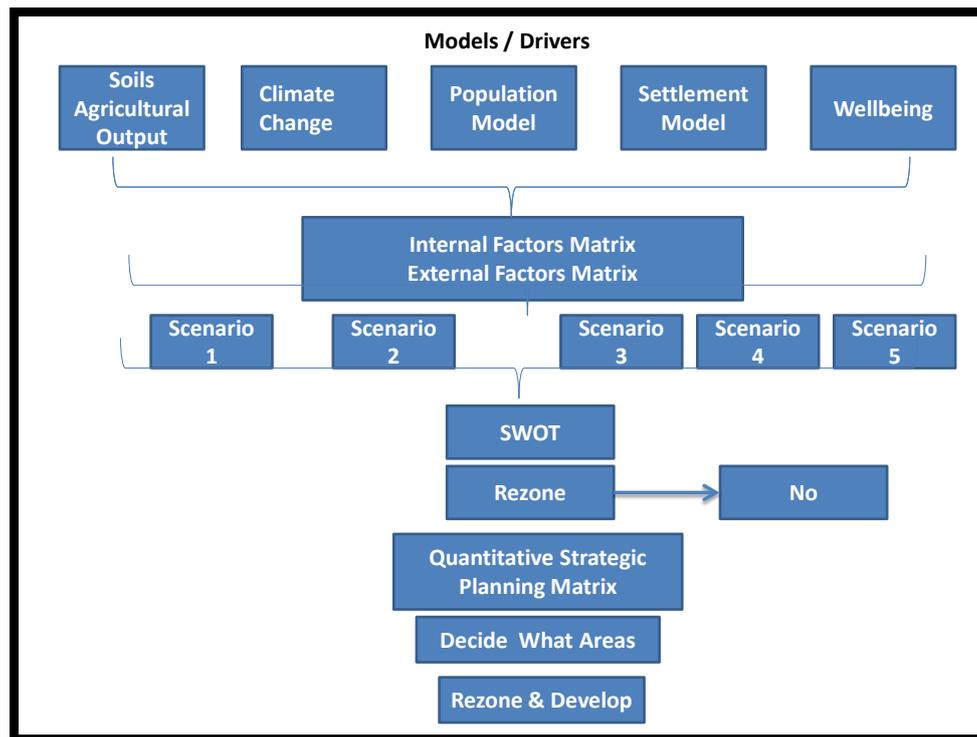


Figure 2: Schematic of Land Use Model. Source:(Herron, M 2012).

The analyses listed below indicate the area and type of specialization that were undertaken during this research.

- **GIS Analysis:** Load the study area current cadastre, demographic, environmental and climate data and do the analysis. Use population and climate projections and model those out to 2050; Undertake the following analyses on the projected following categories
- **Population:** Population Density; Employment and Employment Density; Composite residential/non-residential population
- **Land Use:** Single-family units; Multifamily units; non-residential density; retail square feet ; office square feet, other non-residential square feet; average lot size; open space use mix (residential vs. non-residential); open space by type (spot parks, regional parks, trails, preserves); residential density; retail/service floor space
- **Environment and Climate Change:** Buildings in 100-year floodplain; Buildings in 50-year floodplain; Buildings in environmentally sensitive areas; Open space percentage.
- **Transportation:** Vehicle miles travelled (VMT); VMT per capita; Sidewalk ratio; Bicycle trail density; Walkability; Households served by transit; Average distance to transit (residential)
- The statistical methodology and software to be used in the analysis includes:
 - **Descriptive Statistics:** Frequencies; Cross tabulations
 - **Compare Means:** T Test; One way ANOVA
 - **Correlation:** Bivariate
 - **Regression:** Linear
 - **Non Parametric Test:** Chi-square analysis

Introduction to Warrnambool

Warrnambool like the majority of early settlements in colonial Australia was developed using the colonial/imperial grid model. This planning model contained eight key features (Home 1997) including:

- A policy of deliberate urbanization or town planning, in preference to dispersed settlement;
- Land rights allocated in a combination of town, suburban and country lots;
- The town planned and laid out in advance of settlement;
- Wide streets laid out in geometric, usually grid form, on an area of one square mile;
- Public squares;
- Standard-sized rectangular plots, spacious in comparison with those in British towns of the time;
- Some plots reserved for public purposes; and
- A physical distinction between town and country usually by a common land or an encircling green belt

Warrnambool was first incorporated as a municipality in 1855 and by 1863 became a shire and in 1883 graduated to town status. The early development of Warrnambool can be explained using several planning theories. These include the Concentric Theory which describes community growth patterns in terms of five concentric rings, the Radial Sector Theory which provides an explanation of how Warrnambool developed following the major transport routes and Multi Nuclei Theory which provides any understanding into how and why Warrnambool growth can be attributed to the effects of several locations in the Warrnambool area.

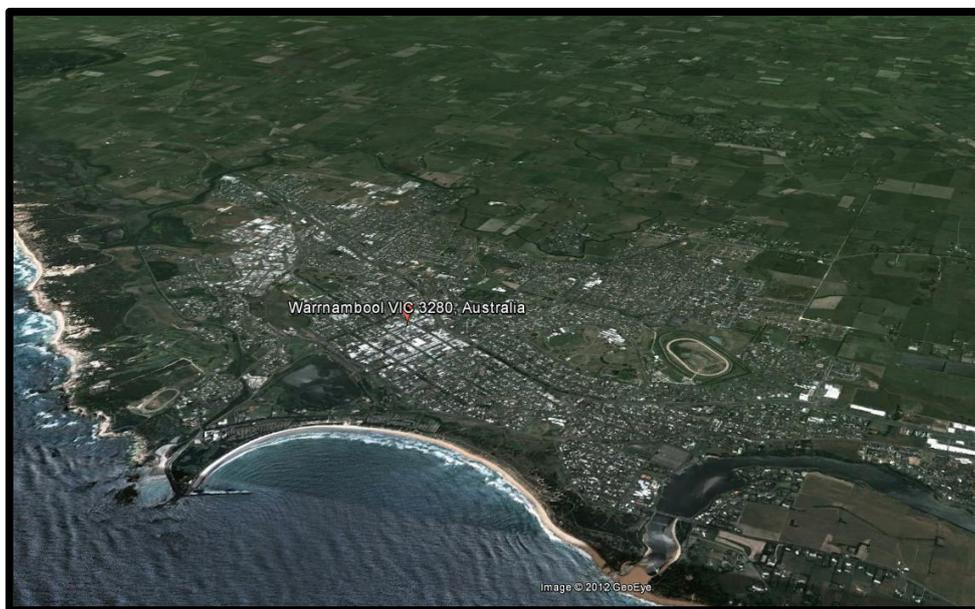


Figure 3: City of Warrnambool aerial view. Source: (Google Earth 2012),

Warrnambool's structural and organizational changes have continued from 1883 to the present. Warrnambool reached city status in 1918 expanding its boundaries though the 1950's into the 1970's.

The urban parts of the Shire of Warrnambool in 1918 became the City of Warrnambool whilst the rural portions remained in the Shire of Warrnambool. The City of Warrnambool grew in size by annexing land from the Shire of Warrnambool in 1955 and in 1978. The present City of Warrnambool with current boundaries officially came into being on September 1994. Warrnambool is the largest settlement in South West Victoria with a population of 32,000. Warrnambool is the administrative, educational and commercial centre for South West Victoria.

Historic Demography

The population of Warrnambool has grown at a steady rate since its inception. For the purpose of this discussion 1947 has been selected as the first year of demographic analysis. This year selected as it was the first modern census conducted after WW II.

Table 1 shows the Warrnambool Population Profiles from 1947 to 2010. Double digit population growth occurred during the following time periods 1961-1966; 1966 -1971 and 1996-2001 as illustrated by Table 1. As indicated in Table 1 the 2010 population of Warrnambool (ABS Census 2010) was 32,028 while the population of Australia was 21,507,719. From 1947 to 2010 Australia's population grew 183.76 % (13,928,356 / 7,579,358) and Warrnambool grew by 221.79 % (22035 / 9993) indicating that Warrnambool excided the 63 year Australian population growth pattern (1947 to 2010). The Warrnambool growth rate was similar o other coastal regions in Australia.

To highlight the changing demographic pattern from 1947 through 2010 the census was re-arranged into 4 age categories (0-14; 25-54; 45+ and 65+).

The rationale for recoding the data into the four nominated age categories was based on the premise the four age categories have a particular importance to current and future land use planning.

The under 15 years of age category represents current and future school children and this group also represents the potential demand for day care and education facilities.

The second group is 25- 54 age group. This group represents the largest group of potential and current home owners and rate payers for local government. This group traditionally pays the majority of local government rates and fees.

The third group is the 45 years of age and older group. This group represents the long term demand for old age services.

The fourth group is the 65 year of age and older group which represents the current and immediate future demand for old age community services such as meals on wheels, senior citizens housing, home nursing.

Table 1: Australia/Warrnambool Population 1947-2010. Source:(Australian Bureau of Statistics 1954, 1966, 1971, 1976, 1981, 1986, 1991, 1996; Australian Bureau of Statistics 1947, 1961, 2000, 2006, 2010, 2012).

Year	Australia	Population change between census	% change between census	Warrnambool	Population change between census	% change between census
1947	7579358	0	0	9993	0	0
1954	8986530	1407172	18.56	10850	857	9%
1961	10508186	1521656	16.93	15762	4912	45%
1966	11550462	1042276	9.99	17499	1737	11%
1971	12755638	1205176	10.43	18684	1185	7%
1976	13548445	792802	6.21	20195	1511	8%
1981	14576330	1027885	7.58	21414	1219	6%
1986	15602156	1025826	7.03	22868	1454	7%
1991	16850540	1248384	8.00	23946	1078	5%
1996	17892423	1041883	6.18	26777	2831	12%
2001	18972350	1079927	6.03	26842	65	0%
2006	19853288	882938	4.65	28149	1307	5%
2010	21507719	1652431	8.32	32028	3879	13.7%
		13,928,356			22,035	

Table 2: Australia /Warrnambool Population in Four Age Classes 1947-2010. Source:(Australian Bureau of Statistics 1947, 2010).

Age Class	Australia 1947	Australia 2010	Persons Increased	% Change	W'bool 1947	W'bool 2010	Persons Increase	% Change
0-14	1,899,053	4,144,021	2,244,968	118.82%	2527	5736	3209	126.99%
25-54	3,117,414	8,981,581	5,864,167	188.11%	3994	11086	7092	177.57%
45+	2,202,937	8,467,191	6,264,254	284.36%	2916	12243	9327	319.86%
65+	604,897	3,012,283	2,407,386	397.98%	920	6937	6017	654.02%

As shown in Table 2 the growth rate for two Warrnambool age groups i.e. (45+ and 65+) are significantly higher than their Australian counterparts. Warrnambool has become a retirement destination, with forecasts indicating that this trend for these population segments (45+ and 65+) will continue to increase in overall number and percentage.

Historic Land Use Planning

The City of Warrnambool and its surrounding area represents an area of 43.5 Square Kilometres. The Victorian Department of Primary Industry has identified 61 distinct land use activities or categories with in Warrnambool ranging from residential developments, industrial sites, commercial premises, factories, universities sites, hospitals and infrastructure/transportation facilities. To regulate this activity and development Warrnambool has at its disposal 25 planning zones and 488 planning overlays. Warrnambool has been a centre for manufacturing (textiles), primary industry (dairying

and food processing), service industries (government services), health and education (primary, secondary and tertiary). Changes in employment patterns have resulted in changes in land use.

Warrnambool has seen its land dedicated to open space i.e. parkland (municipal parks; gardens; and reserves/sporting reserves) decrease with Warrnambool having a total of 1572.54 HA for the city which represents 0.04 HA per resident. This figure when compared to other South West settlements such as Portland which has 229.78 HA (i.e. 0.0229 HA per resident) or Port Fairy which has 363.86HA (i.e.0.129 HA per resident) indicates that Warrnambool lies midpoint between the Port Fairy and Portland allocation of public space.

Warrnambool has a land budget which contains a 10 year supply of vacant land for future residential, commercial or industrial expansion. For the Period 2006 through 2011 (Table 3) 1,223 private dwelling were constructed in Warrnambool

Table 3: Dwelling Structure in Warrnambool 2006- 2011. Source:(City of Warrnambool 2010).

Dwelling structure							
Warrnambool City	2011			2006			Change
Dwelling type	Number	%	Regional VIC	Number	%	Regional VIC	2006 to 2011
Separate house	11,150	80.0	87.8	9,887	77.8	87.8	+1,263
Medium density	2,468	17.7	10.4	2,501	19.7	10.3	-33
High density	130	0.9	0.3	88	0.7	0.2	+42
Caravans, cabin, houseboat	114	0.8	1.0	82	0.6	1.1	+32
Other	69	0.5	0.4	96	0.8	0.6	-27
Not stated	0	0.0	0.1	54	0.4	0.0	-54
Total Private Dwellings	13,931	100.	100.0	12,708	100.	100.0	+1,223

Figure 2 shows the growth in the Warrnambool residential housing market from 2006 through 2011.

The preferred residential option in Warrnambool is the separate house which played the dominant role in residential expansion form 2006 through 2011.

The Warrnambool land budget for the period 2011 through 2016 predicts a deficiency of 847 lots. This figure represents the number of new lots that need to be created to meet the additional residential demand.

Historic Economics Development Patterns

The employment and industrial characteristics of South West Victoria have been recorded by the Australian government since 1901. The employment characteristics and pattern of a region reflect the land use activities which are conducted in the area.

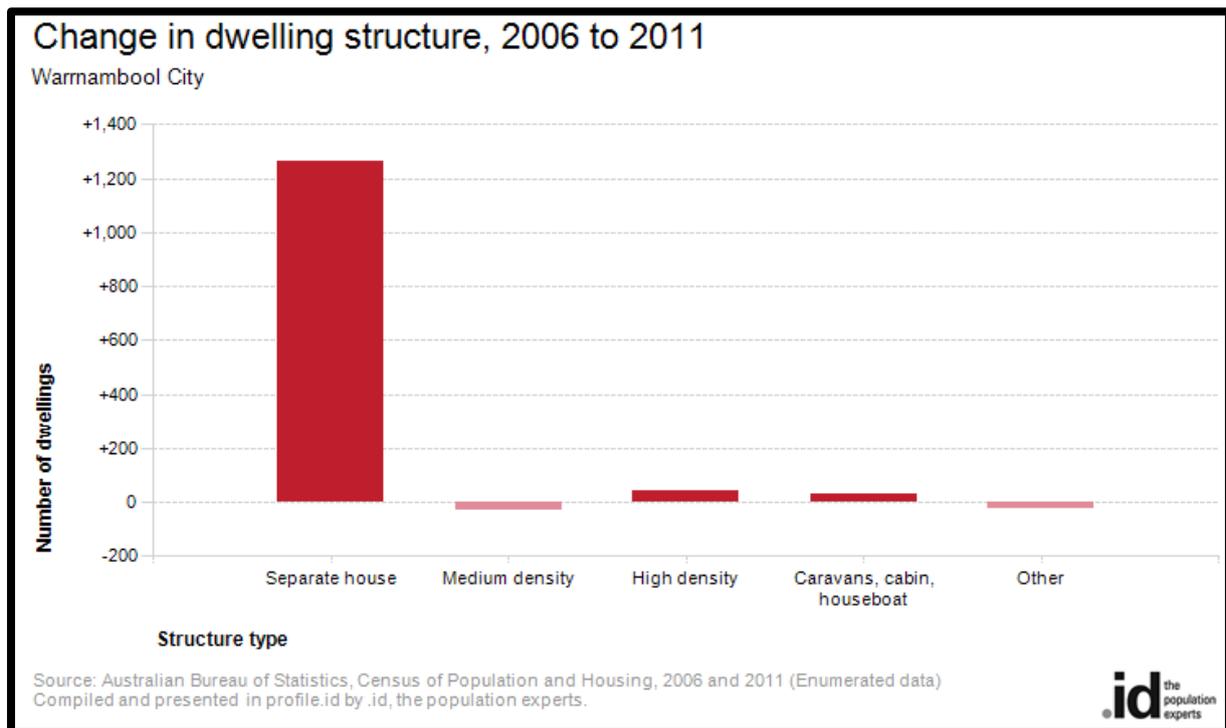


Figure 1: Growth Pattern in Warrnambool Residential Dwelling Market 2006-2011. Source:(ID Consulting 2013).

In 1947 The ABS has 12 categories (i.e.) Primary Production; (7 sub-classes) Mining; Manufacturing (5 sub-classes); Building and Construction (7 sub-classes); Transport; Communication; Finance and Property; Commerce; Public Authority; Amusement / Hotels Personal services etc; and two categories for industry which are not contained in the preceding nine categories.

The 2010 census has 20 categories (i.e.) Agriculture, Forestry and Fishing; Mining; Manufacturing; Electricity, Gas, Water and Water Services; Construction; Wholesale Trade; Retail Trade; Accommodation and Food Service; Transport; Information Media and Telecommunication; Financial and Insurance Services; Rental Hiring and Insurance Services; Professional, Scientific and Technical Services; Administrative and Support Services; Public Administration and Safety; Education and Training; Health Care and Social Assistance; Arts and Recreation Services; Other Services and one category which consolidates all non identified industrial or service categories.)

The different number of industrial and service categories i.e. 12 in 1947 and 20 in 2010 makes a comparative analysis difficult. To do a comparative analysis between 1947 though 2010 nine categories from the 2010 census were transposed and included into the most likely 1947 categories. The transpositions were:

2010	To 1947
Education and training	Public authority (N.E.I.) and Professional Activities
Public Safety and Safety	Public authority (N.E.I.) and Professional Activities
Health Care and Social Assistance	Public authority (N.E.I.) and Professional Activities
Professional , Scientific and Technical Services	Public authority (N.E.I.) and Professional Activities
Electricity Gas, Water and Water Services	Manufacturing
Retail & Wholesale Services	Commerce
Rental hiring	Commerce
Arts& Recreational services	Amusement, Hotels, Personal Services
Administrative & Support Services	Amusement, Hotels, Personal Services

Table 4 is a comparison of labour employment rates over thirteen industry categories. The results include total and percentage increases in 12 employment categories including primary production in Warrnambool. As stated earlier Warrnambool is an agricultural centre and the rise in employment is contrasted with the net reduction in Australia for workers in primary industry.

In 1947 the Warrnambool area had a 27.0 % female labour participation rate (1134 /4198) as opposed to the 1947 Victorian female labour participation rate of 18% (i.e. 217,425 out of a working population of 1,207,830). The overall Victorian female participation in the labour force recorded an annual 6.99% growth rate over the 63 year period (1947-2010).

In 1947, the overall Australian female labour participation rate was 22.41% (717,132 out of a working population of 3,200,351). The overall Australian female participation in the labour force recorded an annual 8.79% growth rate over the 63 year period (1947-2010).

The 2010 overall female participation rate for study Warrnambool is 47.15% of the labour force as compared with 46.65% for Victoria and 46.64% for Australia.

The employment category with the great growth in employee numbers and percentage was the Public authority and Professional Activities sector.

Table 4: Warrnambool Employment Classes 1947-2010. Source:(Australian Bureau of Statistics 1947, 2010).

	1947	2010	Dif	%	1947	2010	Diff	%
	Australia	Australia			W'bool	W'bool		
Primary Production	498,019	249,829	-248,190	-49.84%	142	263	121	85.21%
Mining	54,391	176,562	122,171	224.62%	3	55	52	1733.33%
Manufacturing	829,800	1,018,440	188,640	22.73%	1388	1587	199	14.34%
Building and Construction	232,433	828,910	596,477	256.62%	409	1195	786	192.18%
Transportation and Storage	246,376	479,182	232,806	94.49%	246	495	249	101.22%
Communications	49,191	178,189	128,998	262.24%	58	166	108	186.21%
Finance and Property	73,711	536,204	462,493	627.44%	108	483	375	347.22%
Commerce	405,519	1,461,111	1,055,592	260.31%	5015	2888	-2127	-42.41%
Public Authority and Professional Activities	429,811	3,543,619	3,113,808	724.46%	400	4561	4161	1040.25%
Amusement, hotels, cafes Personal Services	225,566	974,117	748,551	331.85%	406	1236	830	204.43%
Other and Inadequately Defined Industries	108,175	378,277	270,102	249.69%	123	475	352	286.18%
Industry not Stated	124,439	233,885	109,446	87.95%	211	317	106	50.24%
Persons not in Work Force			0			0	0	
Total	3,277,431	10,058,325	6,780,894	206.90%	8509	13,721	5212	61.25%

The economic growth of the study area was subjected to a Shift Share Analysis (Barff, 2008). Shift Share analysis decomposes employment growth (or decline) in a region over a given time period into three components:

1. an Australian growth effect, which is that part of the change in total employment in the study area ascribed to the rate of growth of employment in Australia as a whole,
2. an industry mix effect, which is the amount of change the study area would have experienced had each of its industries grown at the Australian rate, less the Australian growth effect, and
3. a regional shift, which is the difference between the actual change in employment and the employment change to be expected if each industrial sector grew at the Australian rate.

The mathematical formula to describe Shift Share analysis is (Source Wikipedia 2013):

$$e_i^{t+n} - e_i^t = \text{share change} + \text{mix change} + \text{shift change}$$

$$e_i^{t+n} - e_i^t = e_i^t \left[\frac{E^{t+n}}{E^t} - 1 \right] + e_i^t \left[\frac{E_i^{t+n}}{E_i^t} - \frac{E^{t+n}}{E^t} \right] + e_i^t \left[\frac{e_i^{t+n}}{e_i^t} - \frac{E_i^{t+n}}{E_i^t} \right]$$

The same twenty industries were compared from 2000 through 2010. Table 5 shows the employment growth by major industry group in the study area from 2000 through 2010. Under the heading Actual Growth are two columns that report percentage and net change in total number of jobs for each industry category. Over the period 2000-2010 a net total of 1409 jobs were added to the study area economy, amounting to an increase of 11.44%. They show the changes in the study area economy that would have occurred over 2000-2010 had each industry grown at the same rate

as its Australian counterpart. The standardized “percent” growth column identifies the growth rate for each industry on an Australian basis, while the standardized “net” growth simulates the result net changes in employment in the study area. The data not only allows one to directly compare the study area with Australian industry employment growth rates, they also translate Australian industry growth rates into hypothetically comparable changes in employment in the study area. (Smith, 2009)

Standardized Employment for 2010 is the resulting level of employment in each industry for the study area had each grown at the same rate as its Australia counterpart since 2000. This presents a hypothetical profile of the industry composition and level of local employment that would have occurred had the study area directly followed Australian industry trends. (Smith, 2009)

The Australian growth component in the first source of change is the growth or contraction in the Australian economy, During the time period 2000 to 2010, Australia grew by 21.2% (i.e. Australia employment in 2001 and 2010 was 8.298 million and 10.058 million, respectively. The growth rate is therefore $(10.058 - 8.298) / 8.298 = 21.2\%$.

This growth rate is listed in Table 5 as the Australian growth component. The effect of the Australian growth component is felt most acutely during the peaks and valleys of the business cycle, i.e. during recessions and boom times.

The Industrial Mix Component which is the second aspect of Shift Share analysis provides an insight into these growing sectors. This component is found by calculating the percent growth rate for an economic sector at the Australian level and subtracting from it the Australian growth component. The industrial mix component measures how well an industry has grown, net of effects from the business cycle.

The third and final component of Shift Share Analysis is called the Regional Shift. It is the remaining employment change that is left over after accounting for the Australian and industrial mix components. If a sector’s competitive share is positive, then the sector has a local advantage in promoting employment growth

Results for the study area may be highlighted as the following:

Study Area Growth =	Australian Growth +	Industrial Mix -	Regional Shift
1409 jobs	2611 jobs	-969 jobs	-232 jobs

The industries in the study area that are shown to have a local advantage are:

▪ Construction	▪ Electricity, gas water & waste services	▪ Transport
▪ Health Care	▪ Accommodation & food Services	▪ Education
▪ Rental	▪ Public Administration	▪ Technical Services

Table 5: Warrnambool Shift Sear Analysis 2001-2010. Source:(Australian Bureau of Statistics 2000, 2010).

	2001-2010	Warrnambool		Warrnambool		Australia		Australia		Warrnambool		Total	Expected	Differential (local)	Industry mix			
	Australian Growth Rate	Employment	Employment	Employment	Employment	Employment	Employment	Employment	Employment	Employment	Employment	Employment	Employment	Employment	Effect	effect		
		2001	2010	Change %	2001	2010	Change %	2001	2010	Change %	2001	2010	Change %	2001	2010	Change %	2001	2010
Agriculture, forestry & fishing	21.20%	354	263	-91	-25.71%	330782	249828	-80954	-24.47%	429	-166	267	-4	-162				
Mining	21.20%	12	55	43	358.33%	75178	176563	101385	134.86%	15	40	28	27	14				
Manufacturing	21.20%	1577	1385	-192	-12.18%	1010179	902829	-107350	-10.63%	1911	-526	1409	-24	-502				
Electricity, gas, water & waste services	21.20%	93	202	109	117.20%	60692	115611	54919	90.49%	113	89	177	25	64				
Construction	21.20%	918	1196	278	30.28%	558582	828910	270328	48.40%	1113	83	1362	-166	250				
Wholesale trade	21.20%	644	527	-117	-18.17%	437134	403801	-33333	-7.63%	781	-254	595	-68	-186				
Retail trade	21.20%	2341	1878	-463	-19.78%	1211332	1057310	-154022	-12.72%	2837	-959	2043	-165	-794				
Accommodation & food services	21.20%	755	1236	481	63.71%	410589	650397	239808	58.41%	915	321	1196	40	281				
Transport, postal & warehousing	21.20%	355	495	140	39.44%	355874	479181	123307	34.65%	430	65	478	17	48				
Information media & telecommunications	21.20%	113	166	53	46.90%	148480	178190	29710	20.01%	137	29	136	30	-1				
Financial & insurance services	21.20%	294	310	16	5.44%	312396	377352	64956	20.79%	356	-46	355	-45	-1				
Rental, hiring & real estate services	21.20%	290	173	-117	-40.34%	120556	158853	38297	31.77%	351	-178	382	-209	31				
Professional, scientific & technical services	21.20%	291	528	237	81.44%	554055	730062	176007	31.77%	353	175	383	145	31				
Administrative & support services	21.20%	291	362	71	24.40%	245721	323779	78058	31.77%	353	9	383	-21	31				
Public administration & safety	21.20%	346	684	338	97.69%	369855	689931	320076	86.54%	419	265	645	39	226				
Education and training	21.20%	1082	1268	186	17.19%	595398	804418	209020	35.11%	1311	-43	1462	-194	150				
Health care & social assistance	21.20%	1613	2081	468	29.01%	806171	1167634	361463	44.84%	1955	126	2336	-255	381				
Arts & recreation services	21.20%	245	209	-36	-14.69%	202456	151574	-50882	-25.13%	297	-88	183	26	-114				
Other services	21.20%	433	475	42	9.70%	300658	378217	77559	25.80%	525	-50	545	-70	20				
Inadequately described	21.20%	265	228	-37	-13.96%	192519	233885	41366	21.49%	321	-93	322	-94	1				
Total		12312	13721	1409	11.44%	8298607	10058325	1759718	21.20%	14922	-1201	14923	-969	-232				

Part 2 How Sustainable is Warrnambool

A series of scenarios was developed to test the how sustainable the Warrnambool is. The scenarios involved:

- Forecasting future population growth and its impact on land and water supply, urban and open space density;
- The resulting increase or decrease in CO2 emissions generated by human activity; and
- Forecasting the changing economic and employment environment.

Scenario 1

Population increases

The state government has developed population forecasts for the period 2011 through to 2031 (i.e. 2011, 2016, 2021, 2026 and 2031).

Table 6: Forecast Population increases for Warrnambool. Source:(Victorian Department of Planning and Community Development 2012).

Town	Era	Forecast population increase	Year	Total Population	Increase
Warrnambool	2011-2016	8.17%	2016	36,988	2795
	2016-2021	6.56%	2021	39,416	2428
	2021-2026	5.90%	2026	41,740	2324
	2026-2031	5.26%	2031	43,934	2194

Land use and future land requirements

The Warrnambool land budget contains a 10 year supply of vacant land for future residential, commercial or industrial expansion. Table 3 indicates the number current of vacant lots per city; the number of lots needed to house the expected increase in population by area and the number of additional lots that will be required by 2031.

Table 7: Land Budget for expected housing growth. Source:(Herron 2012; Herron Murray 2013).

Location	Era	Expected Households	Lots Required for increased population	Surplus or Deficit of lots	Number of new lots required or created
Warrnambool	2011-2016	14,664	1285	Deficit	847
	2016-2021	15,904	1240	Deficit	2087
	2021-2026	17,063	1159	Deficit	3246
	2026-2031	18,158	1090	Deficit	4336

Warrnambool Sustainability

As shown in Table 3 Warrnambool has a chronic residential land shortage needing a predicted 4,400 lots to meet the expected population increase by 2031. To resolve this issue Warrnambool has several options at its disposal:

1. Developing more residential land by rezoning the last agricultural land in the city;
2. Decreasing lot size and increasing urban density; and/or
3. Working with the surrounding municipality to co-develop new residential areas adjoining Warrnambool and Port Fairy

Warrnambool is not sustainable in its current form. Residential density will increase from 913 individuals per square kilometre to 1253.82 in 2031 while open space density will decrease from 0.04 Ha per individual to 0.0346 Ha per individual. The density issue will need to take into consideration that the fastest growing segment in the Warrnambool population the 45+ and 65+ age groups.

Warrnambool consumed 475 ML of its total water allotment of 750ML in 2010 (i.e. 62%). The current water consumption per dwelling is 166 kilolitres per dwelling per year, using this figure and extrapolating it forward to 2031 water consumption would go up to 3,014,228 Kiloliters or 3014.228

ML which is over four times the entire current water allotment. This factor again brings into consideration whether or not Warrnambool is sustainable.

There is a solution Warrnambool currently has 4674 ML of recycled water at its disposal and to date has used not one drop of this resource, Warrnambool uses only 8.70% of its total water resources.

The Warrnambool Public Transport and bus system has the ability to expand to carry additional passenger and additional routes.

The Victorian State government believes the current and future economic growth of Warrnambool will

“focus on key industries where new investment is anticipated including dairying, energy and tourism with significant opportunities for further value-adding in major industries.”

“By 2031 the largest sectors in the economy are projected to be healthcare, agriculture, manufacturing and construction. Other high growth sectors will include retail trade, financial, professional and scientific services and accommodation. This highlights a shift from primary production to a more service-based economy and will require workforce changes and services to support skills development and productivity improvements. Employment in manufacturing is expected to decline between 2011 and 2031, with healthcare, retail trade, accommodation and food being the largest employers by 2031.” (Victorian Department of Planning and Community Development 2012, 2013)

Limiting this scenario is the ability to manage competing demands for agricultural land, particularly in the corridor from Warrnambool to Portland, including limiting urban encroachment into highly productive agricultural areas. The reduction of agricultural land for housing will impact on future agricultural production and overall economic returns.

With the forecast expansion of Warrnambool population CO2 emissions have been forecast to double by 2050. This factor will be compounded by the effects of Climate Change on the Warrnambool coastline and land scape. Warrnambool has developed an environmental strategy that focuses on coastal management, waterways and wetlands, pest plants and animals, flora and fauna protection, parks, reserves and public open space development , community awareness and involvement, water and energy efficiency, recycling and accountability. The question is will this program be sufficient to ensure that Warrnambool will still be sustainable and as liveable as it is today?

Summary

The continued sustainability of the three cities hinges on factors which are controlled by the cities themselves.

In Warrnambool’s case higher density limits and the use recycled water will ensure a sustainable future. For Port Fairy the major issue is flooding and coastal erosion both of which can be mitigated through coastal management.

Portland faces issues of economic sustainability and is the most vulnerable of the three settlements. Portland must foster and develop other industries beside the smelter and the economic exploitation of natural resources for its future prosperity.

The proposed water redevelopments will add to the landscape diversity for each of the three cities. The question of whether these developments will assist in improving the sustainability of these communities is still undecided

Appendix A: Inventory of Key Coastal Planning Dissertations

Abeyirigunawardena, DS 2010, 'Climate Variability and Change Impacts on Coastal Environmental Variables in British Columbia Canada', PhD thesis, University of Victoria.

Ahmad, SR 2009, 'GIS Based Analysis and Modelling with Empirical and Remotely-Sensed Data on Coastline Advance and Retreat ', PhD thesis, University of Windsor.

Alkema, R 2010, 'The rising tide: Adaptation to sea-level rise in Charlottetown, Prince Edward Island', Msc thesis, University of Guelph.

Allen, JS 2005, 'Policy and methodological implications of a coastal urban growth prediction model', PhD thesis, Clemson University.

Baccardax, AD 2010, 'Incorporating concerns of coastal stakeholders in planning and management: The case of St. Margaret's Bay', MA thesis, Dalhousie University

Batish, S 2010, 'Use of Landsat for Managing Coastal Ecosystems of the USVI ', PhD thesis, Ohio State University.

Belfiore, S 2005, ' Using Indicators for Improving the Performance of Integrated Coastal Management Efforts towards a Common Frameworks ', PhD thesis, University of Delaware.

Berke, PR 1981, 'Shoreline Resources Planning in the United States ', PhD thesis, Texas A & M University.

Bernhardt, SP 2010, 'Evaluating Florida's Coastal Protected Areas: A Model for coastal Management Plan Evaluation ', PhD thesis, Texas A & M University.

Charles, JD 2005, 'Perspectives on integrated coastal management in Halifax Regional Municipality', MA thesis, Dalhousie University.

Davis, B 2003, 'Area-based management frameworks in the United States coastal zone', PhD thesis, University of Rhode Island

Dos Santos Azevedo, MA 2000, 'A decision support system for Brevard County's barrier island system', PhD thesis, Florida Institute of Technology

Ex, L 2010, 'The State of Integrated Open Space Planning towards Landscape Integrity', MA thesis, Utah State University.

Gardiner, PC 1974, 'The Application of Decision Technology and Monte Carlo Simulation to Multiple Objective Policy Making A case in California Coastal zone Management', PhD thesis, USC.

Gray, AC 2009, 'Assessing coastal evolution by using GIS and remote sensing to model shoreline changes in Galveston over time and intense storm events', Msc thesis, Stephen F Austin University

Hardy, MH 2001, 'Simplified Integrated Transportation and Land Use Modelling to Support Metropolitan Planning Decisions: An Application and Assessment', PhD thesis, George Mason University.

Hart, DA 2000, 'Building a horizontally and vertically integrated coastal GIS using local government spatial data the case of coastal erosion hazards of the Lake Michigan coast of Wisconsin', PhD thesis, University of Wisconsin.

Hundley, CC 2008, 'A Comparative Assessment of Shoreline Change Policy Options in the United States ', PhD thesis, Clemson University.

Kaya, LG 2006, 'Critical Barriers to Rational Planning Processes for the Coastal Zone Management: the Case Study of Antalya, Turkey', PhD thesis, State University of New York

Kudu, R 2009, 'Multi-objective optimization model for macroscopic land allocation', PhD thesis, University of Colorado / Denver

Loucks, LA 2005, 'Coastal community based decision-making: Values for sustainable coastal zone management', MA thesis, St, Marys University.

Lovelace, PS 209, 'Making decisions in coastal ecosystems', PhD thesis, East Carolina University.

Lu, KS 2001, 'A parcel GIS-based multinomial logistic model for destination land use prediction', Clemson University.

Moss, ML 1974, 'Urban Coastal Resource Management: Public Ownership and Leasing as a Development ', PhD thesis, USC.

Norris-Raynbird, C 2006, ' Capacity Building: An Inquiry into the Local Coastal Program Component of Coastal Zone Management in Louisiana ', PhD thesis, Texas A & M University

Norton, RK 2001, 'Consensus and commitment: Reconciling state and local growth management goals for North Carolina's coastal commons', PhD thesis, University of North Carolina.

Pettit, C 2002, 'Land Use Planning Scenarios For Urban Growth: A Case Study Approach ', PhD thesis, University of Queensland.

Portman, ME 2007, 'From land to sea: The application of land protection tools to the marine environment', PhD thesis, University of Massachusetts

Ru, Y 2001, 'Web-based GIS for coastal zone management in New Brunswick', Msc thesis, University of New Brunswick.

Soule, J 2010, 'An Analysis of Stakeholder Preferences on a Complex Waterfront: Land Uses and Planning Processes in Chelsea, MA ', PhD thesis, Tufts University

Sylver, SM 2009, 'Getting it Right: Planning to Protect Cape Cod's Sensitive Coastal Resources ', MA thesis, Tufts University

Wood, IL 2009, 'Planning for Coastal Community Resiliency: A Case Study Analysis of South Carolina Beachfront Communities ', MA thesis, Clemson University.

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Looking From Within, What Comes Out?

An indigenous perspective on community and urbanism

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While many Australian indigenous communities may be associated with western desert regions or remote country towns, this paper explores the notion(s) of indigenous communities in relation to the inner city.

Given the potential nature and range of assumptions about communities in general, the paper will focus on three specific aspects of indigenous 'involvement', the first of which addresses the overall notion of *what constitutes community* and thus what constitutes community *in relation to indigenous populations*? On the basis of this, and given that communities in general may be understood and/or perceived in a range of different ways, the second investigates *how indigenous communities are often regarded as being enclosed or self-aggregated* – almost as if there is a negative perspective from the outside looking in – and thus addresses the question *why might it be assumed that these people have nothing to offer*? In opposition to this, then, and given the potentially positive nature of indigenous communities, the third, and perhaps most important section of the paper, involves a close examination of a particular urban indigenous population, that of Redfern in NSW, in order to advance the view that such a community might engender issues, qualities and/or values that can be utilised *to enhance other and different communities*.

This paper therefore addresses the idea of indigenous communities from two quite different perspectives. The first interrogates the negative approach of the outsiders looking at indigenous communities and, in a sense, mentally pushing them away, as if to say 'they don't have anything to do with me', while the second, and more positive approach, advances the proposition that *there are indeed different and additional community elements within indigenous populations that might seriously enhance the nature of 'ordinary' communities*.

Keywords: Enhancing communities, Redfern, urban indigenous environments, notion(s) of community

Introduction

While many Australian indigenous populations may be associated with remote desert settings or with a variety of country towns, this paper explores the notion(s) of indigenous communities in relation to a specific urban setting, that of Redfern in New South Wales. The current paper will briefly address the idea of indigenous communities from two quite different perspectives. The first interrogates the negative approach of ‘outsiders’ looking at indigenous communities and, in a sense, mentally pushing them away, as if to say ‘they’re essentially different and I have no interest in them’, while the second, and more positive approach, advances the proposition that *there are indeed different and additional community elements within indigenous populations that might seriously enhance the nature of ‘ordinary’ and non-indigenous communities.*

While indigenous populations may be viewed by many either in a negative light, and/or from the supposedly ‘neutral’ perspective that ‘they have nothing to do with me’, why might we assume that these people have nothing to offer? As such this paper raises a number of issues, values or characteristics that, while they might promote disagreement, are considered to be potentially positive or beneficial to these communities.

The information and views within this paper are not, as yet, derived from a large survey or extensive gathering of data, but, instead, from the beginning of an ongoing study that will ultimately comprise a PhD thesis that will explore, in much more detail, a range of issues associated with indigenous populations in inner city areas, ideas of communities, and notions of values and value differences. The information provided within this paper, then, comes from a limited range of authors, but seeks to pose the questions: What is defined as community? What constitutes a community in relation to indigenous populations? How might this notion of indigenous community relate to an urban setting? And how might the specific location of Redfern – or, more particularly, The Block – represent a particular view of (potential) indigenous interaction?

What constitutes community?

As a starting point, then, we might ask how might we begin to define the ambiguous term ‘community’? While many people may talk about community; use the term in common parlance; and nod and agree on what it is, as if its ‘content’ and ‘requirements’ are easy to understand, and essentially problem-free; it becomes clear that it is not something that can simply be defined as one universal ‘context’. Rather, our understanding and interpretation of the term is essentially different depending on time, location and, perhaps most importantly, culture. While this paper cannot explain *all* of the different assumptions and/or agreements and disagreements behind the idea of community, it aims to focus on a particular aspect of this notion that is defined as *a group of people sharing local issues and bounded within a real physical space.*

Yet the issue of physical space is of significance insofar as it may suggest two quite different viewpoints. From one perspective it might be suggested that, while different locations and/or different suburbs are 'inevitably' different on the basis of, for example, higher or lower socio-economic determinants, and thus perhaps physical planning and 'higher quality' homes, this does not mean that supposedly 'similar' suburbs necessarily constitute communities comprising identical issues and values. From a second perspective the idea of location in relation to particular 'residents', and the notions of density and/or specific physical and spatial setting within a particular town or suburb can suggest major differences. As will be discussed later, if Redfern has a very small indigenous population, but The Block, a single housing area located within the suburb, has a high concentration of indigenous people and thus a high density; and if the town of Inala, in Queensland, has a significantly higher percentage of indigenous people but a considerably lower density since they are effectively 'spread throughout the town', then what can this tell us about cultural 'representations', notions of potentially dissimilar or even conflicting community values, and lifestyle choice?

At its essence, then, it is about an analysis and understanding of people, issues and physicality, but in relation to a parallel understanding of culture and cultural values. Chance encounters within physical space notwithstanding, this notion of community has to go *beyond* the mere recognition of people. It is only when the relationships are multi-layered, or, as Christopher Alexander suggests in 'A city is not a tree' (1966), a *closed link* of relationships, that this notion of community is what the paper is alluding too.

Yet, while communities are generally taken to be both ongoing and 'sound' in relation to their residents, from a contemporary perspective it might be suggested that many current communities *actually* constitute a *society in withdrawal*, an *erosion of social ties*, increasing *tension*, etc. In many suburbs around Australia, and in many other quasi-Western countries around the world, there is a suggestion of a decline in traditional community values (c.f., for example, Sennet 1992; Buchecker 2005). The considerable forces at play behind this effect – the advent of social media, the modernist 'nuclear' family breaking down family structures, etc. – have been extensively researched. While this may be seen as a negative – or, potentially, a positive – effect, there are consequences that come with this change in contemporary lifestyle, consequences such as alienation and self-withdrawal from the public environment and community in which one lives, and into the privacy and safety of one's home.

At the same time, though, it might be suggested that, since the dawn of mankind, humans have evolved as *social* creatures; we desire contact with the other. But while new technologies go some way to fill this 'social contact gap', it is not enough. As such there are a whole range of side effects relating to social withdrawal, such as mental effects, anxiety, depression, etc. All combine to produce an environment where anonymity, loneliness and, at worst, the early demise of our youthful population through suicide, is the norm. As a March 2013 Australian Bureau of Statistics Report notes:

Whilst the reasons behind [suicide] are unknown, it is likely to be due to a multitude of societal and personal factors including our economic stability and continued emphasis on improving access to mental health early intervention services...However, suicide is still the most common cause of death for young Australians, and is associated with particularly high rates of death for

young men and indigenous people [our emphasis]. The personal costs of suicide for families are enormous. [ABS website.]

Additionally, an environment that produces and reinforces the notion of 'invisible people' – the homeless, the elderly, the disabled, *and our indigenous populations* – means that such people are sidelined, rendered voiceless, and forgotten – or perhaps, more directly, pushed aside!

Indigenous community definition

How might the above notion of community apply to *indigenous* communities? Hunt & Smith's (2007) description of an indigenous community suggests that:

Family identities and relationships to 'country' lie at the heart of Indigenous 'communities of identity'. As one researcher described it, a community 'is a constellation of individuals, families, clans, ceremonial groups and language groups' [our emphasis] (p4).

One theme that becomes clear from this description is the notion of the *extended* family. This sits opposed to the modern singular 'nuclear' family, which dominates family structures in Western society today. Within the indigenous community the idea of family is not simply that of 'conventional' parents or children. Rather, as Larissa Behrendt (1994) explains:

Groups were a family. The concept of a family was different from European families. Some 'aunts' took on the role of mothers and were called the same name as 'mothers'. Similarly some 'uncles' were fathers, and cousins were brothers and sisters. A person's relationship to others would dictate how to treat them and what a person's obligations were to them (p13).

Given this notion, the suggestion might well be *not* that one community is simply different from another – on the basis of the 'separation' between different suburbs, between the wealthy and the non-wealthy, and/or between different migrant groups, for example – but that the indigenous population, en masse, has a different notion of family, hence a different notion of relationships, and hence a very different notion of what constitutes 'community' and what constitutes the idea of 'values'.

An urban indigenous community

What, then, does it mean if we compare the above notion of indigenous communities to the idea of communities in general? While Behrendt identifies herself as an urban aboriginal on the basis of where she lives, at the same time she recognizes – and significantly retains and commits to the notion – that she is a Eualeyai, one of a dispossessed people from their traditional land in the northwest of New South Wales (1994: 55).

At the same time it is not just a connection with the *land of her people's origin* that she retains – the land being an intrinsic part of indigenous 'understanding' and 'values' – but also with the Eualeyai people themselves, which, she explains, constitutes what might be called 'the nature of her being', an important part of who she is. While, in Behrendt's case, she no longer lives in her dispossessed lands, she still maintains a connection with its people, and thus has a dual notion of community – the community of her *background*, and the community of her *current location*. Using Behrendt as an

example it might be noted, then, that the engagement and interaction with the *extant* location and community – in the case of this paper, the inner city area of Redfern – is, at the same time, affected by and reinforced by both the ‘background of the past’ and by the values that are deeply intertwined within this social and cultural background. While many migrant populations within Australia may suggest similar diversities between being ‘here’ and ‘remembering there’, the indigenous connection to the land, to the physical location of contemporary living, and to the diversity of the community values, may well be significantly different.

Of course, the notion that inner city communities are also intrinsically involved with and affected by *non*-indigenous groups may still be persuasive. From Behrendt’s (1994) perspective this has a twofold influence. On the one hand she still maintains certain traditional values in the face of a culture that not only does not understand such values, but, in a sense, expects her to *disregard* them when operating *within* white society. On the other, she notes that:

Non-aboriginal people do not understand how I can operate in the white sphere...and not be overcome by the values of white society. There is an assumption that by operating within white society, the non-traditional society, I lose my traditional values of community, collectivism, strong sense of family, respect for elders, cooperation, reciprocity and cultural pride (p60).

Yet, if Behrendt (1996) prefers, as she says, “collective co-operation and community spirit to the individualism of white people and their emphasis on competition and materialism” (p60), this is not to suggest that such views are universal among inner city indigenous communities, nor that such views can be kept *separate* from integrated – or at least, ‘mixed’ – communities, nor that indigenous views and values should simply be dismissed as being ‘outside of’ or irrelevant to, extant communities.

Redfern as self-enclosed and self-aggregated

At this point let us move on to the ‘idea’ of Redfern; and on to issues of urbanism, planning, and the relation between location and indigenous populations.

Redfern is an inner city suburb of Sydney, and has been in existence for many years. Of the multiple issues that might be analyzed in relation to it, three are of key importance here.

The first of these – long held – is the assumption that Redfern is effectively an indigenous community; that it is potentially dangerous; and that ‘it’s not where I’d go!’

The second is recent information from a 2011 report from the Bureau of Census and Statistics, which establishes that the indigenous population of Redfern constitutes a mere 2.4% of the total population – equivalent to 288 people – with the total population of Redfern at the time being 12,034.

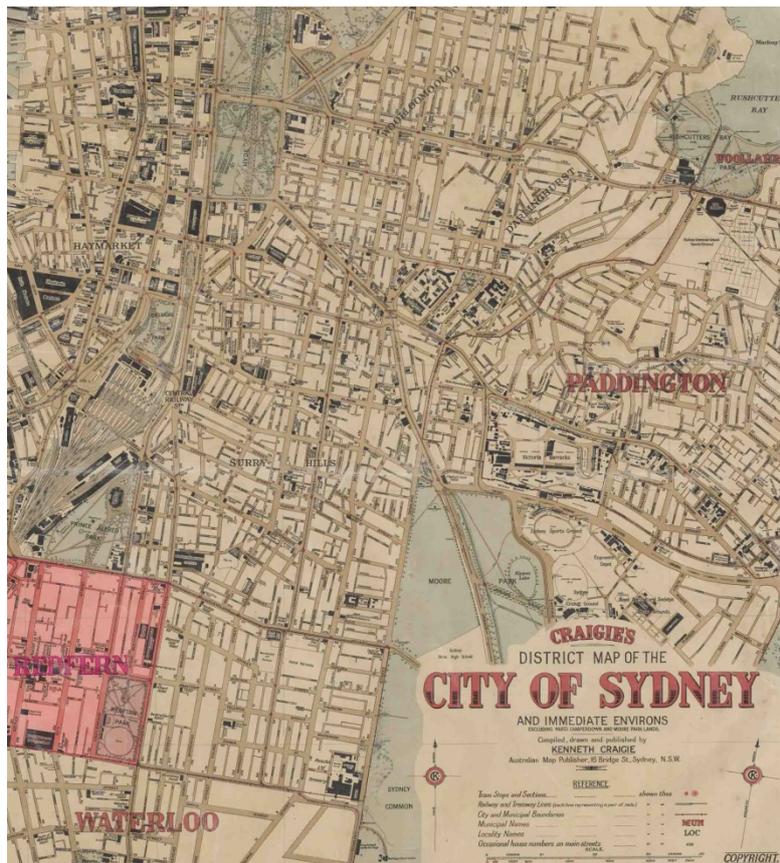


Figure 1: Sydney map 1927.

The relation between the above, however, has two quite different perspectives. While the 2011 ABS report *contradicts* the view of Redfern as an essentially indigenous community – the percentage of the indigenous population is far less than in many ‘normal’ and ‘acceptable’ suburbs – the historical perspective of the 1960s effectively *confirms* the above view, Redfern then having a substantially larger population of approximately 35,000, involving considerably increased density, and comprising about 12,000 indigenous residents. The ongoing assumption that Redfern has *remained* indigenous is thus an intriguing amalgamation of extant history with a lack of contemporary information!

The third point, however, potentially merges the above information: while the 2011 population might well have been reduced to 2.4% of the *total* population, it is suggested that 100% of indigenous residents live in a single location – what has been known for many years as The Block!

Both the negative perspective from the outside, and the effective consolidation of indigenous people within one specific and essentially ‘gated’ area, has had quite diverse effects on the perception of Redfern, and on the notion of community. For many, the perception of Redfern as being ‘substantially indigenous’ – despite the fact that it is not – and thus either ‘somewhere not to go’ or assumptively dangerous, clouds the actual notion of what constitutes the urban environment and the issue of community.

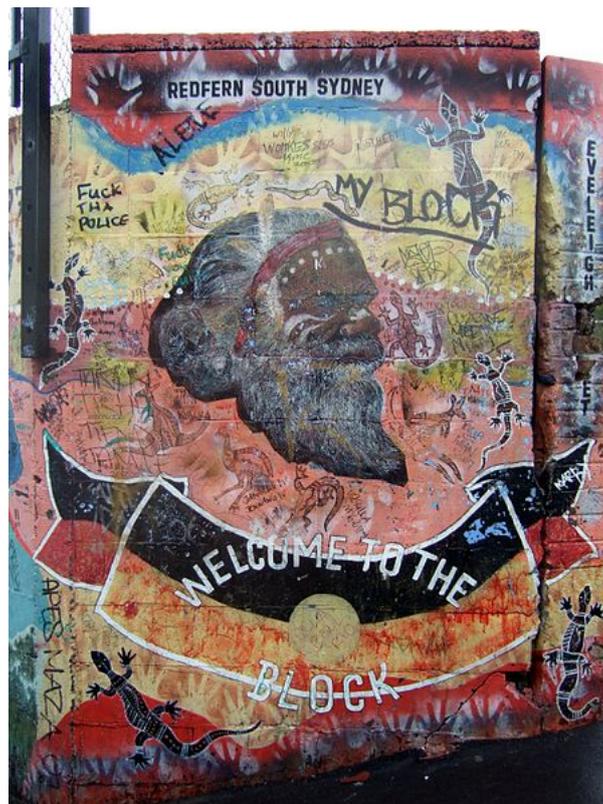


Figure 2: Mural on Eveleigh St Redfern.

Before we talk of the current issues facing Redfern and The Block, however, let us briefly analyse the history of indigenous involvement within that location.

A brief Redfern history

The history of indigenous people in Redfern has been a back-and-forth affair and, in many respects, still is today. Long considered a gathering place for Sydney's indigenous peoples, the Gadigal tribe, due to its close proximity to Shea Creek (now the fully concreted and culverted Alexandria Canal), its nearby wetlands, and its elevated position offering a good view of the surrounding area, pre-dated white settlement and the development of Redfern as a 'mixed' community.

By the 1960s, indigenous peoples from all around Australia, and particularly from nearby La Perouse Aboriginal Reserve, came to Redfern not only pursuing employment in the Eveleigh rail yards – the largest employer of indigenous people at the time – but also seeking refuge from discrimination by being close to relatives and other kin concentrated in and around this location.

At this point Redfern, together with a number of other inner-city indigenous suburbs such as Darlington and Waterloo, began to attract much media attention, predominantly negative, and the areas were considered slum-like as the houses became run down and neglected.

In 1967 the National Referendum gave citizenship rights to Aboriginal people for the first time and, potentially in connection with this, large numbers of indigenous people from rural Queensland and NSW started ‘migrating’ to Redfern. As noted above, the population increased dramatically, serious problems of overcrowding developed, and, perhaps most significantly, many Aboriginals faced discrimination – akin to but different from the discrimination facing them in their previous ‘natural’ environment – when seeking accommodation. Such discrimination culminated in 1968 in a campaign to relocate the large Aboriginal population *away* from inner city areas, with the NSW Department of Housing resettling them to far out suburbs such as Mt Druitt and Campbelltown.



Figure 3: The Aboriginal Housing Company’s Redfern Housing Project underway in 1974 (photograph courtesy National Archives of Australia - Series A8739, Item A1/8/74/74).

A key turning point for the indigenous community in Redfern, however, was the development of community-controlled services, which included the Aboriginal Legal Service, the Aboriginal Medical Service, the Aboriginal Children’s Service, and the Aboriginal Black Theatre House. The development of these services provided the indigenous community of Redfern with a key foothold in the inner city, and was an important moment for a move towards self-determination for many Aboriginal communities nationwide. Most notable of these community-controlled services in respect of this paper was the Aboriginal Housing Company (AHC), which, with funding from the Whitlam government in 1972, purchased six terraces on what is today known as The Block. The aim of AHC and its Housing Project was to provide *a communal living environment run by Aboriginal people*.

In 1975, however, a major backward step for the AHC's project occurred with the dismissal of Whitlam, the election of the Fraser coalition, and the subsequent termination of funding for the project, with The Block once again plunged into disrepair. By the 1980s, however, and staying true to the back-and-forth nature of indigenous peoples in Redfern, renewed support from the Keating Labor government meant that now the AHC had acquired over half of the properties on The Block, and, by 1994, had full ownership of it.

Over recent years, however, Redfern has changed yet again as the forces of inner city property – increased land values, rent prices and council rates, and the general issue of gentrification – have pushed most of Redfern's indigenous population into other inner city suburbs, or further out onto the city's fringe. Apart, that is, from those living in The Block.

Redfern today

Returning now to contemporary Redfern and, despite the previously mentioned statistical evidence that suggests otherwise, the misplaced view that it is a place made up predominantly of aboriginal people, we must ask, why is this so? Why is an essentially tiny portion of the population, albeit filling 100% of The Block, to be considered a negative effect on the suburb?



Figure 4: Demolition of The Block, Redfern – 2011.

While outside the current issues discussed in this paper, three dramatic effects on The Block should be mentioned: first, that the AHC still has ownership of The Block; second, that decisions have been made to demolish the existing fabric; and, third, that The Block will be rebuilt, accommodating indigenous peoples, and comprising the same number of houses as previously, as well as a substantial art gallery. When this will occur, and who will provide the funding, and will it actually go ahead at all, is a matter of some concern, but a significant factor is not that this will simply comprise re-housing, but that – quite deliberately one suggests – it will have a potential future impact on the suburb, and on the city of Sydney itself, and on the art world: a small but important urban and planning proposal.

To return to the paper itself, though: how has indigenous involvement impacted on *the place of Redfern itself*?

While Andrew Benjamin (2013) talks of humans as *placed beings*, in that the very thing that defines us is *place* – i.e. the place in which we *live*, the place which we *come from*, or the place in which we dwell, it might also be suggested that the very opposite is also true, that the place that defines us, is also defined *by* us. In the case of Redfern, and despite a very low percentage of indigenous people today, the suburb is still defined as an indigenous place. This misconception is further reinforced by Spark (2003) when he claims about The Block that “Aboriginal person-place relationships here would seem to be a ‘matter of degree’ rather than absolute...Aboriginal people are struggling to remain in this place to which they are intimately connected” (p34).

At this point some ‘visitors’ or residents may say that they walked past Redfern train station, or past The Block, and had seen some indigenous people. Nothing surprising about this, but the ‘expanded’ idea that such people fill the whole of the suburb is erroneous and, in reality, there is no real reason to assume so. Yet, when told that Redfern is *not* full of indigenous people, ‘outsiders’ may concede this fact, but then go on to say that *it only takes a few aboriginals to make the place ‘dangerous’*. The reality is that Redfern is full of relatively new migrants, and has been for a some time now, and yet the idea that Redfern is an enclosed or self-aggregated indigenous community is still held. This leads to the idea of The Block being seen as a kind of ‘gated community’ – not in terms of wealth, where you may want to close off those from the outside, but rather a dual system which, on one hand, and from an indigenous perspective, says *we are closing off The Block from all those around it*, while, on the other, and from an ‘external’ perspective, suggests that *we are putting the gates around it because we don't want to be involved*.

While this external perspective may be negative – or again perhaps neutral in the sense that *‘these people have nothing to do with me’* – Behrendt claims that this is a type of antagonistic stereotyping prevalent in contemporary Australia and perpetuated by the media – the medium through which most Australians have contact with aboriginal people – and is selective in how it wishes to portray such people. Often indigenous people are thought of as *having problems that only apply to them and not to other cultures*.

Behrendt (1994), however, is very upfront with the negative aspects of indigenous communities, and presents them as things that are quite normal. As she states:

As a community we have our problems. They are well publicized and I do not deny that we have issues related to violence, substance abuse, sexism, racism and homophobia. While noting that these are all problems that have been introduced since colonization I will also point out that these problems do not erode the integrity of our traditional values [our emphasis] (p58).

She suggests that these are problems, full stop; but not necessarily only indigenous problems, as they affect communities across the world. We all have these problems; they are bad things in themselves; but this does not mean that they are solely indigenous problems. Yet, while the misconception that indigenous communities are plagued by these problems may be true, it is a misnomer – and an offensive one at that – to interpret such issues as relating *only* to indigenous populations.

In many respects, this is a typical sort of negative stereotyping being placed on indigenous people that is prevalent in modern day Australia. It is further perpetuated by some media in the way it selectively *wishes to portray* aboriginal people; and, sadly, is the way in which most Australians assume they have contact with Aboriginal people. As Behrendt (1994) claims:

Ever since the white people invaded Australia, aboriginal identity has been attacked. Aboriginal people were portrayed as uncivilized, barbaric and primitive...We are continually stereotyped in a negative way...These stereotypes are used to justify the continuing oppression and poverty of aboriginal people. The stereotype becomes a tool by which to blame the victim (p58).

Furthermore, as Hughes & Hughes (2012) have noted, this negative stereotyping is prevalent within the “many organisations which claim to support Aboriginal and Torres Strait Islanders which go along with withholding fundamental rights without protest (p25).

Moreover, as Behrendt previously expressed, White society expects her to act in a certain way. This is reinforced by Nenova (2012) when she claims that the common conception is that “Indigenous people should behave in the same way as white Australians, have the same education, develop the same skills, have the same goals in life, same schedule and preferences, so that they can be assimilated and cease to be a problem” (p29).

As such, and from an external perspective, indigenous populations have had a substantial amount of negative connotations placed upon them, and a true understanding or deeper knowledge of the potential values these people have, have been pushed aside and considered irrelevant.

The notion of values

This paper – and many other people involved in the *battle for recognition for indigenous peoples* – therefore wishes to point out that *there are indeed different and additional community elements within indigenous populations that might seriously enhance the nature of ‘ordinary’ and non-indigenous communities*. Given the things Behrendt has said, and taking on board the values that seem to come from indigenous populations, we might begin to say that here are a number of things that seem to be, in themselves, *positive*, while not necessarily *understood by, accepted by or thought*

of by non-indigenous populations. Hence, the quality of them means that we should look at them and consider them very carefully.

While all communities have values, different *kinds* of communities – and different *cultures* – have *different* values. Yet, while such values may reflect *genuine* differences, it should be pointed out that we should look at these, not as *opposites*, but as containing different but potentially useful and significant contributions to *other* communities. It is thus not about pointing out that we have different values to those people ‘over there’ – which should be ignored – but rather that values from indigenous communities, different as they may be, and initially at odds with those of others, may offer significant benefit and a potential reconceptualization of what we currently take for granted.

That *values* is a generic word, and while Behrendt (1994) may argue that “...urban aboriginal communities have a distinct culture and cultural values” (p56), this is not to suggest that these cannot be accepted by, even adopted by, the non-indigenous and, as such, might be utilized to *enhance other and different communities*.

While we cannot go into enormous detail about all the generic indigenous values, nor can we differentiate between the specific values of different indigenous groups, we might offer here four particular values associated with the aboriginal culture and considered positive from within:

1. A particular idea of and commitment to family, often very different from that of many non-indigenous residents;
2. The notion of the extended family and its great significance to indigenous peoples;
3. Ongoing respect towards elders as a central part of aboriginal culture; and
4. A quite different – and spiritual – way of valuing land.

While such values may, to some – indeed, perhaps, to many – be perceived as being irrelevant, lacking significance, and/or being not attributable to ‘our’ concept of community, these are, not merely from an indigenous viewpoint but from an ‘Australian’ perspective, values not to be dismissed. While not necessarily ‘superior’ or ‘better’ than the values of ‘other’ cultures, which constitute communities in their own right, these are, from the ‘inside’ of indigenous culture, values considered to be very positive. As such, it might then be asked, why would you *not* want to know about them? And if you *did* know of them, why, and on what basis, would you simply reject them? What do they offer that is not wanted? And is it the fact that we simply do not understand them, or that they actively contradict our ‘own’ extant values?

Example of a different value: The notion of land

While each of these different values will be addressed in substantial detail in the ongoing research, a brief example, that of the aspect of the spirituality towards land, will be introduced here to highlight this notion of difference. While it is becoming something of a cliché to say that ‘indigenous people have a connection to land’, it is nonetheless significant that such people hold a very different idea of what the land ‘means’ and of the important notion of connectivity to the land, that is substantially different to the way other cultures view it.



Figure 5: The Goose Hunters of the Arafura Swamp, central Arnhem Land 1937.

Land, in a Western sense, is often seen as something that can be possessed, taken hold of, or conquered. The earth, soil, plants and animals are seen as ‘property’ to be owned, utilized, and exploited for individual gain. But from an indigenous perspective, land is seen as the very thing that sustains life on this planet, and is treated as such. Behrendt (1995) illustrates the importance of this connection to indigenous people by claiming that:

Land is central to Aboriginal existence and survival. It has always been essential for the survival of indigenous people and remains a most precious resource. Aboriginal religion teaches us that we are born from the land. When we die, we return to the land. During our life on earth we are required to look after our land and protect our land (p9).

Behrendt (1995) is also clear on the different ways indigenous peoples view land by noting:

People are associated with specific areas of land, but not in the same way that a proprietary right would explain attachment to land. The link is spiritual, not proprietary. Land is central to the spirituality of an aboriginal person. It also provides the food to ensure the survival of Aboriginal groups (p9).

As previously stated, Behrendt has a particular connection and attachment to the traditional land of her ancestors. She does not own this land in a financial sense, but it still forms a significant part of

her identity, and governs a series of potential relations with other Eualeyai people – a kind of extended family notion where individuals, families, clans, ceremonial groups and language groups are incorporated.

In an age where global ecological balance is a major issue, this view of land – as custodian, caretaker and guardian – must surely have merit. It might thus be asked, how might other communities begin to *rethink* their relationships to land in a different, and potentially more positive way? This is but one example of a value that, while perhaps quite different from the *other outside* perspectives, is considered positive and beneficial within indigenous culture.

Conclusion

As a very brief conclusion, four particular issues are in need of consideration.

First, it should be noted that, as yet there have been limited studies into Australian indigenous involvement within the larger notion of an Australian society. Similarly, there have been very few studies into indigenous community values, their differences, and how these may potentially be of benefit to other cultures.

Second, and as numerous studies suggest, cohesive, supportive and engaged communities equate to happier and healthier people. But how do communities achieve this? Might a close examination of a particular culture engender certain values, issues or characteristics considered to be positive, that begin to offer suggestions on how to deliver this? Might these values shine a light onto addressing some of the general problems every community faces? How might this perspective address a contemporary community withdrawing into the privacy of the home?

Third, and in light of the above, studies that investigate such values may offer a richer understanding and meaning within the places we live. The city as an expression of presence and identity is important due to the way we might begin rethinking our cities in terms of community and in terms of the positive elements that make indigenous communities ‘different’. Australia’s indigenous culture is special and it should be treated as such.

And, finally, how we might understand the very idea of community, both from an indigenous and a ‘western’ perspective, but based on a clearer understanding of the notion of indigenous values and community.

This short paper therefore addresses, albeit briefly, the assumptions about Redfern; the difference between these assumptions and what is actually taking place; the changes that have occurred over a number of years; and also, more importantly, the idea of values and what constitutes this community as opposed to other communities. In the ongoing research we will be looking in much more detail at the above issues, as well as at five further questions:

1. What are the values contained within The Block?
2. Are these values conventional indigenous values or have they been changed by virtue of being both inner city and condensed?
3. Are certain parts of these values universal, while others are different?
4. Are these values unacceptable or antagonistic towards other external values? and

5. In the potential ongoing development of The Block how might such values be changed; perhaps become more important; and conceivably affect both notions of community and urbanism via a more powerful and more persuasive notion of aboriginality that integrates with non-indigenous communities by offering 'more and different' values and ideas.

Whether the non-indigenous population may know or not know of the above, the important question remains: are these values being rejected because they don't fit with another notion of values? Alternatively, in what ways might some or all of these values be a positive addition to other cultures?

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Redefining Migration in Global Sydney

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The global Sydney thesis and the migration thesis, two important dimensions of the impacts of contemporary globalisation, have been developing in parallel. In this article, we argue that the two theses are intrinsically linked. Sydney's rise as a global city is closely associated with its growing migration. The central question is how we should approach migration in the new context of global Sydney, and how we should articulate their relationships. To address this question, we construct an integrative framework linking global Sydney and migration, and build a set of indexes to measure global competitiveness, global migration, and global mobility across the Greater Sydney region. The findings reveal that global competitiveness – the defining capacity of global Sydney – has very weak association with global migration that measures the stock of foreign born population, but has very strong association with global mobility that measures the people movement in recent years. These findings call for a redefinition of migration to incorporate people movement to better capture the interplay between global Sydney and migration.

Keywords: migration, global Sydney, global competitiveness, global mobility

Introduction

Sydney is Australia's leading global city. It is an important urban node in the global city hierarchy, linking Australia with the world (Beaverstock, Taylor, & Smith, 1999; Friedmann, 1986, 1995; Taylor, 2004, 2011). Sydney is also a leading gateway city for migration, adding to Australia's global network (Benton-Short, Price, & Friedman, 2005; Hugo, 2008). The global city thesis and the migration thesis for Sydney have been developing in parallel. The global city thesis has been economic-centric, focusing on Sydney's growing capacity of global services, in particular, of advanced producer services (Daly & Pritchard, 2000; Fagan, 2000; Hu, 2012a, 2013; O'Neill & McGuirk, 2002, 2003, 2005; Searle, 1996; Stein, 2002). These global services are defining Sydney's global city status according to the global city discourse (Sassen, 1991, 1995; Taylor, 2004, 2011). On the other hand, the migration thesis has focused on the spatial settlement of the ethnic groups across the Sydney region or its

socio-economic structures (Baum, 1997; I. Burnley, 1998; Ian Burnley, 1999; Forrest, Poulsen, & Johnston, 2003, 2006; Healy & Birrell, 2003; Ley & Murphy, 2001; Poulsen, Johnston, & Forrest, 2004). The scholarship has not sufficiently addressed the association between the two theses.

In this article, we argue that the global city thesis and the migration thesis are intrinsically linked. Both are important impacts of contemporary globalisation on Sydney, and reflect Sydney and Australia's increasing integration with the world. The question is how the two elements concerning Sydney's role in contemporary globalisation are interrelated. In order to articulate the nexus between global Sydney and migration, we construct an integrative framework linking global Sydney and migration. We then make a comprehensive examination of the spatial patterns of the global services, the foreign born population settlement, and the people movement in global Sydney. This is made through building three sets of indexes: global competitiveness index (GCI), global migration index (GMI), and global mobility index (GloMo) for the local communities across the Greater Sydney region, using the Australian 2011 census. The findings provide new insights into the interrelationship between global Sydney and migration, and call for a redefinition of migration, moving from the conventional perception of foreign born population to incorporate increasing people movement in contemporary globalisation.

This article is organised as follows. Following this introduction, next section provides a literature review on the theses of global Sydney and migration, to point out the gap in the scholarship and the need of this study to link global Sydney and migration. The section on methods explains how this study is carried out, including the definition, calculation and data for the three indexes (GCI, GMI, and GloMo). The results offer the spatial patterns and statistical relationships of the local communities across the Greater Sydney region viewed through the lenses of the three indexes. The last section concludes with a discussion on the articulation of the nexus between global Sydney and migration, and calls for the need to redefine migration in global Sydney.

Global Sydney and Migration

Global Sydney

Global Sydney constitutes part of the broader global city discourse, which has responded to the increasing interaction between contemporary globalisation and cities. The global city discourse has focused on the strategic roles of command and control played by many major urban nodes in the integrated world economy, and in particular on their capacity of providing advanced producer services (Friedmann, 1986, 1995; Sassen, 1991, 1994; Taylor, 2004, 2011). The global city discourse has included Sydney as a member city in the global city hierarchy, and has ascertained Sydney's competitive position in the global context and its evolution (Beaverstock et al., 1999; Friedmann, 1986, 1995; Godfrey & Zhou, 1999; Taylor, 2004, 2011; Taylor, Ni, & Derudder, 2011). Meanwhile, multiple angles have been employed to analyse Sydney's economic transformation along with Australia's integration with the world economy to justify its rise as a global city. The economic transformation includes Sydney's macroeconomic transformation, as well as the transformation of certain industry sectors that are most impacted by contemporary globalisation.

As Australia's leading global city, Sydney is dominating Australian urban landscape. The dominance includes its agglomeration of advanced producer services (Spiller, 2003); its agglomeration of

corporate headquarters, particularly in real estate, and insurance and investment services compared to other Australian capital cities (Tonts & Taylor, 2010); and being the headquarters of multinationals, producer services, and financial services in national, Asia Pacific, and international contexts (Stein, 2002). The process of Sydney's rise as a global city has involved multi-dimensional economic restructuring and industrial changes. These include the industrial shift from manufacturing to a post-industrial information economy (Fagan, 2000); the changed employment structure, global command and control functions, finance sector, and international economic connections (Searle, 1996); and the emergence of a knowledge-based economy (Stein, 2002).

The financial sector and the advanced producer services, the defining functions of global cities, have been a major focus of scholarly interest in global Sydney. Daly and Pritchard (2000) provide a historical narrative of Sydney's growth to be Australia's financial and corporate capital, and its relation to the international financial system and the local political and geographical factors, such as the political aspiration for a global city and connections with Asia. O'Neill and McGuirk (2002, 2003, 2005) study the financialisation of economic activities and its spatial manifestations in the Sydney region, and its impacts on office work in central Sydney through the practices of association, interaction, and shared work space. Coupled with the significant financialisation of Sydney's economy is the creative and cultural sector, which makes another major component of Sydney's transformation towards a more knowledge intensive economy. Internally, the creative economy demonstrates a concentration of the creative population living and working in and around central Sydney (Gibson, 2006; Hu, 2012a, 2012b, 2013); externally, the cultural industries constitute part of Sydney's connectivity with the world city network (Mould, 2007). These transformations are regarded as the economic manifestations of Sydney's rise as a global city.

Migration

Much literature has addressed the spatial settlement of migrants in terms of ethnic concentration, segregation, and assimilation. The efforts to unpack the spatial settlement patterns of ethnic groups have been linked to the cultural diversity of Sydney. Ley and Murphy (2001) contend that the evolving locations of immigrants challenge the continued relevance of traditional models in explaining contemporary settlement patterns in gateway cities. In Sydney, there are two contrasting observations on the evolving spatial patterns of ethnic concentration. One observation is that Sydney is bifurcating with growing migration – one increasingly dominated by low to medium-income non-English-speaking migrant communities in the west and southwest, and the other comprised of established inner affluent areas and predominantly English-speaking “aspirational” areas on the metropolitan periphery (Healy & Birrell, 2003). Skill seems to be an important determining factor of the spatial bifurcation between migrants. Skilled migrants and unskilled migrants have different capacities to choose where to live upon arrival in Sydney. Migrants in the former group, who have recently arrived in Sydney, have a greater degree of spatial dispersal than earlier generations and the latter group; migrants in the latter group are much more constrained with regards to where they can afford to live, and have the desire and need to reside among co-ethnics who will support them in adjusting to life in Australia (Hugo, 2008). The constraints of the unskilled migrants help explain why low and moderate-income overseas arrivals continue to settle disproportionately in the western and south-western suburbs in Sydney, which are known as communities with high ethnicity and low socio-economic status (Healy & Birrell, 2003).

The opposite observation is that the ethnic concentration in Sydney does not translate into high levels of ethnic segregation, but into a spatial assimilation that reflects an intermixing of different ethnic groups with each other and with the host society, a view of Australian multiculturalism as “assimilation in slow motion” (Forrest et al., 2006; Poulsen et al., 2004). Empirical studies of Sydney’s western communities indicate some positive aspects of the ethnic concentration, which are seen in the roles of multicultural alliances in spatial convergence, a notion of “togetherness of difference” or “politics of difference” (Dunn, 1998; Gow, 2005). For Burnley (I. Burnley, 1998; 1999), the term segregation is inappropriate for almost all ethnic groups, and the term ghetto, or even enclave, is inappropriate for the ethnic concentrations in Sydney. Although a few suburbs with high ethnic concentrations are experiencing economic difficulties, and have higher proportions of persons with limited English, lower incomes, and no jobs, ethnic concentrations are not the cause of disadvantages (I. Burnley, 1998; Ian Burnley, 1999). On the other hand, as Sydney’s foreign born population has grown, the overall pattern of settlement reflects a greater ethnic mix in both high- and low-socioeconomic areas (Hugo, 2008). The relatively low levels of segregation and high levels of spatial assimilating differentiate Sydney from other global cities; the impacts of globalisation and international migration are different everywhere (Forrest et al., 2003).

Linking Global Sydney and Migration: An Integrative Analytical Framework

The global Sydney thesis and the migration thesis have been developing in parallel. The global Sydney thesis has been economic-centric, focusing on Sydney’s economic transformation, in particular, on its growing global capacity of advanced producer services that are the defining attributes of a global city. The migration thesis has concerned the spatial patterns of the migrant population across the global Sydney region, with a focus on whether the evolving patterns indicate a trend of bifurcating or intermixing. Both the global Sydney thesis and the migration thesis reflect the impacts of contemporary globalisation on Sydney; they are intrinsically interrelated. Sydney’s rise as a global city has been accompanied by its growing migration. However, their interrelationships are not sufficiently addressed in the scholarship.

In this study, we construct a new analytical framework to link the global Sydney thesis and the migration thesis (see Figure 1). The new framework is underpinned by Sessen’s (1991) thesis on global city as the prime sites for advanced producer services and key nodes in economic globalisation, and on Castells’ (1996) proposition for global space of flows in a networked society. It aims to articulate the interrelationship between global Sydney and migration through the nexus between Sydney’s space of global services and Sydney’s space of flows of people. The articulation between space of global services and space of flows of people in Sydney as a global city enables the advancement of scholarship on global city and migration respectively. For the scholarship on global city, although the global city – migration framework is built upon the same underpinning theses of global city and global space of flows as the world city network model (Taylor, 2004), they are different in subject and methodology. The world city network concerns an interlocking network of world cities through the “working flows” of the global service firms (electronic and embodied flows of information and knowledge, and face-to-face meetings involving business travel), which are enabled by the advances in information and communication technologies (Taylor, 2004). The global city – migration framework, however, focuses on the interrelationship between global services and migration within individual global cities, which are the strategic nodes of the global network. The

physical flows of migration to and from cities differentiate themselves from the working flows of service firms housed in different cities. For the scholarship of migration, the global city – migration framework moves beyond the traditional approach of migrant settlement to the space of flows of people, to address the growing migration. It also moves from a traditional nation-based approach to a city-based approach to analysing contemporary migration. Incorporating the space of flows of people into the global city – migration framework helps capture the new dynamics of people movement in cities as both a contributory and a resultant factor of contemporary globalisation.

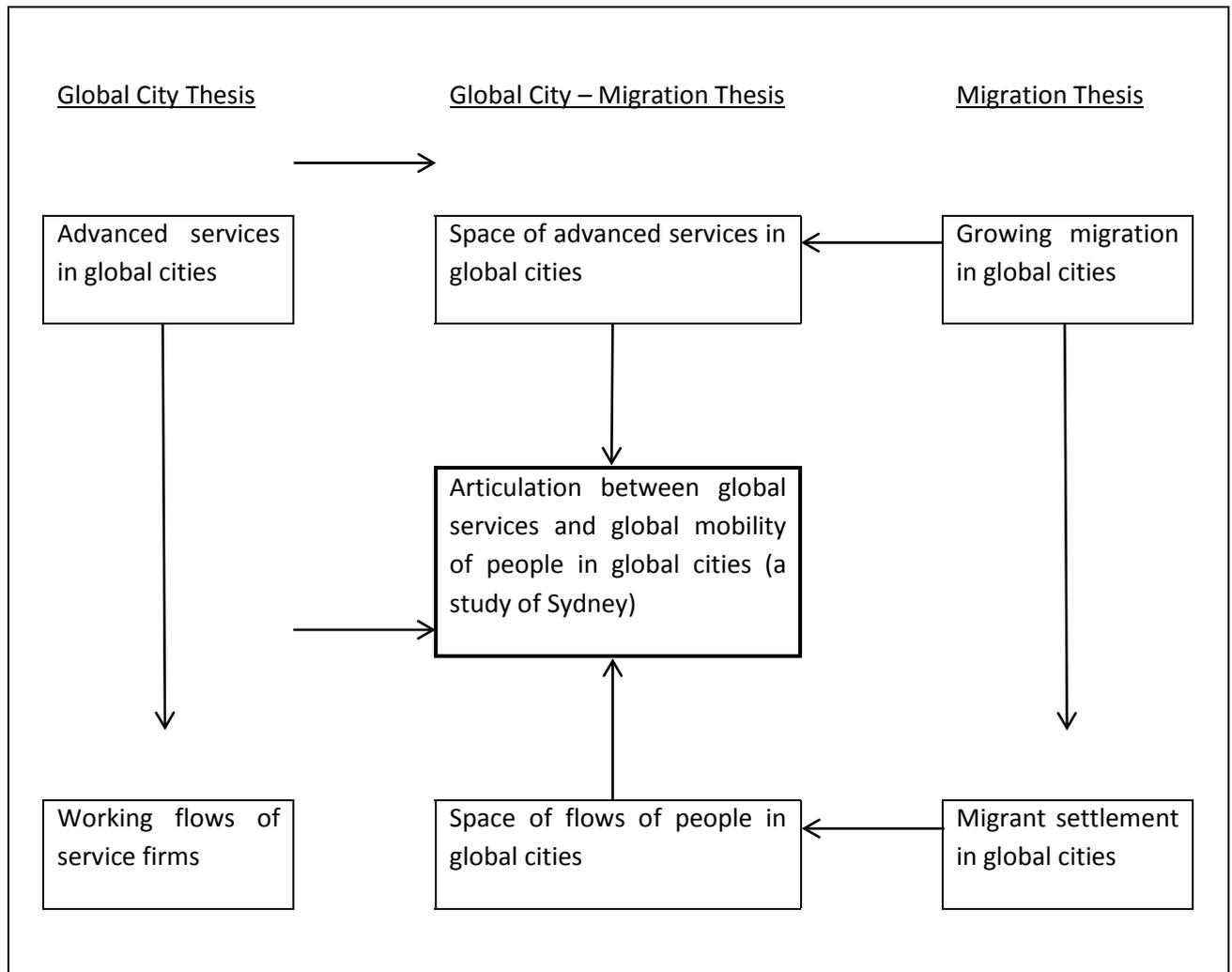


Figure 1: Integrative Global City – Migration Analytical Framework.

Applying the global city – migration analytical framework to Sydney, this study aims to test two hypotheses concerning the interrelationship between global Sydney and migration:

- Global Sydney's capacity of global services is not necessarily linked to global migration defined by foreign born population in its role as a gateway city for immigrants;
- Global Sydney's capacity of global services is linked to global mobility of people in its role as an urban node in the global network.

Methods

Geographically, global Sydney refers to the Greater Sydney region. Global Sydney's boundary is defined by the Sydney Statistical Division in the Australian Statistical Geography Classification (ASGC). It contains 64 ASGC's Statistical Local Areas (SLAs), which are treated as local communities of global Sydney in this study. Global Sydney has a land area of 12,428 km², and had a resident population of 4,428,976 and a working population of 1,835,363 in the Australian Census 2011.

Three sets of indexes are constructed for the 64 SLAs in global Sydney: global competitiveness index (GCI), global migration index (GMI), and global mobility index (GloMo):

- GCI measure's a community's capacity of global services in terms of knowledge-intensive industry, highly-skilled occupation, higher levels of qualification and median income.
- GMI measures a community's stocks and diversity of migrant populations who were born overseas.
- GloMo measures a community's new people movement from overseas and elsewhere in Australia.

The indicators and weightings of the set of indexes are included in Table 1. The data is collected from the Australian Census 2011. The data for GMI and GloMo are based on Place of Usual Residence, and the data for GCI are based on Place of Work. The variables used in the set of indexes are defined as follows:

- The knowledge-intensive industries include the following industry divisions in the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006: Information Media and Telecommunications; Financial and Insurance Services; Rental, Hiring and Real Estate Services; and Professional, Scientific and Technical Services.
- The highly-skilled occupations include the following occupation groups in the Australian and New Zealand Standard Classification of Occupations (ANZSCO) 2006: Managers, and Professionals.
- The higher levels of education include the following levels of qualifications the Australian Standard Classification of Education (ASCED) 2001: Postgraduate Degree, Graduate Diploma and Graduate Certificate, and Bachelor's Degree.
- The foreign born population is determined by the country of birth.
- The English-speaking countries include Australia, the UK and Ireland, New Zealand, the USA and Canada.
- The recent people movement is based on the Five Years Usual Residence Indicator in the Australian Census 2011, which indicates people who moved their residences in the period 2006-2011.

Table 1: Indicators and Weightings of GCI, GMI, and GloMo.

Indexes	Indicators	Weightings
GCI	Percentage of employed persons in the knowledge-intensive industries	20%
	Total number of employed persons in the knowledge-intensive industries	10%
	Percentage of employed persons in the highly-skilled occupations	20%
	Total number of employed persons in the highly-skilled occupations	10%
	Percentage of employed persons with higher levels of education	20%
	Median weekly individual income	20%
GMI	Percentage of foreign-born population	40%
	Total number of foreign-born population	30%
	Percentage of foreign-born population not from English-speaking countries	15%
	No one ethnic group is more than 25% of the foreign-born population	No, 15%; Yes, -15%
GloMo	Percentage of international migrants	40%
	Total number of international migrants	30%
	Percentage of non-Australian-citizen migrants in total migrant population	20%
	Percentage of migrants from outside Greater Sydney region in total internal migrant population	10%

Z-scores for the indicators are calculated to standardise the values. The final value for each index is the sum of the indicators' z-scores weighted. Higher values reflect higher performances in the composite index. The 64 SLAs are mapped, using legends of quartiles of the index values. Spatial patterns are described and statistical relationships are measured for the indexes, to articulate the interrelationship between global Sydney and migration.

Results

Spatial Relationship

Figure 2 presents the spatial coverage of GCI, GMI, and GloMo across global Sydney in 2011. The values of the indexes for each SLA are provided in Appendix 1. The three indexes demonstrate diverging and converging spatial patterns.

Communities with the high GCIs form a “global arc”, which runs through central Sydney, linking northwest and southeast communities at both ends. The “global arc” was included in Sydney’s metropolitan strategy *City of Cities* (2005), referring to the economic corridor of jobs and major infrastructure stretching from Macquarie Park to Port Botany through Chatswood, St Leonards, North Sydney, Sydney CBD, and Sydney Airport. Compared to the “global arc” included in Sydney’s metropolitan strategy in 2005, the “global arc” based on the GCI 2011 extends at both ends, to include Parramatta in the southwest, and Randwick in the southeast. Communities with the highest GCIs remain in Sydney CBD and North Sydney, with declining GCIs for communities along both directions of the “global arc”.

Communities with the highest GMIs remain in the west and southwest areas, which have been traditionally known for high ethnic concentration in Sydney. The GMI 2011 indicates a trend that communities with high GMIs are expanding northward and eastward. For example, Ryde and Kuring-gai in the north, and Randwick in the east, also indicate considerably high GMIs. More

communities in the north and in the east areas of Sydney fall into the second quartile of GMI 2011. Sydney's growing migration is reflected in increasing GMIs in communities which traditionally had high or low ethnic concentrations.

The GloMo coverage seems to combine the spatial patterns of GCI and GMI. Communities with the highest GloMos form two arcs, facing each other. The east arc almost coincides with the "global arc" of communities with high GCIs in the east area; the west arc almost coincides with communities with high GMIs in the west area. The communities around the two arcs mostly fall into the second quartile of GloMo 2011. The top communities of GloMo are the two CBDs in global Sydney: inner Sydney and inner Parramatta. Two eastern communities Manly and Waverley also indicate considerably high GloMos.

Statistical Relationship

To test the roles of migration and people movement in explaining global services, two regression models were run to measure relationship between GCI with GMI, and between GCI and GloMo respectively. The regression results are shown in Table 2. Their respective relationships are illustrated in Figure 3. The results show that GCI is poorly influenced by GMI ($R^2 = 0.029$), but is strongly linked to GloMo ($R^2 = 0.575$). GMI is not a significant predictor of GCI (Beta = 0.171, $p=0.176$), while GloMo is a significant predictor of GCI (Beta = 0.758, $p<0.0001$).

Table 2: Regression Results (N=64).

Dependent variable:	R ²	Adjusted R ²	Beta coefficients	Significance
GCI 2011				
Independent variable: GMI 2011	0.029	0.014	0.171	0.176
Independent variable: GloMo 2011	0.575	0.568	0.758	0.0001

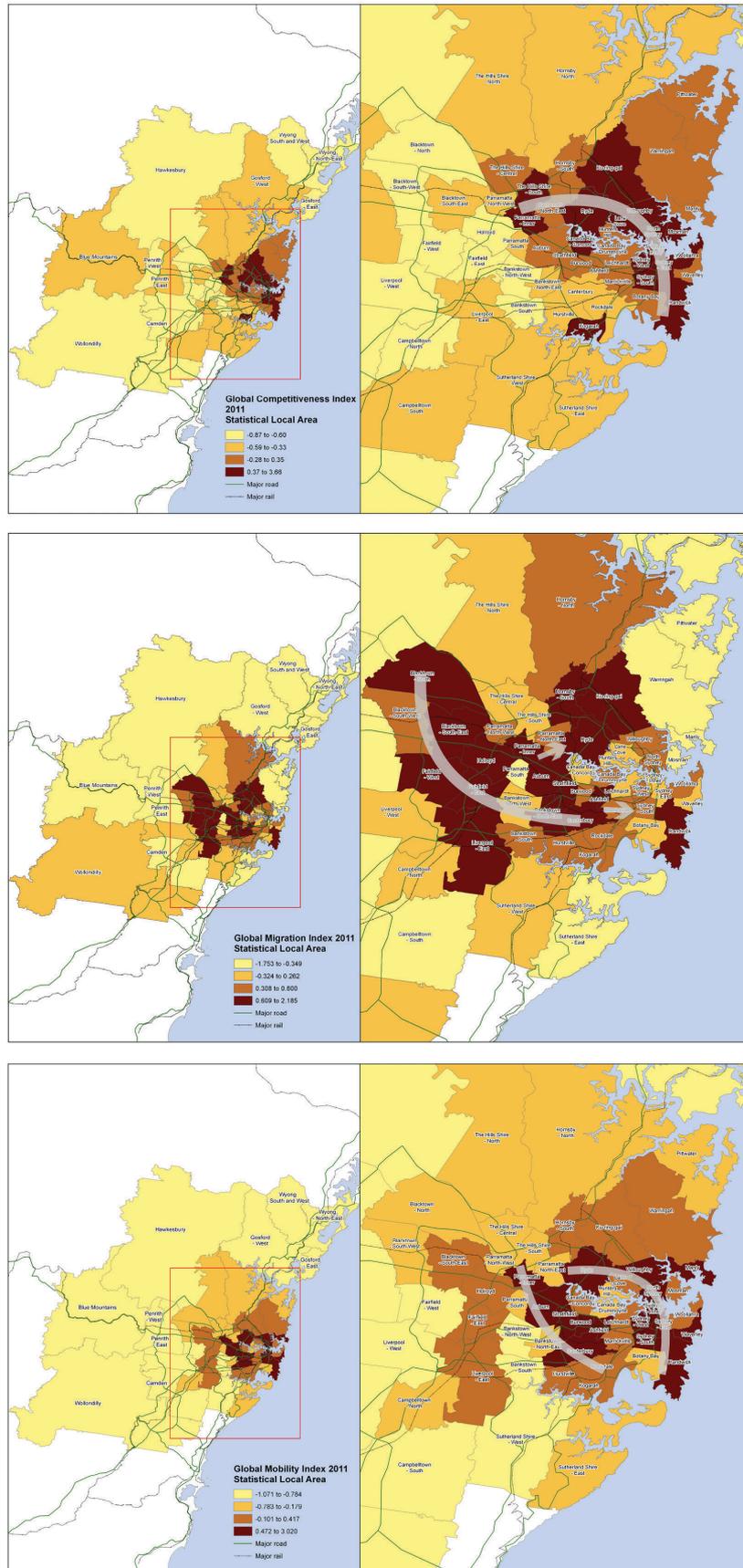


Figure 2: GCI, GMI and GloMo for SLAs in Global Sydney 2011.

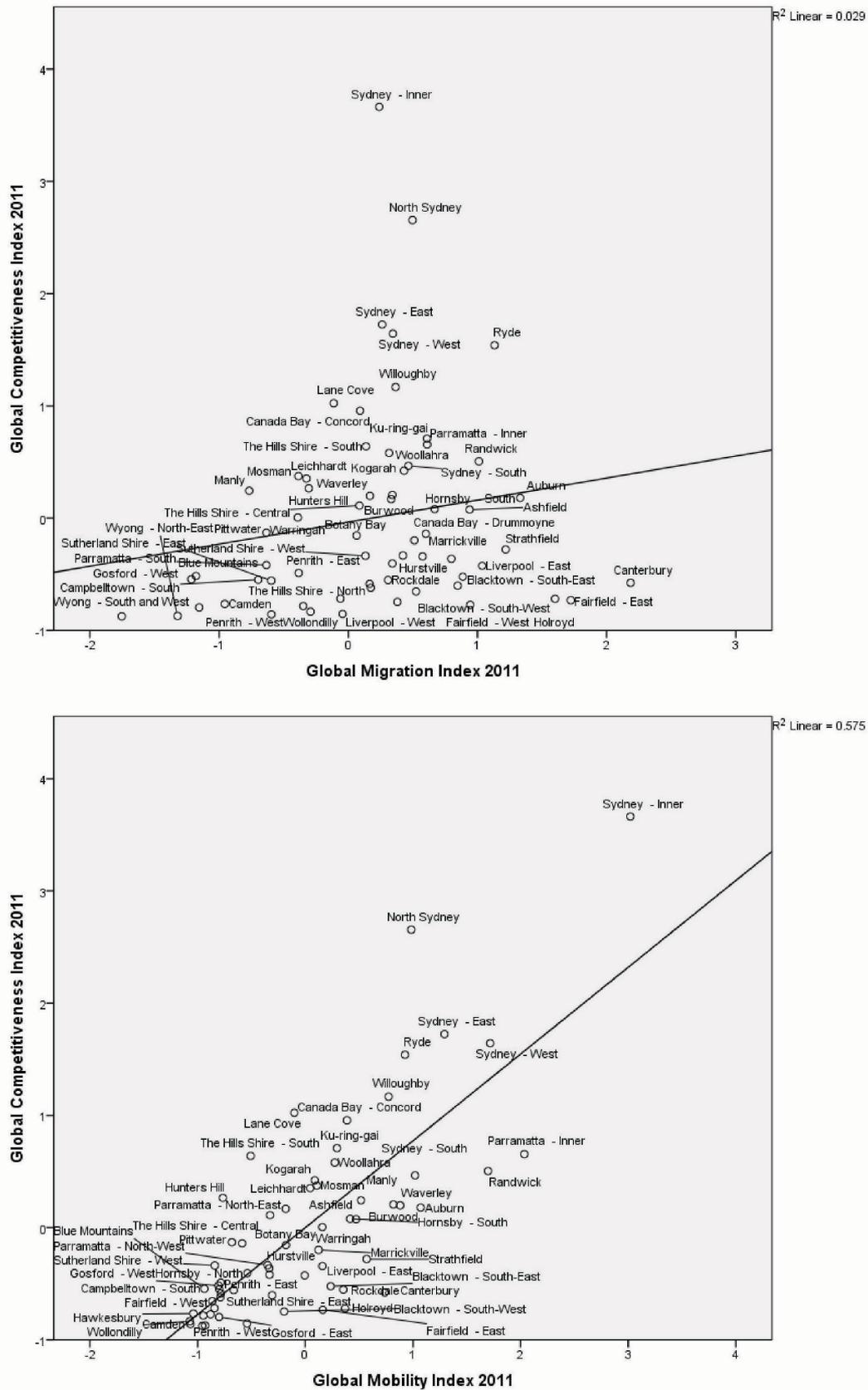


Figure 3: Relationship between GCI and GMI, and between GCI and GloMo for SLAs in Global Sydney 2011 (N=64).

Discussion and Conclusion

The findings reveal both spatial and statistical relationships between GMI, and GCI and GloMo respectively. They ascertain the two hypotheses concerning global Sydney and migration proposed earlier. As a global city, Sydney's capacity of global services is more related to its global mobility of people movement than its global migration of foreign born population. Sydney's rise as a global city has been accompanied by multiple and profound changes in its migration patterns. One prominent change is the growing scale and diversity of foreign born population (Ian Burnley, 2000; Hugo, 2008), in particular the immigration flows from different parts of Asia (I. Burnley, 1998), and the increasing diversity of immigrant settlements in Sydney (Ian Burnley, 2000). However, classifying global migration by foreign born population is insufficient in capturing its associations with global Sydney. The global mobility of people movement better addresses the complexities of contemporary migration in global cities. Both differentiation and embedment exist between the attributes of global mobility and global migration used in this study. The analysis for global mobility includes people movement from Australia (internal migration) and from overseas (international migration). The internal migration and international migration are determined by direction of movement, not by country of birth. Both internal migration and international migration include people born in Australia and overseas. In 2006-2011, returning Australians (Australia-born people) accounted for 10 per cent of international migration, after China and India only as the third largest group by country of birth. For the knowledge intensive industries that are most related to Sydney's global city status, returning Australian accounted for an even higher share of 18 per cent in the international migration. Excluding them in the conventional analysis of migration by country of birth will miss a significant cohort of people movement. This study raises the question of redefining migration according to the global mobility of people movement, which has a higher relevance to Sydney's role as a global city.

The integrative global city – migration analytical framework provides a meaningful and valid framework to address the interrelationship between global city and migration, utilising Sydney as a case study. Global Sydney and migration are intrinsically linked, which is not sufficiently captured and explained in the scholarship. A similar critique has been made to the global city discourse that a focus on business and technological dimensions of global cities is accompanied by the lack of focus on the relationship between immigration and global cities (Benton-Short et al., 2005; Samers, 2002). In effect, migration constituted an important component in the earliest global city hypothesis. In Friedmann's (1986) world city hypothesis, world cities are points of destination for large number of both domestic and/or international migrants as well. Sassen's (1991) global city – migration thesis argues that global cities are the main destinations for immigrants with divided social polarisations between skilled migrants and unskilled migrants. The subsequent global city discourse has paid more attention to the economic dimension of globalisation and cities, focusing on the world city network through the working flows of global service firms (Taylor, 2004). The proposed global city – migration analytical framework is not a return back to the earliest thesis of global cities as destinations of immigration and polarisation (Baum, 1997; Sassen, 1991). It integrates the economic dimension of a city's capacity of global services with migration in the form of the flow of people, and articulates their interrelationships.

The study of global Sydney and migration attests that global city is a meaning spatial scale for analysing migration in contemporary globalisation. Australian international migration has undergone

significant transformations in the last few decades of globalisation in terms of nature, composition, and effects (Collins, 2006; Hugo, 2006, 2008). Hugo (2006) argues that the transformations constitute a paradigmatic shift in Australian international migration; one dimension of the shift is the increasing role played by the Australian cities most linked into the global economic system, especially Sydney. The importance of city-based analysis of the contemporary globalisation has been acknowledged in the global city discourse. The nation state-based macroeconomic changes of post-industrial economy, international division of labour, and competition for capital, technology, and talents are impacting cities as the gateways for the new wave of globalisation. One direct result is that a single world economic system is overtaking the traditional economic roles and powers of nation states, and cities or city-regions are emerging as dominant spatial scales as central nodes in the world economy (Friedmann, 1986; Friedmann & Wolff, 1982; Sassen, 1991, 1994; Scott, 2001). Global city regions are now “active agents in shaping globalisation itself” as “motors” or new “spatial nodes” of the global economy (Scott, 2001, p. 11). However, our understanding of the dynamics of immigration in shaping world cities and its effects remains limited, and a barrier to this search for understanding is a failure to recognise that the world city is an important and appropriate unit for analysing the effects of both immigration and internal migration (Hugo, 2008). Linking global city and migration recognises that global Sydney, Australia’s leading gateway city, is an important spatial scale for migration analysis, in addition to the conventional nation-based approach to immigration.

The scholarship has not addressed the interrelationship between global Sydney and migration, which have been developing as two parallel theses. This study is an effort to link the two important theses concerning the impacts of contemporary globalisation on Sydney. It constructs an integrative global city – migration analytical framework to address and articulate the interrelationship between global Sydney and migration. Using the Australian 2011 census data, this study provides new insights into the spatial patterns of Sydney’s global competitiveness, global migration, and global mobility. Applying the integrative analytical framework, it sheds light on the nexus through which the interrelationship between global Sydney and migration is articulated: as a global city, Sydney’s capacity of global services is more related to its global mobility of people movement than its global migration of foreign born population. It calls for a need to redefine migration in global Sydney, moving from the conventional definition by country of birth to incorporate the people movement to address the increasing complexities of migration in global cities.

Appendix 1 GCI, GMI and GloMo for SLAs in Global Sydney 2011

SLAs	GCI	GMI	GloMO
Ashfield	0.075	0.939	0.472
Auburn	0.179	1.33	1.072
Bankstown - North-East	-0.362	0.798	-0.335
Bankstown - North-West	-0.621	0.174	-0.788

Bankstown - South	-0.653	0.524	-0.863
Blacktown - North	-0.602	0.846	-0.307
Blacktown - South-East	-0.522	0.886	0.236
Blacktown - South-West	-0.747	0.38	-0.196
Blue Mountains	-0.544	-1.214	-0.937
Botany Bay	-0.155	0.065	-0.179
Burwood	0.207	0.341	0.819
Camden	-0.858	-0.595	-1.066
Campbelltown - North	-0.854	-0.044	-0.54
Campbelltown - South	-0.549	-0.697	-0.798
Canada Bay - Concord	0.956	0.091	0.388
Canada Bay - Drummoyne	-0.139	0.6	-0.586
Canterbury	-0.577	2.185	0.739
Fairfield - East	-0.732	1.722	0.163
Fairfield - West	-0.772	0.944	-0.879
Gosford - East	-0.796	-1.154	-0.8
Gosford - West	-0.516	-1.179	-0.805
Hawkesbury	-0.765	-0.956	-1.039
Holroyd	-0.719	1.6	0.37
Hornsby - North	-0.404	0.341	-0.537
Hornsby - South	0.079	0.668	0.417
Hunters Hill	0.265	-0.306	-0.765
Hurstville	-0.342	0.575	0.16
Kogarah	0.422	0.432	0.089

Ku-ring-gai	0.709	0.609	0.295
Lane Cove	1.024	-0.113	-0.101
Leichhardt	0.352	-0.324	0.046
Liverpool - East	-0.425	1.036	-0.005
Liverpool - West	-0.717	-0.061	-0.843
Manly	0.244	-0.767	0.518
Marrickville	-0.198	0.511	0.124
Mosman	0.374	-0.386	0.108
North Sydney	2.655	0.497	0.985
Parramatta - Inner	0.655	0.61	2.035
Parramatta - North-East	0.169	0.332	-0.181
Parramatta - North-West	-0.334	0.423	-0.349
Parramatta - South	-0.418	-0.634	-0.332
Penrith - East	-0.489	-0.384	-0.784
Penrith - West	-0.783	-0.349	-0.947
Pittwater	-0.13	-0.634	-0.681
Randwick	0.505	1.011	1.698
Rockdale	-0.552	0.308	0.354
Ryde	1.54	1.132	0.927
Strathfield	-0.279	1.218	0.571
Sutherland Shire - East	-0.557	-0.596	-0.664
Sutherland Shire - West	-0.337	0.133	-0.84
Sydney - East	1.725	0.262	1.293
Sydney - Inner	3.664	0.239	3.02

Sydney - South	0.466	0.465	1.02
Sydney - West	1.643	0.345	1.718
The Hills Shire - Central	0.112	0.086	-0.327
The Hills Shire - North	-0.586	0.165	-0.783
The Hills Shire - South	0.639	0.137	-0.507
Warringah	0.005	-0.391	0.159
Waverley	0.198	0.167	0.882
Willoughby	1.168	0.366	0.774
Wollondilly	-0.833	-0.292	-1.071
Woollahra	0.58	0.316	0.274
Wyong - North-East	-0.871	-1.321	-0.93
Wyong - South and West	-0.875	-1.753	-0.956

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Defining a 'New Civic'

Redesigning Adelaide's Victoria Square / Tarndanyangga within an era of reconciliation

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Adelaide is distinguished from other Australian cities by its history as a planned free settlement and its gridded plan complete with wide boulevards, five city squares, and a parkland boundary. The largest central square Victoria Square/Tarndanyangga has been the focus of countless redevelopment schemes aimed at reinforcing the space as the heart of the city. This paper examines the latest vision, designed by landscape architects Taylor Cullity Lethlean and architects Tonkin Zulaikha Greer, with the City of Adelaide. It explores how the design team conceptualizes the role and form of civic space within an era of reconciliation.

This research highlights the influence of interpretative practices associated with the new museum on the conceptualisation of civic space. This is demonstrated by the introduction of a 'cultural curator' Peter Emmett, best known for his curatorial ethos for Museum of Sydney, into the design team. Review of design documentation highlights the adoption of a 'new civic' philosophy, which borrows heavily on museological framings. We argue that this approach problematically conflates placemaking strategies with an understanding of civic space.

In this new vision for the square, civic is understood as an expression and representation of culture, stories and histories achieved largely through interpretation, narration and way finding strategies. Conversely, civicness within urban space is assumed to encourage individual and collective expression, interaction and dialogue of democracy. Positioned within a reconciliation context, civicness would extend to building mutually respectful relationships between Indigenous and other Australians. We argue that the adoption of these place making strategies not only limits the square's ability to perform as space of collective expression, but potentially continues practices

of spatial exclusion that have marginalized Indigenous relationships to civic space in Australian cities.

Keywords: urban design, reconciliation, civic space

Introduction

The city of Adelaide is notable in Australia, unique amongst the penal colonies as the only planned free settlement. The design of the city by Colonel William Light was based on a utopian European model, dating back to the theoretical city imagined by Vitruvius, a feature which also serves to distinguish Adelaide from the other state capitals. (Bechervaise, Legoe et al. 1986, p.2.) Light's much-celebrated gridded plan features wide boulevards, intersecting with five city squares, and a parkland boundary demarcating the city from its surrounds. Underpinning this plan were nineteenth century attitudes to urban civility and sanitation, which framed a colonial ideal of behaviour and practice within civic spaces. Hall suggests that the plan of Adelaide can be understood as "an emblem for how city life might be purposefully and humanely lived in the industrial age." (2004, p.54.)

Victoria Square, as the six-hectare central civic space in the Light plan, is repeatedly referred to as the 'heart' of Adelaide. The location of this square overlaps with a major site of significance to the Kurna people, the traditional owners of the Adelaide region. Anthropologist Daisy Bates recorded the site, known as Tardanyangga, as the central camp of the Dundagunya tribe. (Jones 2007, p.5635.)¹ The square sits on a geological formation of significance in the Kurna dreaming.² This convergence of colonial and Indigenous significance has meant the square has long been a site of territorial anxieties. Hall (2004, p.54.) suggests that the establishment of Adelaide on Kurna land through the design of spaces such as Victoria Square was "both an attempt to erase what was and an act of colonial palimpsest."

Not surprisingly, Victoria Square has been significant site in the political history of Indigenous civil rights in Australia. The Aboriginal flag was first unveiled at Victoria Square on National Aborigines Day, 12 July 1971. A memorial river red gum was planted in the square in memorial to Alice Dixon, an Indigenous woman who advocated for greater awareness of Aboriginal deaths in custody.³ The first prominent civic art work to represent Aboriginal people in the City of Adelaide, the 1968 Victoria Square Fountain, or 'The Three Rivers', by sculptor John Dowie is also located there.⁴ It is recognised as a contemporary meeting-place for Indigenous people, due to its central location in the city of Adelaide, its proximity to transport, and to the services and civic buildings which sit on its perimeters. It is also known to be a space of public drinking, and was subject to a re-zoning as a 'dry area'. (Hall 2004, pp.66-69.)

Given its position as a contested space of shared significance in the history of Adelaide, it is not surprising that Victoria Square/Tardanyangga has become the focus for an engagement with reconciliation. In no other city in Australia will you find a space so valued for both its Aboriginal and civic significance. Further, South Australia is recognised as having a socially and politically progressive attitude to Indigenous affairs, being the first state to give all men including Indigenous men the vote in the 1856 and all women including Indigenous women the vote in the 1895; one of

the first to diminish segregation practices under the Aboriginal Affairs Act (1962); and the first to appoint an Aboriginal person to a vice-regal position in Australia in 1976, Sir Douglas Nicholls.

Thus, Victoria Square/Tarndanyangga offers a rare convergence in an Australian city – the combination of a state and local governments committed to reconciliation and Indigenous issues, and an appropriate space of civic importance perfectly positioned to express the aspirations of reconciliation. Before engaging with the design, it is necessary to understand the origins and ambitions of reconciliation in Australia.

Understanding reconciliation in Australia

Reconciliation remains a fraught issue in Australia given the continuing absence of a treaty. Mark Harris describes the resulting landscape as one of “disquietude, a tension between those who have been displaced and those who have replaced them.” (2003, p.71.) Muddied by colonial power relations, the ill-defined parameters of reconciliation are embedded in our very understanding of the term. This semantic ambivalence, according to Fiona Nicoll (2004, p.17.), “has proven to be extremely convenient for politicians of all colours anxious to indefinitely defer the recognition of Indigenous sovereignty.” Providing a more explicit definition of reconciliation, Jackie Huggins (2005, p.9.) clearly identifies the mission of Reconciliation Australia – “To promote and build reconciliation between Indigenous and non-Indigenous Australians.”

However, the ‘disquietude’ inherent within the political landscape of Australia, tied up in notions of territory and discourse, makes this process of reconciliation difficult to conceptualise. Academics, politicians and Indigenous leaders continue to debate the motives and success of any action or event linked to reconciliation. The tension between symbolism and practice is the focus of much discussion. This dichotomy is evident in discourse emerging from landmark events, such as the Corroborree 2000 Sorry Walk and Prime Minister Kevin Rudd’s landmark parliamentary apology to the Stolen Generations in 2008.

The Corroborree 2000 Sorry Walk, which resulted in 250,000 people crossing the Sydney Harbour Bridge on Sunday 28th May, 2000 was viewed by some as simply a symbolic gesture. Huggins (2005, p.8.) stated that while the walk marked a symbolic triumph for the reconciliation movement, “the walks masked the harsh reality of a lot of what we call ‘unfinished business’ – issues tied in with reconciliation that have not been resolved.” Similarly, Andrea Durbach (2008, p.16.) argues that while such symbolic events “are all significant manifestations of an expanding appreciation” the focus on them has “obfuscated a critical understanding of the essential prerequisites for reconciliation and delayed the execution of a government responsibility to create mechanisms to secure economic, political and social justice for Indigenous Australians.”

Similarly Rudd’s Apology to the Stolen Generations on 13th February 2008 has attracted criticism for not leading to a strategy of compensation. Andrew Gunstone (2007, p.403.) was critical of the expectation by non-Indigenous Australians that the Apology would mark a sense of closure to the process of reconciliation, that “there will then be no moral connection between the past and the present.” However, Durbach (2008, p.17.) identified the productive promise of the Apology for its “potential to regenerate a cautious belief in the process of reconciliation.” However, Durbach’s

optimism is on the understanding of an apology alongside the implementation of a national scheme of compensation.

Indigenous leaders such as Noel Pearson (2008) similarly question the ethics of an apology without compensation, while expressing concern that “this apology will sanction a view of history that cements a detrimental psychology of victimhood, rather than a stronger one of defiance, survival and agency.” However, Chris Healy (2008, p.217.) suggests that the apology authorises an “emblematic memory”, the symbolism of which could provide a scaffold for practical change [a concept borrowed from Stern in relation to Pinochet’s legacy in Chile]:

“In this sense, the apology to the stolen generations is a particular assemblage which integrates personal memories and experiences, evokes the past and provides a framework of interpreting that past, and articulates this in the public sphere in ways which authorise and popularise a new sense of the past.”

Despite these debates, reconciliation has become a requirement for public institutions across Australia who now must develop Reconciliation Action Plans (RAP). According to Reconciliation Australia (2012), the body that administers the policy development of RAPs, the motivations of reconciliation surround the creation of a dialogue of mutual benefit, between Indigenous and non-Indigenous Australians:

“Reconciliation involves building mutually respectful relationships between Indigenous and other Australians that allow us to work together to solve problems and generate success that’s in everyone’s best interests.”

The RAP is framed as an action – a measurable outcome-based strategy that emerges from this critique of reconciliation, from the tension between theory and practice, the past and the present, the symbolic and the pragmatic. The Adelaide City Council (ACC) was one of the first local councils in Australia to adopt a Reconciliation Vision Statement in 1997, which included a commitment to recognise Kurna heritage through the physical features of the city.⁵

Adelaide City Council’s vision for reconciliation

The renaming of the Adelaide parklands formed one of the first actions of the ACC RAP. This is seen as a significant step towards reconciliation as the parklands of Adelaide are considered some of the first spaces through which Indigenous people were marginalised in the city. To date all 29 Adelaide City Park Lands have had new signage installed, including the River Torrens/Karrawirra Parri and the central space of Victoria Square / Tarndanyangga.

Contemporary to the development of council’s RAP has been a broader move towards the regeneration of the central business district of Adelaide. Architect Donald Bates (*City needs Federation Square*, 2007) suggested that Adelaide, like Perth, risked “falling behind in terms of civic profile if some thoughts aren’t put into rejuvenating and revitalizing the [city]”. Council’s focus on the redevelopment of the city has seen the production of reports such as Jan Gehl’s *Public Spaces and Public Life: City of Adelaide 2002* (updated in 2011) and the Adelaide City Council 2007 Community Land Management Plan, both of which highlight the importance of Victoria Square

within a wider move to reinvigorate the city. The ACC aspires to regenerate Victoria Square as part of its 2008-2012 'Creating Our Future' Strategic Plan as "a space to celebrate culture and identity".

In 2008, a Community Ideas Competition for the design of Victoria Square was held by the ACC in partnership with the State Government of South Australia, seeing 115 entries submitted. (Bildstein 2007) The competition asked designers to respond to the civic significance of the space, as well as the dual-naming as an act of reconciliation. This position drew on the 2004-2007 City of Adelaide Strategic Plan through which council aspired to work with local Indigenous communities to "build effective Indigenous cultures in the community." (Adelaide City Council 2012) The framing of the competition also acknowledged the significance of Tardanyangga /Victoria Square more broadly to Aboriginal communities throughout Australia. (ACC 2007b)

In response to the competition, council issued the 2009 Victoria Square / Tarndanyangga Vision and Guiding Principles, and sought expressions of interest for teams to propose a suitable design. Of the 16 guiding principles, "Cultural Diversity and Unity" asked the design teams to explicitly produce a design that would "foster strong links with Aboriginal culture." (Taylor Cullity Lethlean 2011, p.90.) Through direct consultation with the Kurna community, designers were asked to interpret the spiritual significance of Tarndanyangga to enhance the identity of the space, as well as to 'creatively introduce' Aboriginal culture into Victoria Square/Tardanyangga through education and celebration, drawing on practices of dance, music, performance, interpretation and design. (TCL 2011, p.90.)

Landscape architects Taylor Cullity Lethlean (TCL), along with architects Tonkin Zulaikha Greer (TZG) and engineers QED were engaged in 2009 through this process to develop the masterplan for the 6 hectare Victoria Square/Tardanyangga site. Construction of Stage 1 of the masterplan commenced in 2012 and is slated for completion in early 2014.

The design philosophy

Working in conjunction with local council, the design team is comprised of the lead consultant landscape architects TCL and architects TZG working in collaboration with a Kurna Indigenous consultant, Karl Telfer, and a cultural curator, Peter Emmett. The designer, the late Kevin Taylor, describes the project explicitly in terms of the relationship between both civic and Indigenous significance, describing Victoria Square as 'the civic heart of the city'. (ACC) The new design of Victoria Square/Tardanyangga, illustrated in Figure 1, aspires to draw together the various cultural threads of symbolic significance together through a multi-scalar experience-driven design outcome. The Square is positioned as a metaphysical node of regeneration for the city.

Taylor's approach aims to infuse 'spirit' into the place of Victoria Square through linking the identity of the space to Indigenous culture as a strategy of 'regeneration', an approach which optimistically suggests that "the heart of the city is beating again..." (ACC)

Six guiding principles are nominated to reinfuse the space with activity. These are:

- "to tease the site out of the edges" – To draw-in a base population of users from adjacent offices and businesses;
- to "enable the new civic" - To facilitate socialisation, exchange and daily encounter in a particularly '21st century' way;

- to “make the market connection” – to make a physical and programmatic linkage to Adelaide’s Central Market;
- to “create new sources of light – a hybrid square” - develop a mixed-use space;
- to “tell stories with meaning” – to embed an appreciation of the cultural significance of place, particularly in terms of the Kaurna community;
- and to generate “a centre of the symbolic and actual life in the City” – to link a strategy of heavy programming with symbolic significance.



Figure 1: Victoria Square/Tardanyangga Masterplan perspective, (TCL 2011, p.17.)

This paper is most interested in how the notion of ‘the new civic’, the second principle, is constructed by the design against a twenty-first century framing of reconciliation. Of particular interest is the introduction of museological strategies into the realm of urban design, as demonstrated by the role of ‘cultural curator’ Peter Emmett in the design team. Emmett is known for his role in the development of the curatorial ethos for Museum of Sydney, noted for his ‘art and

artifice' approach to museum curation developed during the 1990s. In an introductory essay for 'The Curated Square', produced as part of the Design Development documentation for Victoria Square/Tardanyangga, Emmett defines the new civic in the following manner.

"The 'new civic' shifts the paradigm of urban culture from grand city symbols, strategies and master-narratives to many stories about personal and collective memory of its citizens, interpreting place through spatial experience and interaction with others. Place becomes experience and not thing. We ask not what is this place but what is taking place here?" (TCL 2011, p.107.)

Emmett's description draws from the language of museology and in particular the 'new museum'.⁶ We argue that this direction problematically conflates ideas of placemaking with the concept of civic space. This is particularly troubling in the context of reconciliation where there is intent for open dialogue and collaboration. There are two ways in which this is manifest - the insertion of the Mullabukka Cultural Centre into the space, as well as the explicit narration of place in the external civic space. The remainder of the paper explores these two aspects of the design proposal.

The insertion of a cultural centre – a reversal of interior and exterior

The Mullabukka Cultural Centre is located within 'The Garden', the southern vegetated zone of Victoria Square/Tardanyangga. It is situated in 'The Native Garden', a mosaic of organically shaped garden beds composed of native plantings that act as a narrative thread throughout the space. 'The Garden' zone also includes a productive garden and a bio-retention garden to process rainwater on site. By contrast, the northern zone is an 'Event Space', an amphitheatre accommodating 6000-7000 people. Building on the design principles, the two zones of entertainment and culture are conceptually reconciled, linked by an overarching 'arbor promenade' structure, equipped with infrastructure to accommodate markets and other temporary events. The arbor, swathed in vegetation, clearly plays to associations with wine and broader agendas of South Australian tourism.

The architecture is designed in collaboration by architects TZG and Indigenous consultant Karl Telfer, acting on behalf of the traditional owners. Telfer prototyped the form of the building, its curving roof structure rising up from the ground plane as illustrated in Figure 2. A symbol of authority and protection, the form is based upon the Kurna shield Mullabukka to resonate with the ongoing survival of Kurna culture in Adelaide.

Less understood is the purpose of the cultural centre. Telfer and Emmett describe the Mullabukka Cultural Centre as a space for "Living Kultja" a place for the transfer and activation of the knowledge of country, ritual, song, custom, memory, place and belonging. (TCL 2011, p.127.) It is framed as space through which tourists will pass in order to gain knowledge of country before venturing into the rest of South Australia. (TCL 2011, p.127.) The interior and exterior spaces have been designed to flexibly accommodate a number of "modes" - Workshop mode, Performance Mode, Display mode, Function mode. A vast array of functions potentially accommodated within the building are suggested, including special ceremonies; various dinners; storytelling; forums; seminars; performances; workshops; retail; films; lectures; school programs; video conferencing. Yet interestingly the building is imagined as simultaneously without program, described by the architect as an unprogrammed space. This indeterminacy is reflected in the words of Emmett and Telfer:



Figure 2: The Mullabakka Cultural Centre, (TCL 2011, p.131.)

Mullabakka is not a building with a garden around it, or a garden with a building in it. It is not a museum or gallery or theatre or garden. But it does all the things that these places do – and more (TCL 2011, p.128.)

The absence of program in the interior space is in contrast to the heavily programmed and narrated external spaces of the square. The immediate surrounds of the cultural centre is in itself are densely designed. This will be discussed in detail later in the paper, as the external spaces throughout the square are highly curated and scripted.

This anomalous reversal of the centre's internal and external spatial relationships raises two questions, especially when contextualised against the history of Indigenous cultural centres developed throughout the 1990s. Firstly, the on-going viability of an unprogrammed and as yet unfinanced cultural centre must be questioned. The experience of extensive cultural centres constructed throughout Australia in 1990s lesson suggests that structures of governance, programming and economics are the key determining factors of ongoing investment from the community, and ultimately success.⁷ This position is echoed by McGaw, Pieris and Potter (2011, p.308.), who argue that

“Ensuring that the flows of community to and from a cultural building continue to breathe life into it after building works are complete involves a deep understanding of relationships, and an interrogation of the legal and organisational structures that settler society often places around them.”

Telfer is the driver of both the form and program of the cultural centre. However, in terms of ongoing sustainability it is problematic for a single representative of a cultural group to be the sole driver of both the form and program of the cultural centre. This is not to diminish the expertise, experience and role that Telfer has had within the design team. Rather, it points to a potential vulnerability in relying on a single individual or perspective to be representative of a diverse Kaurua and Aboriginal community, as opposed to a wider community investment in the project.

Secondly, the reversal of active-passive spatial relationships in Victoria Square/Tardanyangga reduces the ability of the external open to space to function with accepted meanings of civic. As discussed in following section, this compromises the ability of the public to use the space for unscripted use. Further this limits the political and social potential of the site. Is civic in this case understood as the expression and representation of culture and history, or instead of space to facilitate experience, interaction and dialogue of democracy?

Programming the Civic Square

Notions of civic space and the right to city are the subject of extensive scholarship crossing urban design, cultural studies and geography. (Lefebvre 1972, Rowe 1997, Massam 2000, Mitchell 2003, Harvey 2012) Within a western context, civic space is understood to encompass competing tensions of singularity and pluralism; critique and accord; fluidity and transcendence; familiarity and development; and the collective and the individual. Accordingly, to Rowe (1997, p.218.), civic space:

....is as once familiar, pluralistic, and critical - at least to the extent that this last quality can be sustained architecturally. It is also specific, socially relevant, transcendental, and concerned with everyday life, including matters of both individual and collective experience. Furthermore it is inextricably bound up with the continual advancement of the expressive means by which it is made and elaborated.

Mirroring Rowe's definition of civic space, Massam (2000, p.77.) suggests that there are five seemingly contradictory imperatives of the civic state:

- Citizens assert rights – citizens have obligations
- Citizens seek security – citizens seek liberty and freedom
- Citizens assert individual rights – citizens contemplate collective rights
- Citizens are concerned about the present – citizens contemplate the future
- Citizens are concerned about us and we – citizens contemplate the situations of strangers and unknown others.

Emmett's definition of 'new civic' is not positioned within the lineage of this theoretical understanding. Instead it can be argued that Emmett's framing is responding to museological strategies rather than understandings of urban space. Although Emmett (TCL 2011, p.107.) claims a "fresh approach to the concept of the public domain created by informal people experience rather than formal urban planning" there is little evidence in the proposed design interventions of people's ability to use and gather in space in an indeterminate manner. This is somewhat surprising given the site's history as a space where Aboriginal people have gathered to live, protest, commemorate and celebrate.

Instead, it can be argued that Emmett’s understanding of the ‘new civic’ is aligned with techniques developed for the Museum of Sydney, maintaining a focus on material culture while also engaging with the ‘poetics of place’. This approach to museology practice emerged in the ‘new museum’ movement of the 1990s, reflecting the increasing understanding of the contingent nature of evidence and historical truth. (Gregory 2006, p.2.) Emmett typically worked with an array of creative practitioners, eschewing the conventional dominance of the writer, “to both compose and liberate the metaphor of place.” (Emmett 1996, p.114.) The ‘new museum’ typically deploys technology and interaction is demonstrative of its image of newness. (Message 2006, pp.604-605.)

The new museum’s emphasis on the intersection of art, new media and museology clearly shapes Emmett’s strategy for *The Curated Square* which highlights an “integrated approach to public art, design, interpretation, heritage, digital interactions and wayfinding.” (TCL 2011, p.107.)

This philosophy is most evident in three major elements:

- digital installation,
- textual inscription,
- ‘the arcadian grove’ installation.

What is puzzling is the intent to construct and heavily interpret place as distinct from allowing the place to operate as a civic space.

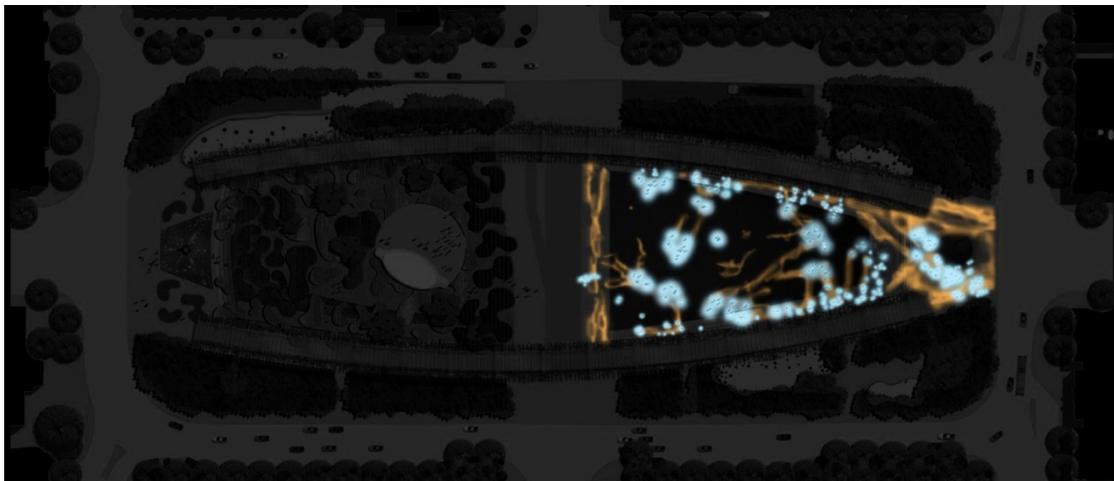


Figure 3: The Digital Sigh (TCL 2011, p.116.)

Real-time digital installations and projections, drawing on technology, lighting and social media, suggest a new interactive landscape. For example, the “Digital Sigh” projects the passage of people through the square onto the urban surface, offering a kind of residue of movement as shown in Figure 3. (TCL 2011, p.115.) Other strategies include a large digital scrim suspended from the arbour, a series of OLED ‘augmented reality’ pillars, digital pod sculptures, and digital graffiti projections. However, a closer interrogation of this interactivity reveals a highly curated and prescriptive

strategy, best illustrated by the concept of the digital graffiti. The digital graffiti strategy offers the user the opportunity to generate 'digital messages' that could be projected onto the surfaces of the square and publically 'tagged' to a geospatial location using smartphone technology (Figure 4). However, this strategy implies a level of content control with all messages running through the 'digital graffiti' application. This inevitable form of censorship institutionalizes interactivity, removing the subversive edge and creative potential normally associated with graffiti and urban art projects.



Figure 4: Digital Graffiti (TCL 2011, p.124.)

A highly curated approach to history and meaning is further developed through the Arbour Text Fragments. Inscribed quotes on the surfaces of the arbour promenade structure have been drawn from the historic record by curators to tell the "rumblings of the collective unconscious of Adelaide city - musing and debating about who has the right to be or not to be in this place?" (TCL 2011, p.108.) Ironically, while the surfaces are embossed with text about exclusion, the whole design strategy is an exclusionary practice. In particular, Indigenous users of Victoria Square/Tardanyangga do not need to be reminded of spatial 'exclusion', as this is engaged through their own lived experience. According to Hall (2004, p.62.), the community of Aboriginal people who have regularly met in the square over the past 30 years are some of the most marginalised and traumatised in the Indigenous community, as members of the Stolen Generations.

This heavy narration is continued through the Arcadian Grove, a ruin-like installation through which the colonial statutory of Victoria Square/Tardanyangga are dismantled, "knocked off their pedestals" as conceptualized in Figure 5, and repositioned alongside a sound installation. According to Emmett these statues are reconceived as 'The Oracles of Victoria Square' which act as witnesses to past events in the Square. This installation is clearly derivative of the practices developed at the Museum of Sydney. At the Museum of Sydney Emmett utilised a strategy of juxtaposition, through the manipulation of image and text, in order to counter a linear view of history and reveal new

meanings. (Carter 2004, p.75.) For example, both the sound installation by Paul Carter, *The Calling to Come* and the forecourt installation designed by Janet Laurence and Fiona Foley, *The Edge of the Trees*, utilise the juxtaposition of language and objects to interrogate relationships between Eora and colonial subjects at the site of contact. At the Arcadian Grove we find the direct application of these same techniques. In the case of the Museum of Sydney, Emmett consciously adopts these techniques to generate a sense of place through the metaphor of absence. (Emmett 1996, p.112., Gregory 2006, p.12.) This is designed to reveal a place that is obscured, the archaeological dig site of Sydney's First Government House buried underneath the new museum, and is located in a space that contains no existing users. However, this approach is perplexing when positioned in a civic space with existing users and associations of place.



Figure 5: The Arcadian Grove (TCL 2011, p.112.)

Read against the historical development of Adelaide, the goals of reconciliation and an understanding to civiness, these interpretative ambitions and techniques expressed in this new vision for the square appear somewhat out of place. Rather than delivering a space of civic engagement inclusive of Indigenous Australians, the scheme serves to institutionalise and neutralise civic space, while shutting down opportunistic and spontaneous uses of space. Further, the heavily designed external spaces erase the existing civic relationships and meanings inherent to the site, while the proposed cultural centre appears to have minimal purpose, funding or engagement with the existing Indigenous community.

The importance of Indigenous spatial engagement and ownership has been discussed extensively in scholarship from architecture, urban design, cultural studies and history. (Jacobs 2002, Fantin 2008, Go-Sam 2008, Gulson and Parkes 2010, McGaw, Pieris et al. 2011, Muldoon and Schaap 2012). Consistent to all is the importance of engaging with the practices of everyday life, arguing for an engagement with the dynamics of contemporary Aboriginal life, rather than the representation of Aboriginal culture through static artifact or symbolism. This framing also holds true to the notions of civic space. This understanding is less preoccupied with the meaning of space, but instead how space can support individual and collective expression.

Conclusion

The redesign of Victoria Square/Tarndanyangga Square offered the potential for demonstrating a fresh design approach for a civic space reflective of a new era of reconciliation. It is important to acknowledge the challenges faced by the design team given this task. Victoria Square/Tardanyangga is the first urban design project of its kind, and is a project without precedent in Australia in terms of encapsulating the aspirations of reconciliation within a civic space.

Unfortunately the strategies suggested by the design team allow for limited engagement with the broader politics of civic space, and do not appear to build upon the lessons learned by other designers in developing culturally driven design outcomes. The siting of the Mullabukka Cultural Centre within the square, with a limited sense of community connection, governance or funding structures raises significant questions over its viability.

The adoption of a 'new civic' philosophy derived from the experience of the new museum, rather than an understanding of physical and political space leads to the privileging of representational strategies of narration, symbolism and inscription over spatial practices reflective of collective and individual expressions of democracy. Rather than interrogating what civic space might be in an era of reconciliation, the design instead offers a new 'interpretation' of place layered over a space that is already imbued with significance and meaning realized through lived spatial practices.

Problematically, these strategies potentially represent the continuation of practices of spatial exclusion that have marginalized Indigenous relationships to civic space though out Australian cities. The formalisation of program, the restriction of informal use, the heavily narrated spaces and the highly curated interactions all act to control and institutionalise how the public perceive and use public space. Combined, these strategies may act to 'museumify' the square rather than redefining the square as the vibrant heart of the city.

¹ The Aboriginal people who live in and around the Adelaide area, the Nunga people, are composed of descendants of the traditional owners, the Kurna, and nearby bordering people of the Narrunga and Ngarrindjeri territories. Today, the city's Aboriginal and Torres Strait Islander population is recorded at 15,597 people (2011), representing 51.25 per cent of Aboriginal and Torres Strait Islander population of South Australia, and 5.6 per cent of the national Aboriginal and Torres Strait Islander population of Australia.

² The area south of the Torrens, the location of the city of Adelaide, is identified in Kurna language as Tandanya, meaning 'red kangaroo rock'. The area is a special place, linked to a sacred being, *Tarnda*, who transformed into a red kangaroo.

³ According to Jones (2007), the tree was planted during the Royal Commission into Aboriginal Deaths in Custody which ran from 1987 through to 1991. The Royal Commission was called due to public concern over the disproportionate number of deaths of Indigenous inmates in custody in Australia's prison system throughout the 1980s. The report found that Aboriginal people were over-represented in Australia's prison system. The publishing of the report formally began the process of reconciliation in Australia.

⁴ Commemorating the visit of Queen Elizabeth to Adelaide in 1963, the fountain incorporates three figures, including an Aboriginal man, representative of the three main rivers that supply water to Adelaide, the Murray, the Onkaparinga and the Torrens. Dowie used the commemoration of a Royal visit to reflect on the respectful recognition of Aboriginal people and culture, and their inclusion in the broader citizenship of the nation.

⁵ The ACC also became one of the first councils to sign the National Sorry Day Acknowledgement in 1998, which formed the basis for the ACC Reconciliation Action Plan.

⁶ This approach to museology practice emerged in the 'new museum' movement of the 1990s, reflecting the increasing understanding of the contingent nature of evidence and historical truth. (Gregory, 2006, p.2.) The 'new museum' typically deploys technology and interaction is demonstrative of its image of newness. (Message, 2006 pp.604-605.)

⁷ This experience has been shared throughout Australia, in the failed Galina Beek Living Cultural Centre at Healesville, the unrealised Musgrave Park Cultural Centre in Brisbane, and the contested Melbourne Museum space of Bunjilaka.

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Incorporating Indigenous Australian Knowledge and Perspectives into Planning Practice

Past, present and future

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The history and contemporary practice of land-use planning and place-making by Indigenous Australians is poorly understood by academics, students and practitioners in the field of urban and regional planning in Australia. This is despite recent high-profile events which have increased the profile of Indigenous peoples' rights, such as the recognition of native title by the High Court in *Mabo v the State of Queensland [No. 2] (1992)* 175 CLR 1 and The United Nations *Declaration on the Rights of Indigenous Peoples* (2007), and Commonwealth policy and reconciliation discourses. Further, little impact has been discernible arising from the adoption of reconciliation policies by government bodies, planning authorities and the Planning Institute of Australia (PIA). This paper reviews this lack of progress and discusses why this is a problem for Australian planners which needs to be addressed.

The paper reviews the present Australian historical and socio-cultural context in terms of collaboration with traditional land owners as it relates to contemporary planning practice. It considers ontological, epistemological and axiological differences between the dominant western model of planning and Indigenous models, and the challenges this presents. A case-study documenting past, present and future planning practices at Lake Condah in South West Victoria which is the Country of the *Gunditjmara* and *Budj Bim* will bring to life these topics through the documentation of Indigenous planning practices prior to and post European arrival. It offers a vision for the future of planning with Indigenous communities. The paper envisages a future which values and incorporates Indigenous place-making and planning, which goes far beyond the tacit acknowledgement of traditional owners commonly observed around Australia today.

Keywords: Indigenous planning; *Gunditjmara*; *Budj Bim*; Lake Condah; reconciliation

Introduction

Period and contemporary town planning histories of Australia commence at the European colonization or invasion of this continent. Underpinned by settlement patterns and models, surveying strategies and theoretical world views, they articulate that life – and thus ‘planning’ – on the Australian continent commenced through dreams in the United Kingdom about what to impose on an “empty continent”; thus initiating the terra nullius myth that has perpetuated much of Australia’s ‘history’ and thereby its planning ‘history’.

The dichotomy is that the Australian continent was settled some 100,000-60,000 years ago, resulting in a landscape of mixed semi-sedentary and permanent communities of approximately 250 countries each with their own language. ‘Settled’ and ‘semi-sedentary’, as European-derived terms, muddy historical and contemporary literature about Australia as they are predicated upon European development preconceptions and in particular about generic appraisals of Aboriginal occupancy of the Australian continent (Williams 1988).

Thus a colonized Eurocentric translation of Australia’s pre-colonial and post-colonial planning histories exists and the decolonized narrative is little expressed or investigated. The irony is that while the essence of contemporary ‘planning’ is to consciously devise, execute and monitor strategies, policies or plans that are linked to land-based activities and or resources, such a strategy, plan and policy occurs within Indigenous cultures that historically curated (and in certain parts continue to curate) the Australian continent before and since the invasion (Gammage 2011).

As an example, the Gunditjmara people of south-western Victoria are, and continue to be, the antithesis of this contradiction and are incorrectly mapped into these Eurocentric definitions. In their eyes, they do not ‘own’ their ‘country’ but rather are the custodians of this land on behalf of ancestral beings who created this environment, with Budj Bim integral to their narratives and ‘laws’ (Dixon 1996).

‘Country’ is also an Aboriginal term as it embodies both the tangible and the intangible, as well as the before, now and after, and the below, here, and above realms of both day and night. Thus, a contrasting definition to the Eurocentric definition that assumes a rural swath of landscape with artefacts and citizens reflective of some tangible relationship(s) and pattern(s). Thus the Gunditjmara perceive their role as a cultural planner sustaining and guiding the health of the landscape or ‘country’ to which they have been vested responsibility.

To the Gunditjmara people of western Victoria in Australia in the custodianship of their landscape and process of landscape planning, “we continue our heritage” to the quote the Acting Chief Executive Officer of the Gunditj Mirring Aboriginal Traditional Owners Corporation, Damein Bell.

To secure rights over this ‘country’ against ongoing claims of others on it, the Gunditjmara have strategically engaged with European systems of land tenure and heritage valuing as vehicles to achieve their objectives. Thus in recent times the Gunditjmara community have recognized that it

has become necessary to 'own' land title in accordance with European land conventions to reinforce and achieve these custodianship responsibilities. Thus, they are 'playing' the Eurocentric 'game' respecting and adapting the Western ideals but strategically seeking to achieve their cultural responsibilities to continue, maintain and enable their 'country'. Their historical acts of land manipulation and planning to craft a unique hydraulic engineering system resulted in an advanced internationally-significant terrestrial aquaculture system, with associated native vegetation and wildlife management regimes, creating a particular landscape unique in Australia for which they sought and now have a 'National Heritage Landscape' designation. The former is further evidenced in the writings of Gammage (2011) in his advocacy of Indigenous informed land management regimes and planning systems

The Gunditjmarra, therefore, are seeking the re-establishment and legitimization of their integrated knowledge system as a planning and land use management plan and suite of strategies.

Where is the Western Colonisation of Australia now?

The taproot is the root of the tree that goes the deepest. In my family taproots are really important because, as my mother always says, 'We didn't get here by ourselves. We have others to thank for that and we should acknowledge it'. Those family members that make up the taproots are still very much alive and living with us today, and this reinforces a sense of self, belonging, and place. Never forget your taproots because they'll never forget you - Tjalaminu Mia (Mia 2007: 208).

Australian planners, environmental designers and land managers are beginning to embrace an informed and shared practice of knowing Aboriginal notions of 'country' and in turn an understanding of what that means to land and water stewardship and professional practice across Australia. These are extremely important and challenging times for Australian planning systems and their educators and practitioners.

Historically, non-Indigenous scholar Debra Bird Rose's seminal *Nourishing Terrains* (1996), addressed the now defunct Australian Heritage Commission's (AHC) urgent and poignant inquiries into the assessment and quantification of cultural landscape (tangible and intangible) values and their associated land and water attributes across the Australian landscape. Rose (1996: v) was specifically commissioned to "explore Indigenous views of landscape and their relationships with the land," in the temporal context of debates about 'wilderness' and how such a classification of land was to contribute to the AHC's charter to identify and conserve 'National Estate'. Her treatise offered an informed cultural land planning and management conversation with Aboriginal Australia. Through her eyes, 'culture and landscape' were inclusive of Aboriginal knowledge systems of sustaining environmental values and their associated obligations and cultural rights for being. This documented line of argument confounded traditional perceptions in the AHC at the time that accepted transformative understandings of the Australian environment and, landscape (wilderness or otherwise). Rose's thoughts about 'country' however opened up a deeper discourse about Australian 'space' and what could be shared and learnt about Aboriginal relationships and associations with Australian cultural landscape systems.

Rose poignantly revealed to Australian popular culture that in Aboriginal knowledge systems, everything is alive and everything is in relationships; past, present, and future are one, where both

the physical and spiritual worlds of 'country' interact. Thus in Aboriginal culture, the 'Dreaming' is an ongoing celebration and reverence for past events: the creation of the land, the creation of law, and the creation of people. Stories historically and orally vested to Aboriginal peoples from the 'Dreaming', inter-weave that everything comes into being through story, and that 'Dreaming' is their ancestors. All things exist eternally in the 'Dreaming'; the 'Dreaming' is alive. Thus, the individual is born to 'country', not just in 'country', but from 'country', and his or her identity is inextricably and eternally linked to the 'Dreaming'. Rose (1996: 1) suggested:

In Aboriginal English, the word 'Country' is both a common noun and a proper noun. People talk about Country in the same way that they would talk about a person: they speak to Country, sing to Country, visit Country, worry about Country, grieve for Country and long for Country. People say that Country knows, hears, smells, takes notice, takes care, and feels sorry or happy. Country is a living entity with a yesterday, a today and tomorrow, with consciousness, action, and a will toward life. Because of this richness of meaning, Country is home and peace: nourishment for body, mind and spirit; and heart's ease.

As observed by Revell and Milroy(2013), Australian space is not emptiness, a void to be filled, or a neutral place for action. Rather, space through the Indigenous lens is imagined – called into being – by individuals, families, and the cultures of which they are a part. Yet we experience a double spatial jeopardy in Australia, which is the oldest intact environment (120,000 years) in the world, and the oldest Indigenous culture in the world (60,000+ years). These spatial qualities negate uniformity and featurelessness within 'country'. They also allow 'country' to speak for itself. Indigenous peoples humanize their environments because of their (non-material) 'country' relationships and their abilities to sense the resources of 'country' itself.

Importantly, *Nourishing Terrains* (1986) now indelible mantra -- "If you are good to Country, then Country is good to you" – eventually has become revelatory to the planning and design academies and professional institutions of Australia, and elsewhere. This text came at a critical time for Australian planners where the study of both ancient and contemporary biophysical and human ecological systems were overtly staring at one another, desperately seeking to understand the specificity of reciprocal environmental and social meanings and their associated ecological relationships. Above all, 60,000 + years of Aboriginal caring for 'country' was beginning to make sense to Australian planners, and the professional inquiries and relationships Rose (1986) helped to set up were to change bi-cultural Australian planning practices forever. The cogent fact that *Nourishing Terrains* (1986) arrived in Australia only 27 years ago in the 'Nation's' collective 60,000 year history should be extremely significant to Australia's planning histories, and might we say unconsciousable to Australia overall.

Today, despite some isolated regional achievements, Australian bi-cultural planning practices have much to learn from other First Nation groups across the globe. Notably, Canadian and New Zealand planning institutions have well-advanced, culturally-inspired educational programs, professional policies and accountable practices offered and operated by Indigenous professionals and their communities for the betterment of bi-cultural (Indigenous and non-Indigenous) communities.

Professional cultural protocols, ethics and respectful ways of working and engaging with 'Indigenous Ways' are paramount to these successful bi-cultural planning systems (Havermann 1999; Walker

2004). Professional (and everyday) matters of cultural competency, inclusiveness, respect and equity are important, yet they somewhat pale against a greater de-colonised understanding of Indigenous ways of knowing, planning and managing land and community.

Matters of cultural sustainability, endurance of stewardship and custodial care and generative practices of creative land, water and sky planning and design are significant primarily because they are understood as a set of overdue de-colonised processes rather than necessarily any collection of re-colonised product. Planning ‘outcomes’, physically tangible, ‘real’, or manifested otherwise, are important yet they are not to be sacrificed by short-cutting or ignoring ‘proper’ cultural ways, socialisations and associated rights of engaging with living ancient and contemporary cultural obligations and custodial practices amongst family, community, land, water and sky. Planners are finally learning that there are only certain people who can speak and work for certain country. And at times, these rights cannot be shared in a bi-cultural planning realm.

Indigenous Canadian cultural theorist and scholar Margaret Kovach, for example, has heralded decolonizing research practices where epistemological planning and design research, mapping methodologies and project implementation initiatives are designed as ongoing Indigenous-led conciliatory ceremonies in their own right, determined by strict inter-cultural protocols, ethics and customs of knowledge inquiry, development and keeping. Involving ‘two-way’ relationship building and the dialogical spaces in which they develop, performance and celebration are essential ‘ceremonies’ in the project design process and remain at the forefront of improving any planned landscape. Senses of community need and site specificity are bound up with different ways of knowing, decolonizing theory itself, story as method, cultural protocol and ethical responsibility (Kovach 2009).

Walker et al (2013) has collated much of the North American discourse on this topic, echoing Kovach (2009), and Porter (2004, 2006, 2010, 2013) and Smith (1999, 2012), in Australia and New Zealand respectively, are key proponents of this Reclaiming Indigenous Planning (Walker et al 2013) argument.

An exemplar Australian model of bi-cultural collaboration can be found in the south-western Western Australian (WA) planning work of Collard and Palmer (2008). Nyungar senior Len Collard directed the development of a set of nine (9) meta-narratives – see Table 1 -- that would become operational principles to undertake planning and design studies on Nyungar lands in WA. They offer planners a way of working with ‘Nyungar Ways’ and are intentionally broad ranging and holistic in their understanding of Nyungar peoples, their ‘country’ and their ways of working. Non-replicable per ‘country’, these principles are specific to the Aboriginal country to which they belong.

Table 1: Nyungar Meta-Narratives of Planning. Source: Collard and Palmer (2008).

Meta Narrative #	Meta Narrative Principle
1/ <i>Windja Noonook Koorliny</i> or Where are you going (Interrogating the planners own motivation and desire)	The first step in any process of recognising the importance of <i>Nyungar</i> systems of land use ought to involve planner and design workers interrogating their own desire – asking the question: where am I going and what motivates my work;

2/ <i>Nidja Nyungar Boodjar</i> or this is Aboriginal land (Land & Place)	Planning and design work ought to begin with a recognition that the south west of Western Australia is <i>Nyungar Boodjar</i> or <i>Nyungar Country</i> . This means that a principal theme which needs to run through planning work ought to be recognition of <i>Nyungar's</i> knowledge of legal, cultural, linguistic, and custodial obligations and rights to country. Designers must be mindful of their legal and moral obligations to recognise and respect the prior ownership of <i>Nyungar</i> cultural custodians. In practice this includes planners and designers understanding their obligations under federal and state Aboriginal heritage legislation, researching native title claims and perhaps negotiated native title agreements, and establishing sensitive plans which incorporate <i>Nyungar</i> protocols for <u>Nyungar</u> involvement;
3/ <i>Moorditch Boordier</i> or strong path-makers (Strength and Leadership)	It is a mistake to assume that Nyungars have, as yet, had little influences on the way that other Australians use and engage with land. Design work should regularly draw out the point that Nyungars have often acted in leadership roles, influencing, directing and shaping economic, cultural and social life for other Australians growing up in the south-west. Designers need to shift their thinking to emphasise the strength and resilience of Nyungars and Nyungar culture. Far from being dupes who have always lost any capacity to shape landuse and design, Nyungars have, in different historical moments, been instrumental in influencing the way other Australians use and interpret country;
4/ <i>Kura, Yeye Boorda</i> or the past, today and in the future (Continuity)	It is a mistake to assume that <i>Nyungar</i> culture and land-use, while once being important, is no longer powerful. Planners and designers ought to be mindful of the need to include a balance in the design between 'old stories' and contemporary stories and that <i>Nyungar</i> land use has always been dynamic and is ever present. In other words designers should try and find ways to show continuity in <i>Nyungar</i> influence on land use and landscape design, culture and access to the south-west by seeking out examples of continuity between past land use with present land use;
5/ <i>Wangkiny</i> or speaking (Language)	It is also a mistake to think that <i>Nyungar</i> language is dead. It is very much alive, particularly so in the names that are often still used to describe places. <i>Nyungar Wangkin</i> or language has been critical, particularly in relation to nomenclature. Planners and designers who begin to learn and appreciate language will have keys to understanding <i>Nyungar</i> land use in particular sites;
6/ <i>Boola Wam</i> or lots of strangeness (Shared Difference and Diversity)	It is a mistake to assume that Aboriginal culture represents one unified set of values, ideas and experiences. In any design process there ought to include a balance between an emphasis on how <i>Nyungar</i> and history is distinct and how aspects of <i>Nyungar</i> life are shared with other Australians. In other words, planners and designers should look at different as well as shared cultural experience. At the same time design projects ought to show the diversity of <i>Nyungar</i> life and experiences.
7/ <i>Nyungar Karnya</i> or shame and respect (Culturally Sensitive):	Planners and designers must be sensitive to <i>Nyungar</i> protocols, learning modes and ways of doing things. Many of these values include: respect for elders, the importance of maintaining <i>Nyungar</i> family connections, the central nexus between country and family, taking pride in community, care for the environment, encouraging creativity, regard for the views of others, emphasising active and personal learning, placing great store on learning through listening and observing;

8/ <i>Ngulluckiny Koorliny Nyungar Wedjela</i> or we travel together Black and White (Interaction and Collaboratively):	Planners and designers should find ways to make and maintain contact and dialogue with <i>Nyungar's</i> in the communities they are working in. People need to make opportunities to meet, interact and consult with a variety of <i>Nyungar's</i> . Designers, particularly non-Aboriginal people, must begin to understand the value of shared exchanges and reciprocal learning. The knowledge, practices and information of <i>Nyungar's</i> are gaining in value in the market place. Planners and designers must plan to have contributions of <i>Nyungar's</i> recognised in practical ways; and
9/ <i>Boola Katitjin Koorliny Nitjar Boodjar</i> or with much informed thinking and moving in the land (Thinking and Using Land in Many Ways):	Within many <i>Nyungar</i> accounts we find the idea that country is relational and land use is multiple and contextual. For <i>Nyungar's</i> particular places are related to other places and it is meaningless to talk about one place in isolation from other places related to it. This is in contrast to many western ideas about land use being specific to one activity (often one person) and fixed over time. Planners and designers must begin to understand <i>Nyungar</i> ideas about spatiality and how <i>Nyungar</i> use of space is much more contextual and inter-relational than standard western ideas about land use and mapping space.

Australian decolonising discourses

Australian planning is predicated on Eurocentric definitions of planning and land settlement that run counter to many Indigenous systems of planning. Subject to little discipline-specific introspection, scholars, including the Australian planning profession and its own Institute (PIA 2002, 2010), have started re-thinking this pre-condition. Anthropologist Stanner (1968) first challenged the 'great Australian silence' on Indigenous issues in the 1960s and subsequent authors and political and legal activities heightened debates about Indigenous marginalization in Australian society and the absence of Indigenous knowledge and people in citizenship and enfranchisement.

These differences of perceptions are increasingly embodied in several actions by Indigenous peoples and communities aimed at redressing the denial, dispossession and discrimination against their traditional rights and interests. Included are, the Gurindji Strike (or Wave Hill Walk-Off) in 1966; the successful Constitution Alteration (Aboriginal People) 1967 Commonwealth referendum in 1967; the *Milirrpum v Nabalco Pty Ltd*, (1971) 17 FLR 141 or Gove land rights Australian High Court determination that legally legitimized terra nullius and that no concept of native title existed in Australian law; the *Mabo v Queensland (No 2)* 1992 (commonly known as 'Mabo decision') decision by the High Court of Australia that declared terra nullius to be invalid and legitimized Indigenous 'ownership' of land and water based upon traditional custodianship practices and 'laws'; the *Wik Peoples v The State of Queensland* (commonly known as the 'Wik decision') of 1996; the Motion of Reconciliation by Prime Minister Howard in 1999; and, more recently the apology to the Stolen Generations by Prime Minister Rudd in 2008. Another key example is the Racial Discrimination Act 1975 (Cth) that was the lynchpin of the *Mabo (No. 1)* determination because the Court found that the Queensland government's attempt to effectively wipe out native title rights while the *Mabo* case was before the Courts, was invalid on the basis of race and was in clear breach of the Racial Discrimination Act 1975. The Racial Discrimination Act 1975 also provides the right for compensation for the loss of native title rights subsequent to the Racial Discrimination Act 1975.

The Mabo (No. 2) decision is highly significant to Australian planning histories as it clearly demonstrates that traditional custodianship practices and 'laws' constitute a system of conscious land management curatorship and thus an act of planning of lands and resources. 'Laws' embrace Indigenous myth, moral codes and their narratives linked to place, or a series of places (Gammage 2011; Rose 1996, 2000; Sandercock 1998).

Anthropology, geography and history academics have been perceptive and relevant in participating in much of this debate (Reynolds 1997). But the planning discipline has been lax in its introspectively and ethical responsiveness, still deferring its appraisals to dates of colonization despite Native Title legislative and Aboriginal and Torres Strait Islander cultural heritage legislative responsibilities. Thus historic and contemporary planning interrogations continue to exclude and marginalize despite pleas 'from the edges' of the discipline by authors and planning practitioners including Johnson (2010, 2014), Wensing (2007, 2011), Jackson (1997), Cosgrove & Klinger (1997), Lane (2005, 2008), Jones (2005, 2010a), Porter 2004, 2006, 2010, 2013), Porter & Barry (2012), and Barry (2012). These authors have questioned this ethical accountability and offered case studies that demonstrate alternate planning approaches and outcomes that robustly express and fulfil Indigenous interests, aspirations and 'planning' strategies.

Wensing summarizes it as:

This cultural blindness means that conventional land and property planning as well as management regimes have been, and continue to be, instruments in sanctioning and reinforcing ABTSI [Aboriginal and Torres Strait Islander] people's dispossession of their land and culture, causing loss of physical, spiritual and cultural traditions and customs (Wensing 2007).

The Mabo (No. 2) (1992) and Wik (1998) determinations, unfortunately, relied upon the demonstration of physical or tangible 'evidence'. But, as a consequence they have proven that rich and continuing narratives and legacies have legitimacy in the Native Title discourse. Where 'evidence' is muddled or obliterated by years of dispossession such evidence is much harder to document and prove within the Western legal system (for example: http://www.nntt.gov.au/news-and-communications/newsletters/native-title-hot-spots-archive/pages/yorta_yorta_v_victoria.aspx). Notwithstanding this barrier, cultural re-empowerment and re-definitions of 'ownership' have been forthcoming through various measures; including the creation of statutory land rights grants regimes, direct transfers, purchases on the open market, declaration of cultural heritage sites or zones, and re-naming or dual naming of places through Indigenous-informed or associative toponyms, consultation and direct involvement in national park joint planning and management arrangements. They have also been deceptively and tacitly woven into larger reconciliation strategies.

Therefore, while land 'ownership' and traditional country, as a terra nullius reversal, is known and increasingly becoming respected in both general and planning debates, the legislation of planning process and perspectives in land management and landscape planning has been limited and superficial, hampered by planning practitioner and academic naïf and lack of depth of interrogation and appreciation. Such a knowledge gap can be met, in part, by detailed and localised studies of

Indigenous and non-Indigenous planning histories and joint practices. One such case is offered by the Gunditjmarra of western Victoria.

A journey into the planning of *Budj Bim*

The Gunditjmarra are historically and continue to be landscape planners possessing technical expertise in freshwater aquaculture and hydraulic engineering, and have more recently engaged consultant engineers, natural resource management scientists and other technical expertise to corroborate and inform their own management strategies for land now under their ownership. This knowledge and expertise arises from some 60,000 years of occupancy of a landscape tract in south-western Victoria, and includes unique specializations in architecture, natural resource management, and sustainability curatorship.

All these terminologies are deeply embedded in the planning discipline literature and language systems today, but do not accord with Indigenous language interpretations as they contain alternate notions of science and land management practices (Gunditjmarra with Wettenhall 2010; Reynolds 2005).

The Gunditjmarra represent one of approximately 250 countries or nations that resided on the Australian continent prior to European colonization and dispossession. Their 'country' stretched across most of the lower south-west of the Western District of Victoria, embracing the localities of Portland, Hexham, Hamilton, and Lake Condah today.

Their landscape beginning and its environment rotates around ancestral beings – part human, part animal – who brought life to this barren expansive continent (Gunditjmarra with Wettenhall 2010). As part of this narrative, Dreaming stories record the journeys of these ancestral beings whom left aspects or physical representations in the landscape, as part of this transformative role. Such stories are temporally deep in the origins of the landscape but also embedded in intermittent reappearances that have cast new transformations and responsibilities into the landscape. As Eileen Albert, a Gunditjmarra women, recounts:

In the Dreamtime, the ancestral creators gave the Gunditjmarra people the resources to live a settled lifestyle. They diverted the waterways, and gave us the stones and rocks to help us to build the aquaculture systems. They gave us the wetlands where the reeds grew so that we could make the eel baskets, and gave us the food-enriched landscape for us to survive (Albert in Gunditjmarra with Wettenhall 2010, p.7).

Every aspect of the Budj Bim environment and landscape holds some meaning, sense of purpose and contains a library of oral narratives about Indigenous science and history.

The ancestral being Budj Bim is integral to this environmental creation to the Gunditjmarra. His apparition resides in Mt Eccles, an erroneously colonial appellation that celebrates English aristocrat Eeles, where the doomed form of the mount is Budj Bim's forehead. With the eruption of his head, lava spat out and flowed through his teeth in endless streams of red lava, creating the Tyrendarra lava flow. To the Gunditjmarra, Budj Bim means "high head" and tung att means "teeth belong to it" in the Dhauwurd wurrung language. Budj Bim's journey and transformative acts link the axial castellated Serra Range at Gariwerd (The Grampians) to the desolate isle of Lady Julia Percy Island

(Deen Maar) in Portland Bay to Cape Bridgewater to the west, with Lake Condah in the centre. Included in this somewhat linear tract is the volcanic cone of Tappoc (Mt Napier), and the foreboding granite escarpment of Mutt Te Tehoke (Mt Abrupt) that watches southwards over much of this landscape. The Island, at the far end of the lava flow, is Deen Mar being the final resting place of the spirits of the Gunditjmarra people when they die. The head of Budj Bim itself is analogous to a Eurocentric sacred place because, to the Gunditjmarra, it is a place that only law men or Elders may venture and stand upon, and in their absence it is guarded by the silent sentries of gnearing or weeping she-oaks (*Allocasuarina verticillata*) (Bell pers. comm., 2010; Saunders pers. comm., 2010; Gunditjmarra in Wettenhall 2010, pp.6-7; McNiven & Bell 2010).

Within this 'country', formerly a 7,000-1,000,000 old volcanic plain, is an extensive dendritic watercourse system that flows north-south, often resulting in low-lying and seasonally perennial swamps, lakes and depressions. The undulating volcanic plain is composed of weathered basalt rock and soils, of 1.5 to 4 million years old, affords rich acidic native grassland and introduced perennial pastures to support extensive communities of herbaceous mammals and sheep and cattle respectively (Carr et al 2007). The most recent of these volcanic upheavals occurred some 20,000-30,000 years ago at Mt Eccles, causing the Tyrendarra lava flow that advanced 50 kilometres west and south of this volcano reaching under Portland Bay today. This lava flow progressively became distorted into hummocks and depressions, resulting in extensive fields of loose or interconnected small and large scoria, either heavily air-pocked or dense hard rock. Central in this flow route was the formation of Lake Condah.

The Gunditjmarra witnessed these volcanic eruptions; a major transformation of their 'country'. Their response, in terms of survival necessitated a shift from a semi-sedentary hunter-gather society to a semi-permanent society based upon intensive aquaculture production arising from their mastery of hydraulic engineering principles and their manipulation of this post-lava flow landscape. The end result, after some 25,000 years of landscape planning activity, and some 5,000-7,000 years of lava flow manipulation, was a semi-permanent community, dependent upon and culturally responsible for the intensive production and harvesting of fish and Short-finned Eel (*Anguilla australis*) through the conscious acts of engineering an intricate hydraulic system to support aquaculture production. Semi-permanency was aided by the formulation of unique micro-climatic responses, including architecture from stone and vegetation, a new-found role as a core food supplier and sharer/trader to adjacent countries and the wider region, and by their spatial and physical neutrality of land custodianship (Builth 2002, 2003; Clark 1990a, 1990b; Coutts et al 1978; Jones 1993; Lourandos 1980; Sutton 2004; Williams 1988).

All this knowledge and expertise was suddenly cast aside in the 1840s-60s, and again in the 1930s-50s, when colonial pastoralism, intensive settlement, guns, small-pox, uncontrolled fire, and the European protectorate and religious missions 'invaded' the landscape. Such ongoing incursions resulted in death, dispossession, cultural knowledge disintegration, 'natural' landscape transformation including extensive drainage measures, and the transposition of conventional European science onto the environment. During these periods, and over the wider 160 years, sheep invaded the pastures, the Gunditjmarra were herded, split, died of disease, and their knowledge and 'religion' were discredited despite attempts to fight against this onslaught (Gunditjmarra with Wettenhall 2010; Context 2000; Dawson 1881; McNiven & Bell 2010). These periods witnessed the

disintegration of these traditional aquaculture systems, the imposition of Western knowledge, science and land systems, and the cultural dispossessions of land, spirit and purpose.

The last 25 years have witnessed a major shift in these acts of intellectual and physical planning. The former Lake Condah Mission Station has been returned to the Kerrup Jmara Elders Aboriginal Corporation (KJEAC) (now Gunditj Mirring Traditional Owners Aboriginal Corporation, GMTOAC), additional properties progressively acquired and transferred to the Corporation, and Crown land, whether reserved (at Mt Eccles National Park) or unreserved, transferred to the Corporation openly or under deed embodying management and access conditions (Context 2012).

After an extended period of mediation, research and court hearings, Justice North of the Australian Federal Court ruled in March 2007, on *Gunditjmarra People v State of Victoria* (North FCA 474) in favour of recognising “non-exclusive native title rights” over 13,300 ha involving 2,000 parcels and 170 respondents. Such rights allowed the Gunditjmarra to access, enter, remain, camp, use and enjoy these lands and waters, to take the resources of these lands and waters and to protect places and areas of importance. Crucially the determination did not grant ownership or exclusive rights to these lands – it is a right to enter and use as hunters, gatherers and custodians of these sites – though it does acknowledge their symbolic and cultural value. The reasons for such a judgement are instructive as they acknowledge the long and particular history of the Gunditjmarra on these lands and the means by which they were displaced from them. The ruling therefore notes:

Dating back thousands of years, the area shows evidence of a large, settled Aboriginal community systematically farming eels for food and trade in what is considered to be one [of] Australia’s earliest and largest aquaculture ventures.

This complex enterprise took place in a landscape carved by natural forces and full of meaning for the Aboriginals who lived there.

More than 30 000 years ago the ground in this area rumbled and rolled as Aboriginal people nearby witnessed Budj Bim, an important creation being from the Dreamtime reveal himself in the landscape. That volcano that today we call Mount Eccles, is his forehead and the scoria are his teeth.

Budj Bim is the source of the Tyrendarra lava flow, which extends over 50km to the west and south and which is central to the history of [the] Gunditjmarra.

As the lava flowed from Mount Eccles to the sea it changed the drainage pattern in this part of Western Victoria, creating some large wetlands. Beginning thousands of years ago, the Gunditjmarra People started to develop this landscape by digging channels to bring water and eels from Darlots Creek to low lying areas.

They built dams to hold the water in these areas, creating ponds and wetlands in which they grew short-fin eels and other fish. They also created channels linking these wetlands. These channels contained weirs with large woven baskets made by women to harvest mature eels.

The modified and engineered wetlands and eel traps provided an economic basis for the development of a settled society with villages. Gunditjmarra used stones from the lava flow to

create the walls of their circular stone huts. Groups of between (2 and 16) huts are common along the Tyrendarra lava flow and early European accounts ... describe how they were ruled by hereditary chiefs (North, 2007).

The ruling further describes the history of the many attempts by the Gunditjmara to have this area recognised as their own, including a successful attempt to have part of it included in the National Heritage List in July 2004. This determination recognition that:

The remains of the system of eel aquaculture in the Mt Eccles/Lake Condah areas demonstrates a transition from a forager society to a society that practised husbandry of fresh water fish. This resulted in high population densities represented by the remains of stone huts ... The landscape of the Tyrendarra lava flow ... [is also] of outstanding heritage value because it provides a particularly clear example of the way that Aboriginal people used their environment as a base for launching attacks on European settlers and escaping reprisal raids during frontier conflict ... (North, 2007).

The recognition by the Australian Federal Court of prior occupancy and use was in the face of a spirited division of opinion by experts, anthropologists and archaeologists, as to the existence, use and meaning of the landscapes around the Tyrendarra lava flow. Thus anthropologists such as Lane have argued that there is limited material evidence of long term semi-sedentary occupancy, with the many stone circles adjacent to Lake Condah more likely created by natural processes – such as lava flows and tree roots - than by pre-contact Aborigines (Lane, 2008).

However, others, such as the Victorian Archaeological Service's (VAS) Lourandos (1997) and Builth (2002, 2004) argue a very different case, citing the existence of engineered canals and numerous clusters of stone circles as evidence of a sophisticated fish farming enterprise which, in conjunction with bountiful water and land based food supplies, allowed virtually permanent villages to be sustained. This conclusion is also supported by historical accounts of the region by the Chief Protector of Aborigines – George Augustus Robinson (1841) – and by others, including squatters, observers and travellers such as Smyth (1878), Dawson (1881) and Westgarth (1888) together with the Gunditjmara themselves who deride any alternative interpretation of their inheritance (Saunders pers. com. 2003; Gunditjmara & Wettenhall 2010; Johnson 2014).

In the Aboriginal Land (Lake Condah and Framlingham Forest) Act (1987) (Cth), the Victorian State government acknowledged that the land “was originally Aboriginal land” with “... that part of Condah land ... traditionally owned, occupied, used and enjoyed by Aborigines in accordance with Aboriginal laws, customs, traditions and practices.”

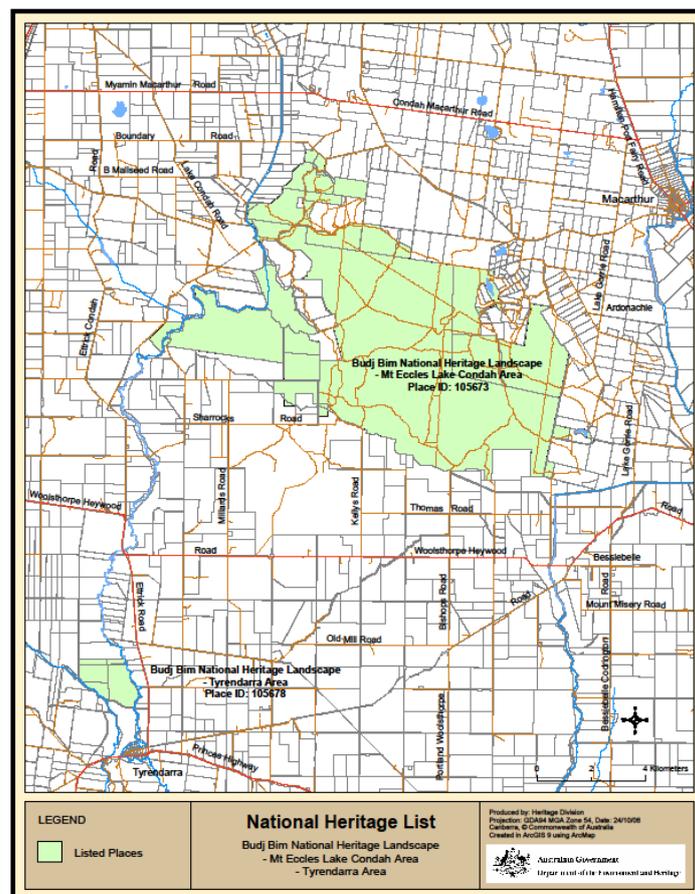
Further:

- iii. The traditional Aboriginal rights of ownership, occupation, use and enjoyment concerning that part of Condah land are deemed never to have been extinguished;
- iv That part of Condah land has been taken by force ... without consideration as to compensation under common law or without regard to Kerrup-Jmara Law;

- v. Aborigines residing on that part of Condah land and other Aborigines are considered to be the inheritors of title from Aboriginals who owned, occupied, used and enjoyed the land since time immemorial;
- vi. That part of Condah land is of spiritual, social, historical, cultural and economic importance to the Kerrup-Jmara Community and to local and other Aboriginals;
- vii. It is expedient to acknowledge, recognise and assert the traditional rights of Aboriginals to that part of Condah land and the continuous association they have with the land (quoted in Weir, 2004: 16).

This ruling is of national significance as it does not admit that Crown land acquisition involved the extinguishment of native title (something the Mabo decision and Native Title Act of 1993 (Cth) rules), recognises that taking land by force was illegal and necessitated compensation and acknowledges the economic rights of the traditional owners while allocating funds to assist in their management. Unlike the later Native Title ruling then, this ruling and related actions provided the foundation and economic basis for post-colonial planning by the Gunditjmarra.

Map 1: Budj Bim National Heritage Landscape (2004). Source:
<http://www.environment.gov.au/heritage/places/national/budj-bim/index.html>



A key change has been the gazettal of the Budj Bim National Heritage Landscape in July 2004 by the Commonwealth in recognition of their extensive aquaculture harvesting system embodying Indigenous technology and its continuity of husbandry practice; the role of the place as a venue to retaliate against colonial invasion and dispossession; the legal precedent of land ownership repatriation; the technical creativity of system construction and maintenance; and, the clear demonstration of ancestral being revelation in the physical form of Budj Bim and landscape transformation.

With repatriation of segments of their original 'country', the Gunditjmarra have consciously sought to renovate, heal and re-establish their traditional systems of landscape planning drawing upon generations of knowledge. To assist this process the Gunditjmarra have directly engaged contemporary technology and science to record past natural resource management practices and to enable future landscape planning and healing actions and processes.

This strategy consists of:

- harnessing generations of technical and cultural knowledge about the environment and landscape of Lake Condah;
- seeking to nurture and enable the environmental and cultural healing of ties to the landscape through cultural and ecological restoration initiatives; and,
- celebrating and respecting the spirit and narrative of Budj Bim, and thereby re-nourishing the life and creation of this ancestral being;

This is a major landscape planning initiative in which "we continue our heritage" embracing the philosophy and objectives of the Gunditjmarra community.

Reflections upon the *Gunditjmarra* experience as post-colonial planning

The Gunditjmarra story offers an additional way to that offered by the Nyungar to think and act in a post-colonial way. For their re-engagement with their cultural landscape has involved mobilizing a range of the colonial tools – of freehold land tenure, of scientific investigation and of ongoing presence – as well as the utilization of some critical post-colonial systems which recognize native title, cultural heritage and Indigenous knowledge and practices. The result is a mix of freehold titles, native title rulings, joint management arrangements and cultural heritage acknowledgements which affirm their past, present and future custodianship over the land of Budj Bim.

While reconciliation and repatriation around Lake Condah have gone some way to re-establishing respect and trust to the Gunditjmarra and Budj Bim, the next phase lies in the acceptance of Indigenous science and planning as legitimate forms of process and knowledge.

In terms of Indigenous planning, acceptance of generations of land management regimes, practices, and spiritual 'laws' – from fire practices, to wildlife culling and harvesting, to seasonal calendars and 'passive' management practices – have and continue to be substantially overlooked by professional planners as offering and possessing scientifically valid information, relevant and temporally-informed sustainability strategies, and legitimate landscape planning methods and practices.

The Gunditjmara are offering a contemporary insight. This insight is informed by their ancestral responsibilities. It is validated by contemporary scientifically-based reviews and investigations to better appreciate physical environment formation and relevant vegetation, wildlife, water, aquaculture, and seasonal regimes to restructure thought and to comprehensively guide and heal recent European land re-patterning and transformative acts.

Thus, in the words of the Gunditjmara, “we continue our heritage” through our acts of landscape planning.

Acknowledgements: Damein Bell, and Uncle Ken Saunders.

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History of Tsunami Planning in New Zealand

1960 to the present

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Tsunami awareness in New Zealand has evolved over the last 50 years since the 1960 Chilean tsunami, which struck New Zealand without official warning and caused significant damage, despite occurring at low tide. From 1960 to 2004 various measures were put in place, such as becoming part of the Pacific Tsunami Warning System, which led to improvements in official warning mechanisms.. However, surveys in 2003 showed that public understanding of tsunami risk and correct warning-response action was limited. Following the 2004 Indian Ocean tsunami the New Zealand government initiated an extensive review of national tsunami hazard, risk and preparedness. This review ranked tsunami risk to property potentially on par with that of earthquake and risk to life an order of magnitude greater. The Ministry of Civil Defence and Emergency Management (MCDEM) subsequently developed guidance for tsunami signage, development of evacuation zones, and dissemination of warnings. GNS Science has also produced guidance on how to incorporate tsunami modelling into land use planning. These initiatives represent significant steps forward in our preparedness for future

tsunami, but there is a considerable way to go to ensure adequate awareness and preparedness of individuals and communities.

Keywords: Tsunami, warning systems, land use planning, Bay of Plenty, Wellington

Introduction

Major subduction zone earthquakes and tsunami, such as the Indian Ocean (2004) and Japan (2011) events, have focused attention on the potential impact of a tsunami of similar size and extent occurring locally to New Zealand. Central and local government, scientific agencies and communities have directed attention towards the risk from an earthquake and tsunami being generated at the Hikurangi subduction margin, off the east coast of the North Island and from other sources (local and distant). Many agencies and communities are reviewing their existing arrangements based on observations from Japan, and our knowledge of risk reduction options is leading to innovative policy and practice. However, much still remains to be done to reduce the risk from a future tsunami in New Zealand.

New Zealand has many potential local, regional and distant tsunami sources. However, because of the difficulties associated with studying undersea plate interaction seismicity, the Hikurangi subduction margin is potentially the most hazardous and least understood. Knowledge of the potential for significant earthquakes at the Hikurangi subduction margin has been developed over several years through studies of background seismicity and plate motions (e.g. Wallace et al., 2009). Paleoseismic and paleotsunami studies demonstrate the past occurrence of significant earthquake and tsunami at the Hikurangi subduction margin (Cochran et al., 2006). Previous numerical simulation of tsunami due to various earthquake sources at the Hikurangi margin has demonstrated the potential for at-shore wave heights of 5m or more, and run-up to double that (Power et al., 2008). Development of a probabilistic tsunami model for New Zealand and high-resolution simulation of the onshore effects of local subduction zone tsunami are underway, as is development of a framework for detailed simulation of evacuation travel time for people at-risk from local tsunami (Fraser et al. 2012). Work is also underway to develop guidance for tsunami-resistant buildings, especially for use as evacuation structures (Leonard et al., 2011). Much of our understanding of the subduction hazard, particularly regarding frequency, remains uncertain. However, a significant local earthquake and tsunami, for which official warnings are not currently possible in New Zealand, is known to be a very real prospect.

This paper will outline the policy response to tsunami over the past 50 years, followed by specific risk reduction outcomes from recent events; namely land use planning guidance, evacuation planning and warning systems. Two case study examples are provided, which highlight the progress made in tsunami planning since 1960.

Policy response to tsunami hazards

Tsunami awareness in New Zealand has evolved over the last 50 years since the 1960 Chilean tsunami, which struck New Zealand without official warning and caused significant damage, despite

occurring at low tide (Johnston et al., 2008). From 1960 to 2004 various measures were put in place, such as becoming part of the Pacific Tsunami Warning System, which led to improvements in official warning mechanisms. However, surveys in 2003 showed that the public understanding of tsunami risk and correct warning-response action was limited (Webb, 2005). Following the 2004 Indian Ocean tsunami, the New Zealand Government initiated an extensive review of tsunami hazard, risk and preparedness (Berryman, 2005; Webb, 2005). This review ranked the tsunami risk to property to be potentially on par with that of earthquake and the risk to life an order of magnitude greater.

Table 1: National policy, council land community response to tsunami events, 1960-2013.

YEAR	TSUNAMI EVENT / TRIGGER FOR CHANGE	NATIONAL POLICY RESPONSE	COUNCIL AND COMMUNITY RESPONSE
1960	Chile	NZ joins Pacific Tsunami Warning System	
1990's			Some proactive councils erect tsunami signage, and other councils follow until present day.
2004	Indian Ocean		
2005		National review of tsunami risk & preparedness	
2007		MCDEM reviewed their response to PTWC alerts and warnings	
2008		MCDEM guidance for warnings, signage & evacuation	Community response plans developed in some areas
2010		NZ Coastal Policy Statements includes reference to tsunami risk	
2011		Guidance for land use planners released on incorporating tsunami inundation maps into land use planning documents.	'Blue lines' project in Wellington (see case study)
2011	Tohoku (Japan)		
2013		RMA reforms seek to include the management of significant risks from natural hazards as a matter of national importance. MCDEM develop siren standard for use and technical requirements.	

The development of New Zealand policy framework in relation to tsunami has been sporadic and has primarily been triggered by large international tsunami events (see Table 1). In particular, until the mid-2000's there has been little or no policy guidance in relation to tsunami. As a result, a significant amount of development has occurred on the coastal margins, with little or no consideration of this hazard and the associated risks. What is of particular concern is that many of New Zealand's coastal communities have experienced significant growth and redevelopment since 1991 when the Resource Management Act 1991 (RMA) became law. This Act governs the use of land in New Zealand. Under this Act, tsunami is specifically identified as a natural hazard. The Act also requires Councils to plan and manage the effects associated with natural hazards (including tsunami). However, tsunami is often considered as a hazard that is best addressed through

emergency management actions, and as such, many planning documents throughout New Zealand do not attempt to address this hazard through appropriate objectives, policies and rules. The resulting effect has been that since 1991, there has been a significant increase in risk to people and property from tsunami. However, as demonstrated in the case studies provided, councils are now realising the risk that tsunami presents to their communities and the wider New Zealand economic and social wellbeing. As a result, they are beginning to proactively plan for this hazard to address future risks.

The RMA is not the only statute that addresses natural hazards. The current regulatory and policy approach to managing natural hazards – including tsunami – is well documented (Saunders & Beban, 2012; Saunders et al. 2007; Saunders et al. 2011). Ideally, any policy response should be a holistic, integrated approach that includes risk assessment, regulations, warning systems, construction, education, and exercises (see Figure 1). Each of these factors should not be considered independently as part of an integrated planning approach to managing tsunami risk.

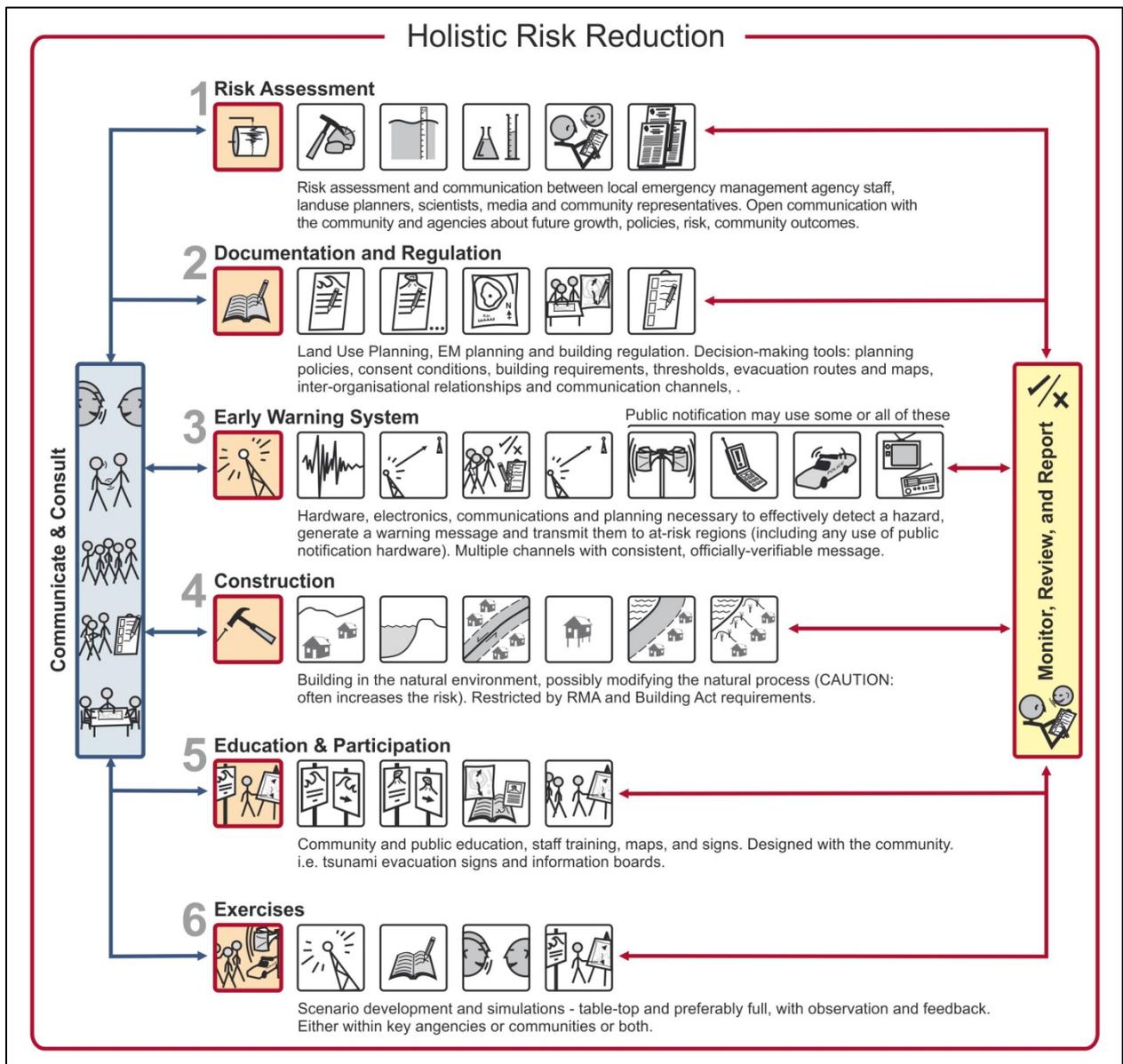


Figure 1: A model for holistic risk reduction (adapted from Leonard et al 2008)

While the RMA does not specifically include risks from natural hazards, in 2006 the Environment Court ruled that considering tsunami risk was a statutory obligation under s6(e) of the New Zealand Health and Safety in Employment Act 1992 (Garside et al, 2009).

Policies and procedures for managing tsunami hazard and risk have been developed within a wider coastal management context. Blackett and Hume (2009) suggested that the constraints and division of responsibilities between management agencies under the RMA may influence decisions on how to respond to coastal issues. Many of the elements of this, and those in Figure 1, have been found in the approaches developed in Island Bay, Wellington, and in a greenfield area in the Bay of Plenty, which are discussed in the case studies to follow.

Land-use planning guidance

Until recently, there has been little regard to tsunami in land use planning in New Zealand. While the New Zealand Coastal Policy Statement (Department of Conservation, 2010) does specifically refer to tsunami (as a coastal hazard whose risk needs to be identified), there was no accompanying guidance on how tsunami could be planned for. In response to this gap, guidance was produced to aid decision makers on how to incorporate tsunami modelling into land use planning (Saunders et al. 2011). Based on a decision tree (Figure 2), the guidance leads the decision maker through the process of ascertaining if there is 1) a risk of tsunami; 2) if the risk is acceptable; and 3) how the risk modelling can be incorporated into land use planning or emergency management responses

Warning systems and public education

Following the national tsunami review in 2005 (Berryman, 2005; Webb, 2005), the Ministry of Civil Defence and Emergency Management (MCDEM) developed guidance for: tsunami signage, development of evacuation zones and evaluation of mechanisms for dissemination of warnings (MCDEM, 2008a, 2008b, 2010, Leonard 2008). However, only a minority of the public recognise that a natural earthquake warning is currently the only reliable warning for a locally-sourced tsunami; a tsunami originating within one hour of travel time. Communities nation-wide are continuing to lobby for tsunami sirens without a clear understanding of the distinction amongst (a) the ability of scientists internationally to accurately detect and forecast a local-source tsunami, (b) the ability to make a message heard and understood with a siren, and (c) the interaction necessary, and time for action required between scientists, emergency managers and technology if an official warning is to be produced. In the first tens of minutes after a large earthquake, scientists and emergency managers currently have no extra information upon which to turn on a siren, beyond the length and strength of the felt earthquake. The New Zealand CDEM approach, therefore, is to educate the public to evacuate immediately on a long (more than one minute) or strong (difficulty standing or walking) earthquake and never wait for an official warning. Attempting to generate official warnings for local earthquakes is currently akin to installing speakers that must be switched on (after checking a rain gauge) when it starts raining heavily, to tell the public to put on raincoats. International evidence shows (Fraser et al. 2012) that the inappropriate reliance on sirens has reduced response to natural warnings, therefore increasing the vulnerability of coastal communities (i.e. increasing fatalities through inaction or delayed action).

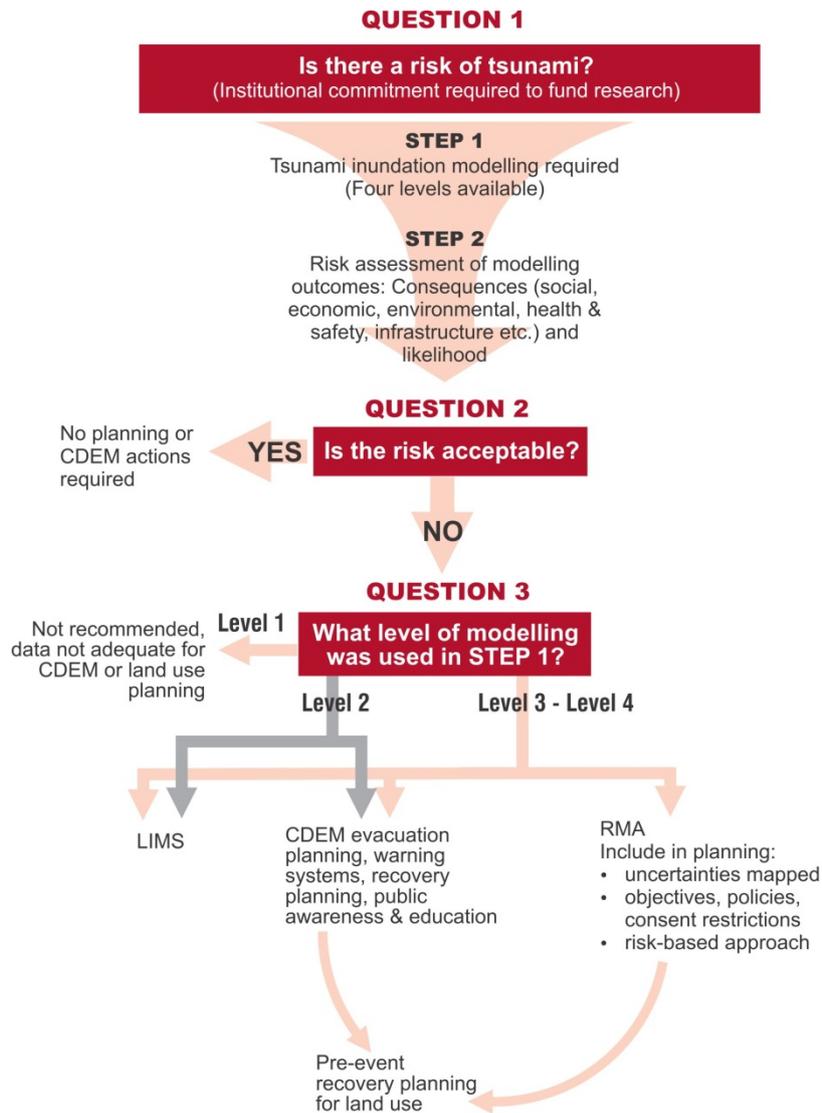


Figure 2: A decision tree for including tsunami inundation modeling into land use planning (Saunders, et al. 2011).

Case Study 1: Wellington

There are many sources for damaging tsunami in Wellington Region, and each source can produce a range of different events. Modeling all possible tsunami waves offshore and translating wave heights offshore into single event-based onshore inundation zones is not possible or affordable based on current resources, data and understanding of the multitude of potential tsunami sources for the region. A pragmatic and cautionary probabilistic approach can therefore be applied to generate an evacuation zone which envelopes all possible maximum events. The methodology used to create the evacuation zones, using a GIS-based attenuation rule applied to probabilistically-determined wave-heights at the coast, is described in detail in Leonard et al. (2009). This methodology also provides for two lesser evacuation zones (see Figure 3).

No one event can be expected to reach the boundary of the evacuation zone in all locations, due to wave orientation, attenuation, wave period and other influences, therefore this method will always produce over-evacuation. However, it is considered this approach is the safest and most reasonable given the uncertainty inherent in tsunami generation and behaviour, and the infrequency of major events. This zone, which applies to all felt major earthquakes and should be evacuated based on natural warnings without waiting for any official notification, is described and mapped by authorities as a nationally consistent “Yellow Zone”. The methodology used to generate this zone has been validated against recorded maximum inundation in the Tohoku tsunami, March 2011. The validation showed that for a 35m run-up value, the zone successfully encompassed the recorded inundation extent (Fraser and Power 2013). The boundary of the zone is delineated in Wellington by painting a blue line across roads, with “tsunami safe zone” written to be read facing uphill or inland. This “Blue Line Project” was devised by the local Island Bay community as part of their evacuation map planning, and has since become policy for the entire region and won an international emergency management award.

The multi-zone methodology also allows for smaller areas to be evacuated based on official warnings for distant source tsunami, when time, monitoring and expertise allows estimation of smaller wave heights and lesser inundation. For these events officials can advise the public whether to evacuate the Red Zone (basically a near-shore marine and beach exclusion zone for smaller, distant events) or the Orange Zone (a larger zone based on maximum distant events, which in most locations are smaller than potential inundation from local tsunami, but still include considerable on-land threat and inundation). Figure 3 (from Wright et al 2013) shows examples of evacuation zones within Wellington Region. It can be seen that the Yellow Zone encompasses the Red and Orange Zones, therefore when a natural tsunami warning is experienced the public response should be to evacuate all zones (Leonard et al., 2009). The “blue line’ is painted along the upper boundary of the yellow zone. Signs erected at the zone boundary indicate the beginning of the safe zone and the blue line reinforces the message in an innovative and highly visible way.

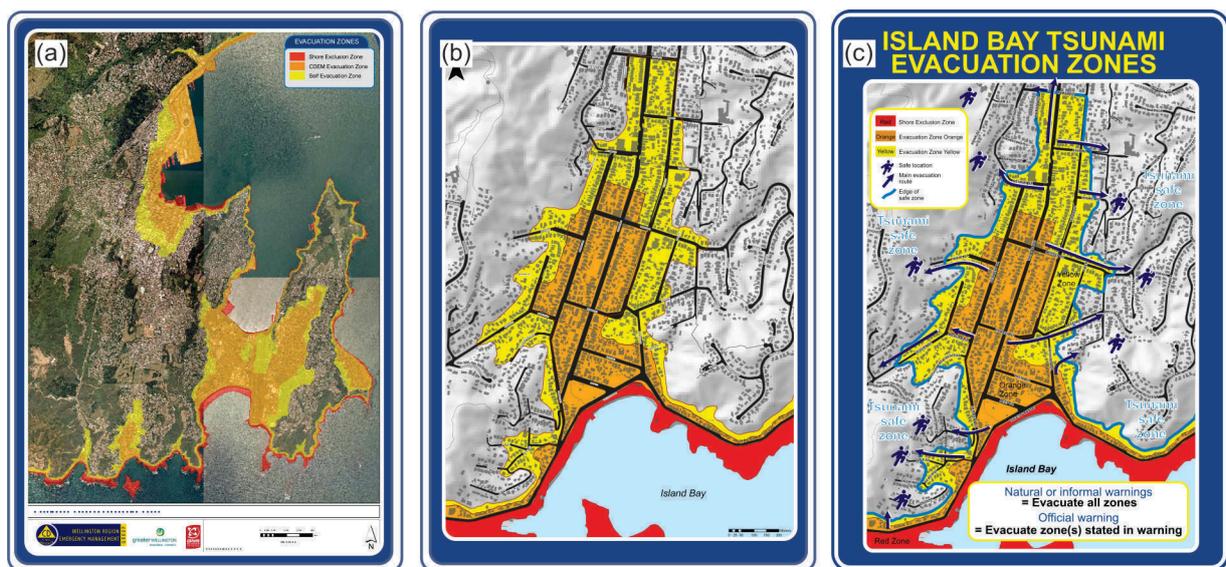


Figure 3: Examples of evacuation zone maps a) a draft evacuation zone map showing Wellington City; b) draft public education map for Wellington City; c) a completed community-scale map including evacuation routes and safe locations.

Public education regarding earthquake risk and tsunami evacuation zones comes under the domain of Wellington Region Emergency Management Office (WREMO). Wellington Region has recently amalgamated all CDEM units within councils to form a region-wide integrated body responsible for disaster planning and response. Community engagement including meetings and exercises, and publications and resources covering earthquake and tsunami preparedness (including maps of the evacuation zones and information about official and natural warnings) has been by WREMO. Their responsibilities also include planning for and coordinating post-event welfare provision, as well as liaison with communities, emergency responders and the national CDEM body prior to and during events (Wright et al, 2013). WREMO are currently integrating existing district tsunami response plans and establishing a scheme of work to expand and enhance existing arrangements from alerting to welfare to evacuation planning.

Case study 2 Bay of Plenty

Bay of Plenty has undertaken a comprehensive approach to incorporating tsunami hazards into its long term land use planning. For a number of years, the local councils in the Bay of Plenty Region have been aware of the potential threat that a tsunami from the Kermadec Trench presents to the Region. In 2010, the Bay of Plenty Regional Council commenced research that explored the risk from tsunami to the existing suburb of Papamoa as well as to future greenfield developments areas to the south east of Papamoa ((Beban, Cousins, Prasetya, & Becker, 2011) (Beban et al 2012a, 2012b). It is proposed that up to 40,000 people could be accommodated over the next 20 years in Wairakei and Te Tumu. The plan for managing this growth goes under the banner of SmartGrowth – a collaboration involving Tauranga City, Western Bay of Plenty District Council, and Bay of Plenty Regional Council working with industry and community groups (SmarthGrowth 2007).

As part of the SmartGrowth research, the risk to human life and the built environment was calculated for 12 tsunami scenarios, from local, regional and distal sources. The levels of risk that were calculated were assessed against the Proposed Bay of Plenty Regional Policy Statement (as notified) which identified acceptable, tolerable and intolerable levels of risk to human life. The acceptable, tolerable and intolerable levels of risk for building damage were based on preliminary risk levels in another GNS Science research program on risk-based planning. The levels or risk calculated assumed that no mitigation measures had been undertaken to reduce the risk to life or property Based on these risk thresholds, several of the larger scenarios resulted in an intolerable level of risk. These larger tsunami scenarios arrived on shore 50 minutes after fault rupture, meaning that people in these areas would not receive an official warning before the tsunami arrived.

The research suggested a number of measures that can be incorporated into land use planning to reduce loss of life and minimise economic losses. They include:

- Retaining the existing sand dunes as they can be an important natural barrier for tsunami
- Designing future development to recognise the tsunami risk and include easily identifiable access and egress routes
- Including mitigation measures in the design of coastal developments to reduce the effects of a tsunami

- Formulating a detailed evacuation plan for the coastal area and ensuring that routes are clearly identified and communicated to the public. Routes should lead to multiple safe areas where there is shelter, water, toilet facilities and cooking equipment.

A report was also commissioned for the suburb of Te Tumu, which is to accommodate up to 20,000 people, to investigate the provision of vertical evacuation refuges as a way to reduce the life safety risk to future occupants (Beban et al 2012b). To achieve an acceptable level of risk, 6000 people were required to be evacuated for a night-time event in Te Tumu, and 7000 people for a daytime event. The land use and emergency management implications of the provision of vertical evacuation refuges were also explored.

The tsunami research undertaken informed a revised SmartGrowth document that was released to the public for comment at the beginning of 2013 (SmartGrowth 2013). This 2013 SmartGrowth document more strongly identifies tsunami as a threat than its 2007 predecessor and also identified actions required to address the risk from the tsunami. While SmartGrowth document is non-statutory, it sets the framework for the future urban growth in the Bay of Plenty and is a document that would be considered when land use planning decisions are made. As such, the inclusion of tsunami into the SmartGrowth documentation will ensure that this hazard is considered when future decisions on urban settlement patterns are made. This represents a significant change in the way that councils in New Zealand consider tsunami hazards and sets a strong framework that other councils could adapt to their respective jurisdiction.

Conclusion

Tsunami awareness in New Zealand has evolved over the last 50 years since the 1960 Chilean tsunami. Recent initiatives represent significant steps forward in our preparedness for tsunami, but there is a considerable distance to go to ensure adequate awareness and preparedness of individuals and communities. Arguably the greatest priority is to increase public understanding that local tsunami will not be preceded by official warnings, and that immediate self-evacuation is the best way to preserve life-safety. Land-use planning does provide opportunities to reduce or limit the growth of tsunami risk. Case studies, strategies and methodologies from regions well-advanced in tsunami planning can be utilised by other locations to assist communities and the authorities supporting them, in improving resilience to tsunami risk in New Zealand.

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The Tarikaka Settlement

85 years of change

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This paper presents findings from a study that includes a new investigation of the Tarikaka settlement in Wellington, New Zealand. The housing settlement was constructed in 1928-29 by the Department of Railways with the houses rented to their workers.

The settlement incorporates 67 standard design railway houses and has been listed as a Heritage Area. This paper outlines some of the physical changes to the public and private outdoor areas in the settlement since its inception. These include removal of houses to create an area of public open space and alterations to footpaths and landscaping.

Over the past 85 years, the area has experienced gentrification and the houses are now mostly privately owned. Few railway workers remain and the lifestyle of the present inhabitants is very different from that of the original inhabitants. In order to explore these changes in lifestyle, oral interviews with older New Zealanders have been used to construct a consistent picture of housing and lifestyle during the 1930s and 1940s which has then been compared with other studies and contemporary literature. Use of the outdoor areas and transportation to and from the house are topics discussed. Oral interviews with present inhabitants of the houses have been used to reveal how the houses and the public and private outdoor areas are used today, following the same format as the interviews with the older New Zealanders.

This paper concludes by presenting an overview of these lifestyle changes and explores some of the implications of these for the public and private outdoor areas of the settlement.¹

Introduction

This paper presents findings which are part of a much larger study to develop a hybrid analysis method for housing (HAMH) (Leah, Vale, & Isaacs, 2013) using a case study approach. The Tarikaka settlement was constructed as part of the 1920s New Zealand Railway housing scheme (Kellaway, 1993) and is included in the Wellington City District Plan Heritage List (Wellington City Council, 2013) having its own non-statutory design guide (Cochran & Murray, 2010).

This paper augments the existing history of the Tarikaka settlement specifically considering site planning, community, and the design and use of the garden. The new contribution lies in oral interviews undertaken with older New Zealanders recalling 1930s and 1940s housing and lifestyle, and oral interviews with present inhabitants of the Tarikaka settlement. References to quotations from the oral interviews are given in the following format: Interviewee reference, Hours: Minutes: Seconds, e.g. [NZ_10, 0:03:29].

Housing for Railway Workers: a summary

The Department of Railways was providing houses for its workers in 1895 (Unknown, [Chief Engineer's Office], 1895) and by 1920, possessed its own forests and mills for construction of houses (Evening Post, 1920, p. 5). North Island settlements existed at Frankton, Taumarunui, TeKūiti, Ōhakune, Taihape and Marton. Gordon Coates, Minister of Railways from 1923 to 1928, wanted to, "*see every railway settlement a garden suburb*", so many had their own roads, drainage systems, parks and recreation facilities (Coates, 1923, p. v), (Unknown, [New Zealand Building Progress], 1920, p. 79).

The Frankton Housing Factory equipped with modern machinery opened in July 1923 (Coates, 1924, p. viii). The consequent standardization of house plans resulted in increased efficiencies with a rise in production. In 1921, the average cost of these houses was £700, £200 less than the same class of conventionally built house (Auckland Star, 1923). By 31st March 1924, 255 five-roomed houses had been cut, with 61 completed and occupied (Coates, 1924, p. viii) with 400 houses per annum the aim (Coates, 1924, p. viii). By the time the factory closed in 1929, it had produced almost 1,400 pre-cut houses, as well as pre-cut timber for wagons, signals, office furniture, stockyards, sheds, huts and other buildings (Schrader, 2005). In 1982, when the New Zealand Railways Corporation (NZRC) began selling its housing, it owned about 4000 houses (Cleaver & Sarich, 2009).

The Tarikaka Settlement

In 1927, the Railway Department purchased twenty acres of land in the Wellington suburb of Ngaio for a housing development later known as the Tarikaka Settlement (Evening Post, 1927, p. 10). Eighty, five-roomed, factory-cut houses with electric light, water and drainage were to be let for a weekly rent of one day's pay. Although identical in plan, different elevations were used to give the

streetscape variety (Evening Post, 1927, p. 10). The houses (Standard House, Plan A.B.1123, Factory Cut) were erected between 1928 and 1929 (Unknown, [Architectural Branch], 1929) (Figures 1 and 2).



Figure 1: Tarikaka Settlement, c.1980 (Unknown, 1986).



Figure 2: Tarikaka Settlement Houses, 2013.

A resident of Tarikaka during the 1930s and 40s recalls the houses were painted every five years and kept in good repair by the Department of Railways (Moroney, 2004, p. 2) echoing a Frankton Settlement resident recalling, "...the houses were very well maintained ... painted ... every five years ... wallpapered..." [NZ_17, 0:09:45].

Today, 67 class A.B. 1123 houses remain in their original locations. 11 of these sections have been sub-divided with houses at the rear. The area has been gentrified and the houses are now mostly privately owned.

Site Planning

The approved site plan (Figure 3) had a central street (later Tarikaka Street, after nearby Tarikaka Hill), two branch streets (Ngata Street and Pomare Street) and a connecting street which was an extension of Bombay Street and later connected to Swansea Street (Unknown, [Architectural Branch], 1927b). The building line was 15ft (4.6m) back from the road boundaries (Unknown, [Architectural Branch], 1927a). The existing layout of the houses differs slightly from the layout illustrated in Figure 3, with no 'as-built' plan in local archives. A resident during the 1930s and 1940s recalls Tarikaka Street, now tar sealed, was a gravel road which was dusty in the summer (Moroney, 2004, p. 2).



Figure 3: Plan of Housing Scheme for Railway Department, Ngaio, A.B. 1089, c.1927 (Architectural Branch, 1927).

Standard House, Plan A.B.1123, Factory Cut

The 1920 report of the Women's Committee of the N.Z. Town-Planning Association included a list of details considered essential for an average family, where the mother looked after the children and

undertook the housework (Platts-Mills, Crawford, & Watt, 1920, p. 1). A well-planned and functional interior with a simple external style were of utmost importance. This report is archived in the “*Railway Department’s House Building Programme*” file (Platts-Mills et al., 1920) and appears to have informed the railway houses design (Ferguson, 1994, pp. 81-82). The same committee inspected and approved the Railway Department’s new houses near Wellington (Unknown, [New Zealand Building Progress], 1920).

The class A.B.1123 factory-cut house comprised a parlour with an open fireplace, a living kitchen, kitchenette, bathroom with bath, and three bedrooms (Unknown, [N.Z.R. Architectural Branch], Unknown). The front door opened into a short hall and the back door into the kitchenette, both with porches over. The house and water were heated by a coal range for cooking with a wet back in the kitchen. An interviewee whose father worked for railways during the 1930s recalls, “...and a wonderful thing being members of staff of railway, we got free coal ... the house was always warm...” [NZ_17, 0:03:17]. Clothes were washed in a concrete boiler and a pair of concrete tubs in the detached outhouse, which also contained the coal store and WC. The houses had electricity, with a single light fitting in each room and a single power point in the kitchen.



Figure 4: Tarikaka Street, c.1977 (Unknown, 1980).

The houses experienced little change over the years and, by the 1980s, they were inhabited by railways workers with the majority still in original condition (Simons, 1986). “*The majority of houses still have outside toilets, substandard wiring, no laundry and in some cases use a coal range to heat their water.*” (Clarke, 1989, p. 2).

Original and Present Inhabitants

Original inhabitants of the houses were railway workers including clerks, engine drivers, shunters, cleaners, labourers and firemen (Unknown, [Architectural Branch], 1929). Average occupancy in the 1921 Census was 4.43 in the Wellington urban area (Census and Statistics Office, 1921, p. 15). The houses had their critics, however:

“One of the upsetting things was that a lot of the early residents in Ngaio felt that The Settlement was a bit of a blot on their area and in some cases and in certain aspects of the community the Railway people were not socially acceptable.” (Moroney, 2004, p. 2)

NZRC sold the houses in the late 1980s (Clarke, 1989) and only a few are still inhabited by railway workers. A present inhabitant who purchased their house from the NZRC in 1988 describes the transformation of the area.

“When we first moved in here, both our parents came down and turned white as a sheet ... they identified these as being sort of run down places that the underclass lived in ... Since then, it’s just kind of transformed to now they’re actually quite trendy and fashionable...” [TS_10, 0:10:44].

The interviewee continued by discussing the potential of the area and knowing that gentrification would come, *“...we just thought we couldn’t go wrong.”* [TS_10, 0:11:39].

Average occupancy in the 1996 Census was 2.77 persons/dwelling (Statistics New Zealand, 1998, p. 45) and 2.64 in this survey of 14 households, with 4 having a single inhabitant, 1 occupied by a couple, and the remainder inhabited by couples with young children.

Housing and Lifestyles: 1930s and 1940s

Recorded oral interviews were undertaken with 17 elderly people willing to share memories of their housing and lifestyle during the 1930s and 1940s (Leah et al., 2013). None had grown up in the Tarikaka settlement, although one had lived in two different railway houses in Frankton and Morrinsville [Interviewee ref. NZ_17] and one had lived in an adjacent street [Interviewee ref. NZ_01].

The recruitment and interviewing took three months. Elderly people were identified by a ‘snow-ball’ method, each interviewee being asked if they knew someone else willing to be interviewed. All of the interviewees now live in the wider Wellington region, although the majority were born and spent their childhood elsewhere in NZ. Interviewees were from a variety of backgrounds, being a mix of poor and wealthy families, and were able to share memories of their housing and lifestyle in city, town and rural settings. An extremely high degree of repetition was discovered in the answers to many of the questions, which was why the recruitment ceased. The fact that interviewees did not live in the Tarikaka settlement was not an issue, as the purpose of these recorded oral interviews was to gain insight into the common issues and attitudes towards housing during this period, and verifying these against the relevant literature. Interestingly, the majority of interviewees stated their housing and lifestyle had been very ordinary, and similar to that of most people living at the same time.

When asked about their households, 8 (47%) of the 17 interviewees lived with a person outside their nuclear family (most commonly a relative, such as grandmother, but also a family friend or boarder). In this group, average occupancy was 5.10 persons/dwelling. Of the 17 interviewees, parents owned (or had a mortgage for) 13 (76%) with the remaining renting.

In 16 (94%) of the households father was employed full-time, with mother not engaged in paid employment. The exception was a household where mother had been widowed. One interviewee recalls that his mother left work as soon as she was married.

"...that was a wife's role ... when she first got married ... she immediately left work and her employer ... was a Canadian and said, in Canada you know, women carry on working after ... they are married, and she thought this was utterly ... out of the question ..." [NZ_16, 0:13:46]

For all interviewees the kitchen was the centre of activity and the room most regularly heated, with the parlour seldom used. 14 (82%) interviewees state that mother was solely responsible for household work with the home a place of production. During the Depression soap was made in the coppers which were also used to cook the Christmas ham [NZ_17, 0:32:20].

Gardens: 1930s and 1940s

Many of the 17 interviewees recall a flower garden at the front and a vegetable garden at the rear of their house, with father mainly responsible for the latter. Exceptions include fathers not in good health and one interviewee whose parents employed a gardener. *"The sections were quite large and everyone endeavoured to put down a large vegetable garden and the competition was fierce."* (Moroney, 2004, p. 2). In some cases, children were also involved, *"I had my own veggie garden; I used to sell veggies, even to my mother."* [NZ_03, 0:34:15]. For most interviewees, a large percentage of vegetables came from the garden, *"...we had quite a large vegetable garden, and grew potatoes and kumara and cabbages and beans, peas sometimes, so ... we ate a lot from the garden."* [NZ_09, 0:18:07]. When money was short during the depression the gardens, *"...were a great source of food for the table..."* (Moroney, 2004, p. 6), *"...we were very hard up during the depression and, my word, the garden was a very essential component in our standard of living."* [NZ_11, 0:12:10]. Preserving fruit was important, *"...mother used to preserve, because there weren't any freezers, and she had a large cupboard ... it would be full of these preserves ... we had to stone peaches and things, it took ages..."* [NZ_02, 0:22:27]. Chickens were kept by 7 (41%) interviewees and one who lived in a Frankton railway house recalls, *"...there was a man along the road who turned his whole place into a poultry ... farm ... we bought eggs from him ... he was a Shunter ... he made quite a thing of producing eggs and fowls you know..."* [NZ_17, 0:35:39].

Interviewees generally struggled to recall what happened to house and garden waste, although 9 (53%) mentioned composting, *"...my father had a trenching system with the garden, that all the vegetable scraps went into a trench which he would cover over and create another trench ... it was a very elementary form of composting."* [NZ_13, 0:13:43]. *"My mother had dug a hole in the garden, and she would use that as a compost hole ... what other rubbish would we have? ... all the vegetables peelings and stuff went into a hole in the garden ... so we were green-ies even in those days."* [NZ_15, 0:09:10].

A present Tarikaka inhabitant discovered a lot of rubbish buried at the bottom of the garden, *"...there was no rubbish collection for the people living in these houses ... so digging in the garden was an adventure ... trees went in where I could get them in."* [NZ_01, 0:13:40]. Another stated their garden was full of filled-in hangi pits which had dropped down,

"...there were lots of stones, which obviously had been used for the heating, but also, probably because they were railway workers, they had used excess bits of railway iron, and they were down in the hangi pits as well ... they would have conducted the heat brilliantly." [TS_03, 0:28:15].

Many interviewees recall washing day, *"...we had a copper ... it did have firewood when I was little and that was changed to gas at some stage ... Monday was always known as the wash day, but if the weather wasn't quite so good, then it did have to move from day to day..."* [NZ_15, 0:07:00].

Community: 1930s and 1940s

Car ownership was uncommon and 9 (53%) of the interviewees' families had no car, 7 (41%) had one and 1 (6%) had two. Bicycles were well used by 12 (71%) interviewees,

"...I'd made my own bike up from bits and pieces, and I painted it red ... from leftover paint from the house roof ... I got a lot of use from it ... and my father went to work on a bike, brother went to work on a bike, and my mother had a bike that she would go to pick up groceries on..." [NZ_10, 0:34:51].

The train was the main transportation to and from work for the Tarikaka workers. An interviewee recalls that, *"...from the mid-fifties on, more families in the street had a car and we were one of the few families that didn't, and my father was incredibly conservative as far as ... buying new things were concerned ... they had a policy that they didn't buy anything until they had saved for it..."* [NZ_13, 0:12:49].

Moroney (Moroney, 2004, p. 4) recalls milk being delivered by a horse drawn cart and dispensed into billies. Interviewees mention putting out a billy and coloured coupon discs to indicate how much milk to leave [NZ_15, 0:26:53]. An Indian fruiterer visited the settlement selling produce and wares from his van. An interviewee who lived in Wadestown recalls the same gentleman, *"...a green grocer would come around on a truck, he was an Indian and he was always, 'the Hindu', and he would park his truck ... on the corner, and all the housewife's would go up and go into the truck ... he'd take all the money, then he'd drive onto the next bit..."* [NZ_14, 0:20:39]. Bread and buns were delivered by van from Denhard Bakeries, and stale buns were given to children and greatly appreciated (Moroney, 2004, pp. 4-5).

During the Depression many Tarikaka housewives walked to Thorndon to collect the pay from their husbands, pick up fresh supplies and catch the steam train home. This trip would often be turned into a picnic and was a good outing for the children (Moroney, 2004, p. 7). Interviewees spent a lot of time outside, *"...in the early days in Frankton, there was so little traffic ... we played tennis up and down the road, we'd just have to scatter off when a car came along..."* [NZ_17, 0:49:04]. *"Well we were always encouraged to be outside, unless the weather was really bad and we would play on the lawn ... often we would play with other children on the street..."* [NZ_13, 0:15:49].

Blackberry picking, gathering wood, biking trips to Titahi Bay, trolley races down Colway Street, and fishing on the wharf at night to catch mackerel were activities undertaken by children (Moroney, 2004, pp. 16-17).

“There was no time to get bored with fishing at Boom Rock at Makara and also on the Wellington wharves and opposite the floating dock. There was sport to which we walked or biked, family picnics, swimming, making canoes from old corrugated iron, gathering pine cones, trolley races and in general thinking up ideas that would keep us occupied.” (Moroney, 2004, p. 15)

Many interviews recollect with fondness the freedom that they experienced as children and the community spirit, *“...there was more friendship, or more sort of co-operation among people...”* [NZ_07, 0:39:42]; *“...well I think there was a greater sense of community ... of necessity really because ... at the beginning, most people didn’t have cars and there were no shops ... some people found that very oppressive...”* [NZ_13, 0:56:17]; *“...I was not aware of being a member of the lowest sections of society when I lived there [Frankton] ... [people were] all the same, that was really the great thing...”* [NZ_17, 0:58:42].

Historic Places

There is some confusion over the listing of the Tarikaka settlement as a Historic Area by the New Zealand Historic Places Trust (NZHPT). The documents referenced below are in the archives, but the settlement is no longer on the list.

In a 1980 report to the Historic Places Sub-Committee on the Tarikaka settlement, the Wellington City Planner wrote,

“The area as a whole is very untidy and in need of an uplift and comprehensive clean up. Street litter includes ... beer bottles, clothing, shoes, paper and ... on the whole, does not reflect very well on [the] Railways Department. There are a number of cars parked along the roadside and some of these are obviously immobilised, which add to the detraction from the amenities of the neighbourhood.” (Clarke, 1980)

Fences also needed repair and grass verges required mowing. Garages had been constructed by residents at the western end of Tarikaka Street and were considered unsightly. Clarke concluded the area was in need of significant upgrading, but felt that, unless the Department of Railways spent money, conditions would remain the same (Clarke, 1980).

Following this, in 1983, the NZRC sought to upgrade the roads, water and drainage to Wellington City Council standard, so these roads could be legalised and handed over as public services. This would allow subdivision of the site and offering of the houses for sale (Harding, 1983). In response to the proposed subdivision, the Director of Parks and Recreation recommended paying the reserves contribution partly in land and partly in amenity works (Director of Parks and Recreation, 1983). Creation of the larger area would necessitate removing five houses. Amenity works included planting up the larger area, developing a park and planting road frontages. The City Planner advised that all but 20 properties (on the southern side of Tarikaka Street) could achieve off-street parking (McCutcheon, 1983) and dispensation was later given from the off-street parking requirement for

these due to the difficulty of achieving access. Another dispensation was needed to retain the existing 40ft (12.2m) section widths (which were too narrow for the requirements of the Council's district plan) (Truebridge Callender Beach Limited, 1985).



Figure 5: Recreation Reserve, 2013.

In 1986, a member of Onslow Historical Society campaigned for the preservation and restoration of the houses and area through having it zoned by the NZHPT (McArthur, 1986b).

“These cottages are deteriorating at present and are a constant source of embarrassment to local residents and a dampener on property values ... the cottages could become the leading area in Ngaio and Khandallah showing by example how old houses respond to restoration and colour schemes.” (McArthur, 1986b)

Not all residents were happy about this prospect, *“A home is what you make it, how you see fit, particularly where finance is concerned. We are not on exorbitant wages, but manage to live happily and comfortably.”* (Te Whare, 1986).

Binning, a member of the Ngaio Progressive Association at a meeting stated 45% of the inhabitants were permanent tenants whose houses had been allowed to deteriorate by the Department of Railways adding, *“They have now become a singular community within the broader community ... it is critical that something be done to upgrade these house as soon as possible.”* (McArthur, 1986a). The Ngaio Progressive Association wanted to avoid the sale of the now sub-standard houses to tenants who might later find that they could not afford the necessary repair and maintenance work. Despite these and other concerns, *“...Tarikaka Street housing should remain affordable to those in lower income brackets.”* (Fanning, 1986). The settlement was classified as a Historic Area by the NZHPT in March 1986 (Daniels, 1986) but, as mentioned previously, the settlement is no longer on the list.

Sale of the Houses

During the 1980s, the NZRC were restructured. In 1983, income from rental of their houses was \$2.5 million, but costs incurred in connection with these were \$7.5 million and consultants recommended that NZRC act quickly to reduce its housing stock (Cleaver & Sarich, 2009, p. 249). In 1989, the Chief Executive of NZRC explained that it was no longer essential for Railways to provide housing as employees no longer worked in remote areas with operations becoming more centralised. As the majority of the housing stock was located within cities, the need for housing to attract staff had become questionable. The houses, which were not let at market rents, were both expensive to maintain and administer (Cleaver & Sarich, 2009, pp. 250-251).

The disposal of railway houses by NZRC was firstly by sale to occupants, followed by sale to Housing Corporation or Maori Affairs, sale by ballot to other Railways staff and finally on the open market (McQueen, 1986) although over 1000 railway houses elsewhere in New Zealand were reportedly sold to Stone Key Investments Ltd and this sale remains controversial (Dyer, 2010).

In March 1988, a Trust was formed by the Ngaio Residents' Housing Committee to buy the houses and maintain the character of the settlement (Clarke, 1988). One year later, 10 of the 95 houses had been sold publicly, 8 were vacant, and the remaining 77 were purchased by original railway tenants through the Trust, 50 of which had qualified for Housing Corporation assistance. In a report the City Planner stated that,

"The area has a lot of community spirit with over 50% being Maori or Pacific Islander and the families age groups starting in the early 20's [sic] with the oldest person being 55 years. Although the Housing Corporation has offered some funds for the renovation of the properties, these funds average \$5,000 per house and [are is] to bring the property up to Health standards which does not include the full extent of the renovations needed to be done to each property." (Clarke, 1989, p. 2)

Tarikaka Railway Settlement Community Improvement Area

In 1989, Wellington City Council approved the Tarikaka settlement as a community improvement area due to its special characteristics (Hume, 1989). At the first two public meetings residents suggested planters be constructed in the street to slow vehicles and make the area safer for children, and that play equipment be installed in the park at the junction of Tarikaka and Ngata Street. Hume noted an apparent large number of children living in the area (4 per household being common) with 12 children in one family. In 1990, the Council approved \$65,000 for the Tarikaka Street environmental improvements (Renovation Advice Office, 1990) which funded the construction of numerous railway sleeper planters the length of Tarikaka Street and additional planters at the junctions (Figure 6). The play equipment was not installed.

Housing and Lifestyles: Present Day

Of the 77 houses purchased in 1989 by railway tenants through the Ngaio Railway Housing Trust, few remain inhabited by railway workers, none of whom volunteered to participate in this study. Recorded oral interviews were undertaken with 14 volunteer households and the data was

processed as for the 17 interviews discussed previously (Leah et al., 2013). Interviewee's occupations included accountants, solicitors, lecturers, teachers, ICT and other professionals.



Figure 6: Planting at Junction of Tarikaka Street and Bombay Street, 2012.

Interviewees were predominantly middle aged, with 12 (86%) aged between 21 and 50 years, 9 (64%) were born in New Zealand. Couples with one or two school aged children comprised 8 (57%) households and 4 (29%) were single person households. Only 2 (14%) of the interviewees were renting their house and, of the remaining 12, 9 had bought post 2000. The most popular reasons for choosing to buy or rent were house location, followed by the character/history of the house, and size of the section. Interviewees commented that the houses are often for sale with one interviewee mentioning the size of the house as being a reason for this, *"The worst thing about the house is its size, which didn't used to be a problem, but it is now, and I think that these houses, they suit people for a time, but then you almost get over being in a little cottage, and you want to move on ..."* [TS_05, 0:24:22].

In contrast to the 1930s and 1940s lifestyle interviews, only 2 (14%) households contained an adult not engaged in some form of paid employment. One was a retired person and the other a stay-at-home mum. In 5 (36%) households, father worked full-time and mother part-time and in the rest all adults worked full-time. This highlights the biggest change in the use of the houses between the 1930s and present day; the house is no longer continually inhabited, but usually occupied only during the weekday evenings/nights and for part of the weekends. Unlike the 1930s and 1940s, household work is no longer only undertaken by the mother, but is the responsibility of the sole inhabitant (29%), both mother and father (14%), or a cleaner (14%).

All of the owner-occupiers had undertaken alterations to the house and in many cases these were extensive, including remodelling the rear of the house, fitting a new kitchen and/or bathroom, and considerable landscaping. When asked about things they liked least about their house, 6 (43%) mentioned the cold and the difficulty of heating it. Its small size (92m²) was another dislike (6 (43%) interviewees), as was the lack of storage space and continual need for maintenance, *"...it's not a lock and leave house ... there's a constant round of mowing, pruning, cleaning, sweeping..."* [TS_10, 0:44:46].

Gardens: Present Day

Vegetable gardening is popular amongst interviewees, with 10 (71%) growing vegetables, however gardens are far less productive than in the past, as 6 (43%) estimate they grow less than 5% of all their vegetables and the remaining 4 (29%) between 5 and 10%. Composting kitchen waste is undertaken by 9 (64%) interviewees and 1 (7%) keeps chickens. Garden maintenance is either undertaken by the sole inhabitant (14%), the male member of the household (21%), or is shared (29%). In 5 (36%) households a gardener is employed, or assistance is given from a person outside the household. Far less time is spent gardening now than in the past, *"I don't tend to use the outdoor area for much, except for gardening. I do enjoy gardening, so that's good, I probably don't get out as much as I should..."* [TS_13, 0:12:57].

Many interviewees have invested considerable time and money landscaping their gardens, *"...we flattened out the back and we built some retaining walls and moved some earth about ... we built a new fence out the front and concreted various areas ... planted a few trees..."* [TS_07, 0:14:38]. When asked about alterations made to the house, work to the garden is the most common answer, mentioned by 13 (93%) interviewees, followed by installation of insulation (79%) and internal decoration (79%). Outbuildings have been changed by 9 (64%) interviewees. This contrasts to the 1930s and 1940s interviewees where only two recalled work to the garden, both times being the construction of a wood shed. For 2 (14%) present day interviewees, the garden is the main reason for choosing to buy the house and 2 (14%) gave the deck and indoor/outdoor flow as being the best thing about the house. Many interviewees appear to appreciate having a good sized section, although few spend much time outside (apart from those undertaking landscaping work themselves). In contrast to the post and wire fences which divided rear gardens in the 1930s and 1940s, many interviewees have erected fences to contain children or animals, making the once transparent boundary lines more solid as inhabitants seek to make their property more secure.

Double doors to the rear are evident in 11 (79%) of the houses, commonly opening onto a deck or area of hard landscaping. Clearly, indoor/outdoor flow is extremely important to the inhabitants and many mention having these doors open when the weather permits.

Community: Present Day

Most households have one car, 7 (50%) households contain at least one member using public transportation regularly, with 2 (14%) never using public transport and the remainder using it occasionally. Many households have bicycles for recreational purposes, but in only 1 household is a bicycle used regularly for transportation to and from the workplace. The street is no longer a place

where children play, but is dominated by the car. None of the interviewees mentioned using the 1983 Recreation Reserve.

A current inhabitant felt there was not a strong sense of community, but explained that there were friendship groups [TS_01, 0:34:13]. This was reiterated by a number of other interviewees, one of whom described how they had united with neighbours in an application to Wellington City Council (WCC) for plants for the roadside. Together, they obtained and planted 150 native plants, helping to maintain the areas adjacent to their houses, which would ordinarily be the responsibility of WCC [TS_11, 0:47:48].

Conclusions

It would appear from the interviews that the Tarikaka settlement is no longer inhabited predominantly by families. The family households who volunteered for the study were mostly young, with many interviewees feeling that the house is too small for teenagers, *"...when the kids are a bit older, we might actually rent, rather than selling this house ... because it's such a nice house to keep ... for two people..."* [TS_07, 0:19:52].

Railway work is no longer something inhabitants hold in common and interviewees tended to know only adjoining neighbours, with small clusters of friendships being common within the settlement. In contrast to the 1930s and 1940s, inhabitants do not travel to work together. In many of the volunteer households, women are in paid employment, often leaving the houses uninhabited during weekdays. Houses appear to be owned by the middle classes (accountants, solicitors, lecturers, teachers, ICT and other professionals) and house prices reflect this. Many interviewees are investing considerable time and money in their houses, updating and renovating these often to high standards.

Cars prohibit children from playing in the street and every interviewee owned at least one. Interviewees tend to use cars for travel to and from clubs or activities and to spend time with friends and relatives that live in different areas of the city. Clubs no longer need to be local.

During the 1930s and 1940s, the streets would have been full of activity; food delivery vans, children playing and people walking or cycling. Today, cars are used to fetch shopping and children often play in rear gardens, hidden from view. The street is a transportation zone, primarily for the car. The 1983 Recreation Reserve was not mentioned by a single interviewee suggesting that this area is not considered to be important.

Interviewee's gardens are no longer highly productive, but are being landscaped with outlook to and connection with the garden being of great importance. Landscaping is often designed around the intention of the garden being "low maintenance" (paved areas, decking and flat areas of lawn). Many interviewees no longer spend a lot of time gardening as they work more and other forms of recreation have become popular, gardens no longer need to be productive.

Interviewees, although sharing a genuine love for their houses, do not have the shared in and out of work interests that characterised the area during the 1930s and 1940s. The community was not what it once was, although houses in the settlement are much sought after, fulfilling the aim of those campaigning for the area to be zoned 'historic' during the late 1980s (Simons, 1986, p. 1). The

houses and gardens are generally well maintained, and pavements and street planting is attractive, but in contrast to the 1930s and 1940s, the public areas appear under-utilised and people have retreated into their private rear gardens. Community spirit and friendships between inhabitants around the street are not perhaps as necessary as they once were. The built form has been successfully preserved, but the essence of the place has not. In a way, it could be argued that the settlement has lost its uniqueness.

Shortly after the Ngaio Railway Housing Trust had signed a contract for the bulk purchase of Tarikaka settlement houses in the late 1980s, the inhabitants celebrated together,

“Just about all of the mixed Maori/Pacific Islander/Pakeha neighbourhood showed up that afternoon. This “extended family of railway employees” ... were there to savour and celebrate a once-in-a-lifetime opportunity to become homeowners. While kids and dogs played in the grass and dirt, these shunters, guards, signalmen, linesmen, fitters, turners, boilermakers, welders, yardmen, engine drivers, bus drivers and all manner of other railway workers and their partners enjoyed the moment and talked about the future. Most of the chatter involved their houses ...” (Dyer, 2010)

Today the houses are no longer affordable to those on low incomes. However, they have endured the test of time, being appreciated and valued by those who live in them today and the settlement must be considered a success. The location, design and quality of construction of the houses are three important factors which have contributed to this success.

Changing lifestyles over the past 85 years have greatly impacted the use of the public and private areas of the settlement. The changing needs, aspirations, and priorities of the different inhabitants have not only affected the use, but also the appearance of these areas. This is not unique to the Tarikaka settlement, but is a reflection of what has happened in housing developments throughout the city and the nation.

When reflecting on the history of the Tarikaka settlement, questions emerge for those involved in the planning and design of houses today. Is it possible to plan and design houses that encourage community and if so, is it important to do this, or is a local community no longer important in the way people live today?

“...we’ve got all sorts of advantages [today] that we didn’t have then, we didn’t even think of then ... we’ve got a car, we can trip around the countryside ... but you weren’t conscious of ... restrictions because you weren’t conscious of the other possibilities ... television came along, so everybody had to have television, and you can’t imagine living without it, but we did live without it ... I think this is just generally true of all people, all times, everywhere, you actually settle into an environment ... you make it fit you the best you can and then you accept that ... as time goes on, things will change...” [NZ_14, 1:03:47].

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Design and Management of Street in Multicultural Societies

A case study in New Zealand

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Public spaces are seen as expressions of the local community and, in many instances, of the wider society in which they exist. Streets bring people together as they travel from place to place, using the street as its most common function, that of movement. Because people move along the street businesses set up to offer goods and services to a steady flow of customers. In a traditional and virtuous synergy, businesses have set up where most people pass and over time these places have developed into shopping streets. The more successful ones have become destinations in their own right. Streets are perhaps the most important type of public open space in any city and yet they receive the least attention by urban designers and those who manage space on behalf of the public.

There is an increasing tendency for urban design research to be considered from users' perspectives. However, there is little research looking at perceptions of urban public space in multicultural societies. This is becoming increasingly relevant as, due to the phenomenon of global migration, cultural diversity in world cities is increasing and today cities constitute a mix of people with different social and cultural backgrounds. In the absence of such research designers, developers and decision makers generally make assumptions related to a specific cultural group situated in a specific geographical location and try to extend it to different parts of cities around the world. Thus, other cultural groups seem to be excluded in considerations of urban design and planning decision-making processes. Yet, a successful public space is one where users of different backgrounds can coexist without one group dominating another.

This paper examines a street in a multi-ethnic urban setting in New Zealand from a different range of ethnic users' perspectives. It documents those attributes of street

planning and design that are associated with social and recreational activities of people with different ethnic cultural backgrounds that can make the street lively and democratic.

Keywords: Streets, Social Space, Cultural Diversity, Multi-Cultural Societies.

Introduction

Streets are the most common form of open space in cities and are considered to be the most significant symbol of a public realm. Streets provide for a wide range of functional, social and leisure activities. Throughout the world the majority of public life is acted out on streets (Mehta, 2007). Social interpreters and scholars suggest that people's lasting images of a city are of its streets.

Think of a city and what comes to mind? Its streets, if a city's streets look interesting, the city looks interesting, if they look dull, the city looks dull (J. Jacobs, 1961, p. 29).

Scholars suggest that, after many years of being influenced by traffic planners, streets should be re-imagined as both social space and movement channels that provide for an array of activities wider than just traffic [such as walking, biking, transit, etc.], associating them instead with the quality of public life (Appleyard, 1981; A. Jacobs, 1993; Moudon, 1987).

In multicultural societies, streets have the capacity to bring people from different cultural backgrounds together in space and time. Sharing of space in this manner gives people the chance to experience intimacy – which could help break down social obstacles that often divide them (Knapp, 2009). In addition, it appears that most street activity happens when it is convenient for large number of pedestrians to use the street in a variety of ways (Moughtin, 2003). A challenge for planners and urban designers then, as societies become increasingly diverse, is to design public spaces that will appeal to people of different social and cultural backgrounds. But what are the qualities of public space that will help ensure that it will appeal to people having different backgrounds? Places that cater to people's different social and cultural expectations are considered to be more socially sustainable (Low, Taplin, & Scheld, 2005). The research reported in this paper aims to understand relationships between social sustainability and the built environment in the context of streets.

Publicness

Mark Francis (1987) first coined the term “democratic street” in the field of urban design by incorporating different aspects of pedestrian streets (Jacobs 1961, Lynch 1981) and liveable streets (Appleyard 1981). According to Francis, democratic streets are streets that are well used, have meaning for people, invite access for all, encourage use and direct participation, provide opportunities for discovery and adventure, are loved, and are well cared and locally controlled (pp. 29-33). He then goes on to link the concept of street democracy to that of publicness. Publicness is a concept seeking to increase social interaction between people, which will be positively facilitated through suitable public spaces. At the very least, a *public* space is one that enables diverse interests to coexist (Franck & Paxon, 1989). The publicness of public spaces is based on a range of

characteristics, which include design, location and provision/ management and no single characteristic is able to define this continuum by itself (Franck & Paxon, 1989). Madanipour advocates that the *openness* of a public space should not only be determined by its physical accessibility but that consideration should also be given to factors such as social accessibility, or the extent to which people “have access to the place and to the activities within it” (Madanipour, 2004 p. 111). Later, Madanipour (2010, p.11) cautions that “if public spaces are produced and managed by narrow interests, they are bound to become exclusive places.”

Urban planners and designers have recognized that “... it remains difficult to isolate physical features from social and economic activities that bring value to our experiences...” (Jacobs, 1993, p. 270). Social activities in streets spring from the interrelationship between land use activities, businesses [semi-public space], the physical elements of the streets, and planning and design strategies that manage all of these in the street space (Mehta, 2006). In order to understand publicness of streets we can look for evidence in terms of the social activities of different cultural groups that take place there. The interrelationships between space, activity and people can be studied more explicitly from the user’s perspective. This research examines how an urban street in a multi-cultural milieu can enrich publicness by being open to variety of users from different cultural back grounds.

Research Setting

The setting for this research is New Zealand, the history of which dates to the 13th century when it was discovered and settled by the Maori. Western forms of urbanization began in New Zealand in the 1840s following colonisation by Great Britain (Belich, 1996; Hamer, 1995; Park, 1995). Consistent with other new world settlements at the time, New Zealand’s towns and cities were built through formal processes of urban planning based on economic forces, to become a reflection of European imperialism and colonialism. The New Zealand settlements shared social, physical and symbolic features incorporating places of cultural and social familiarity. The design of cities helped those of European descent and background to feel a sense of cultural, racial and social superiority (Belich, 1996). Maori were excluded completely in the process of city development and urban design (Hamer, 1995; Marek, 2010).

Recent years have seen a rise in immigration from different Pacific Island states and Asian countries. Analysis of New Zealand’s population identifies four dominant ethnic groups; Europeans, Maori, Pacific People and Asians. Smaller numbers of people consider themselves to be of Middle Eastern, Latin American, African and other ethnic origins (Statistics New Zealand, 2006). Auckland is the most ethnically diverse region in the country where some 56% of the population is considered to have a European ethnic background, some 19% are of Asian origin or background, 14% are of Pacific ethnicity and 11% are Maori (Statistics New Zealand, 2006). South Auckland is considered as a microcosm of the country’s diversity (The Encyclopedia of New Zealand, 2012). A Street in the Auckland region and the four primary ethnic groups provide the setting for this research.

Case study site

The research aims to understand how the design of streets can help foster social activity, both between people who identify as part of the same cultural/ethnic group as well as between people having different ethnic backgrounds. This research considers such intra- or inter- group social

activity to be an important reflection of democratic streets, with higher levels of social activity reflecting higher levels of democracy. The paper presents the case of St George Street in Papatoetoe. Papatoetoe is one of the larger suburban centres in the Auckland region and it has a mix of ethnic groups reflecting that of the whole nation. In 2006 the population comprised 34% European, 16% Maori, 26% Pacific Islanders and 33% Asian with the remainder of people falling into Middle Eastern, Latin American and African and other ethnicities (Statistics New Zealand 2006).

While there is evidence to suggest that many New Zealanders of similar cultural backgrounds choose to live in the same urban areas (Poulsen, Johnston, & Forrest, 2000) there is nothing to suggest that these areas develop into cultural ghettos or enclaves. An important factor helping to ensure that this does not happen is that these neighbourhoods almost always include significant numbers of people of at least one other ethnic background. Papatoetoe is one such area with all four of the distinct ethnic groups of interest in this research represented in good measure. There are many culturally mixed urban centres similar to Papatoetoe throughout the country and this certainly confirms the relevance of understanding how the public space network of these places can each be made to function more democratically. The aim of the research is enabled by this fact as it is not difficult to identify a number of urban and suburban centres in which there are concentrations of people from more than one ethnic background. St George Street in Papatoetoe was identified as an appropriate case through a search of data from the 2006 New Zealand census.



Figure 1: St George Street, 1920s (Papatoetoe Historical Society collection).

Method

The data collection fieldwork employs a mixed-method approach, making use of observations of people's behaviour and of structured interviews. By interviewing people and making observations of their behaviour, the project seeks to identify specific characteristics that support social activity along

the length of a strip shopping area. The case study also analyses land use activities, design characteristics and management strategies of St George Street from the users' perspective to understand the role each plays in attracting and supporting the social activities of different ethnic groups.

Recent methodological discussions have outlined the similarities between participant observation and interviews where there is no clear distinction between them (Pink, 2009). A sample of users of St George Street and the adjacent public shopping mall were interviewed during the participant observation. The interviewer selected the users of street spaces to interview during peak use periods. In total 27 persons were interviewed; 5 European, 6 Maori, 7 Pacific Islander and 9 Asian.

Participants were queried about the places they currently choose for their social and recreational activities and their suggestions about the improvement of the street environment. These queries were asked in two types of questions; in the first set of questions participants were questioned about the street environment without referring to their ethnic cultural background. In the second part they were questioned based on their ethnic cultural background.

The importance of land use activities in streets as public spaces

Analysis of interview data reveals that the diversity of shops offering goods and services on the street is the main reason people are attracted to use the footpaths (figure 2). While the quality of the physical environment certainly affects people's perceptions, the interviews indicate that the land use activities are the key influence. The majority of the respondents mentioned businesses, retail activities and buildings with public use as what they liked most about the street and again when they were asked about what they would want to add (with and without mentioning their ethnic group activities), most answers related to the type of businesses and retail activities. Rishbeth (2001) notes that ethnicity is an important factor with regard to perception and patterns of using public space. The open ended interviews suggest that retail activities remain the main concern of people in multi-cultural streets. On the other hand, design attributes seem to have less importance compared to businesses, activities and maintenance of the public space.

When Jan Gehl (1987) differentiates between outdoor activities in public space he distinguishes them into three categories, those that are *necessary*, those that are *optional* and then those that are *social*. Optional (recreational) activities are those that people engage in if there is a desire and significantly depend on what the place has to offer (both the weather and the physical setting). Optional activities include walking, sitting, standing, and people watching. According to Gehl, necessary activities last longer and the number of optional activities increases in higher quality public spaces. Social activities relate to the presence of others in public space. They include children's play, greetings and conversations, various kinds of communal activities, and simply seeing and hearing other people. Social activities evolve when the quality of the environment supports necessary and optional activities.

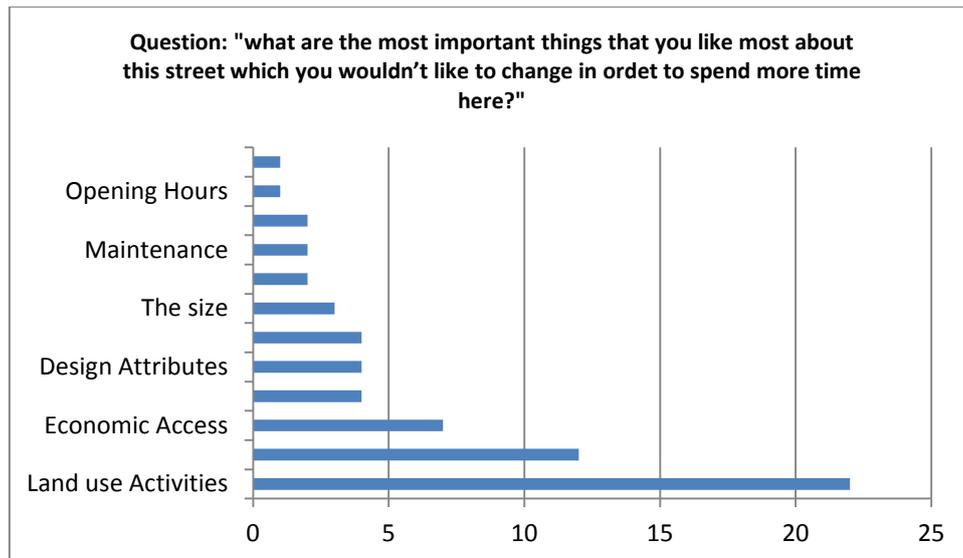


Figure 2: the question that what people like about this street shows relatively high importance to land use activities.

While participants were questioned about their social and recreational activities on the street, a majority of the responses related to daily services and facilities, or those seen as necessary. Services such as supermarkets, banks, chemistries, health service and etc. constituted an important part of what people liked on the street. The responses to what they would add again mostly related to type of services and facilities that do not exist but are needs for daily uses such as hardware stores, butchers, etc. Streets as public spaces are different from other types of public open spaces (such as parks) as they are partly controlled by commercial and retail activities and that discretionary and social activity are usually mixed with functional activities (daily shopping). In other words different types of activities occur in the combination and support of each other.

Planning for community places and public buildings such as the town hall, the library, the sports centre, the RSA where they offer places for social functions, fitness, sports and recreational activities also were included in the responses as important places for social/cultural/recreational activities.

Thus, cultural diversity on streets would be most effectively achieved through strong management strategies of the business, retail activities and services rather than the aesthetic characteristics of the design elements. The most common suggestion for the first part of the interview is to retain the existing variety of uses and services and add more variety to them. This adds to the importance of having a right mixture of land uses activities on the street which supports a wide range of necessary, optional and social activities for different cultural groups.

While a number of respondents referred to the friendly environment of the street and the people who use it, going into considerable detail when discussing its lively, multi-cultural character, Europeans were notable for not making reference to the area's *atmosphere*. As the focus of this study is the manageable and spatial aspects of public streets none of the questions put to respondents made reference to soft concepts such as atmosphere. It was left to those being

interviewed to raise it. It seems that non-Europeans are more conscious of the factors that help create atmosphere in public space, or at least better able to articulate and discuss these matters. European did not refer to atmosphere as an aspect of the street that they liked compared to other ethnicities. This could further discuss the reason that the area is being less used by Europeans compared to other ethnicities (observations show that comparatively, a fewer number of European were involved in social and static activities).

Affordability and Economic Access

Economic access and affordability in St George Street was an important issue after land-use activities and the atmosphere of the area. This is most certainly a reflection of the socio-economic profile of the suburb of Papatoetoe more than it is of ethnic culture. Economic access has been mentioned by Carmona et al. (2010) as an important form of access to public space, ranking alongside physical and symbolic forms of access. Madanipour advocates that the openness of public spaces should not only be limited to physical accessibility but should also include social accessibility, which he states should include the activities that take place there (Madanipour, 2004). Economic access is a factor when analysing how people are able to make use of privately owned, quasi-public spaces such as cinemas and cafes. It is of course less of a factor for access to public parks and streets. The most common way people are restricted from using space is when access is charged for. However, there are also other, more subtle ways people can be shut out such as the way space is organised suggesting that consumption is a pre-condition for access. Planning for appropriate activities that enable social and economic access is an important factor for streets to become “more public”.



Figure 3: Managing affordable eating places on the street increases leisure and social activities; photo by author.

Most of the land-use activities along St George Street such as second hand shops, those charging a flat dollar rate for all goods and hairdressers were associated with budgeting, bargaining and affordability. Economic access seems to be an important issue for the users of St George Street, regardless of ethnic cultural background. One interview respondent explained that the popularity of these businesses is related to socio-economic status rather than cultural background:

“Islanders and Indians like the Asian shops. They go to 2 dollar shops because they are affordable and a lot of them are on benefits. The Asian shops are affordable. You can pay 10 dollars for a pair of tights, where in farmers they would cost 40. And they like the second hand shops because they are on a budget, that’s the way they could budget and save their money for food.” She continues that affordable shops are a kind of necessity in South Auckland. It’s something related to economics, not cultural.

Participants also compared St George Street to the fashionable area of Newmarket and how it fits with the socio-economic status of people living in the area,

“The shops are not posh like those in Newmarket; they fit well with the socio-economic level of people”.

Another participant said that *“most people live on a budget and have to go to the affordable shops, otherwise how would they survive?”*

In fact many users St George Street could be considered as cash poor, where shopping and participating in the activities along the street has a different meaning for them compared to wealthier communities. The findings from the open-ended interviews supports Hutchinson’s(1987) concept on the differences between cultures in recreational activities. Hutchinson argues that cultural differences are related to a more complex interaction between race and social class rather than being simply influenced by either of them.



Figure 4: The type of activities and the way they express themselves in their frontages conveys different meaning for different users; both photos by author.

What is disliked about the business activities?

Retailing is recognised as an important factor in the cultural, economic and public life of the city (Goodman & Coiacetto, 2012). According to some interviewees, St George Street provides a flavourless representation of a mono-culture in its retail activities. Homogeneity through the dominance of retailers was a key concern of the participants in St George Street. Although chain stores do not dominate the street and most of the shops are privately owned, economic globalization on the one hand and socio-economic criteria of the area on the other have led to a similarities in the shops. Multiple two-dollar shops and similar takeaway businesses begin to create a monotonous image, not at all expressive of the cultural characteristics of the area. In other words, economic globalization has priced out the cultural diversity and distinctiveness seen elsewhere in the urban area.

The economic viability of the retail activities on shopping strips, as multi-owned spaces, is related to individually owners and operators who must ensure that they choose the right business to minimise the risk of their investment. Thus, the provision of retail activities is linked to the economic profile of the area. To attract customers in areas with low income levels, businesses must focus on affordability. This is contrary to privately owned shopping malls, which often have a regional catchment and can focus on attracting people with sufficient means with the range and mix of their tenants, as well as offering free carparking (Lloyd & Auld, 2003). Such centres are considered by many to not be democratic. The similarity between the shops and eating places along St George Street has reduced levels of window shopping and leads to complaints about the quality and attractiveness of the area to some shoppers. According to one respondent, *“everybody is doing the same thing like the two-dollar items and it doesn’t look pretty.”* One shopkeeper noted with a hint of disappointment that *“there are more than 10 takeaways offering the same things around.”*

A Fijian Indian shop owner notes that:

“I suppose there is a limited type of shops here that you can window shop, because all the shops are the same and there are not many shop frontages. It’s not attracting. Because it’s not normal, you go to 2 dollar shops to buy something, you don’t go there to window shop.”

Interviewees were concerned about the quality of many of the shops and would prefer to have higher quality businesses including quality restaurants instead of takeaways on offer. This appears to be a response related more closely to socio-economic circumstances and personal preference more than it is to cultural preference. Figure 5 below indicates how the prices of goods on offer can increase or reduce publicness in streets.

Economic Access	
More Public situation	Less Public situation
Wide Range of goods and prices offered on the street [for socio-cultural groups]	Narrow range of goods and prices support for a limited range of potential users

Figure 5: Economic characteristics of the retail activities and businesses have an important role in order to achieve publicness.

Thus, one of the best ways of increasing publicness in streets is to make sure that retailers of different economic ratings fit within the overall profile of the street.

The importance of planning for culture in land use activities

As mentioned earlier, the second part of the interview focuses on social activities related to culture. Findings suggest that restaurants and takeaways offering a culturally specific menu play an important role for Asian compared to other cultural identities with 7 of the 8 people interviewed mentioning this (figure 6). People noted that Indian eating places play an important role for their gatherings when they were asked about the important places for their ethnic members for their desired activities. A part of the Asian cultural group is Muslim and it may be self-evident that provision of Halal eating places plays an important role for them. Currently, there are two Indian Halal takeaways on St George Street.

When participants were asked about what they would like to add or change on the street to become a place they would like to stay for their ethnic group social activities, most responses related to land use activities (figure 7) and a majority of those responses were linked to the provision of ethnic cultural shops and restaurants. Cafes could be understood as a cultural eating place related to the European culture. As many European participants mentioned the importance of Cafés for their ethnic group social activities as a feature that could be added to the street (figure 8).

Another type of social exclusion is political exclusion, which according to Madanipour (2003) follows on from a lack of political representation. This form of exclusion develops when some groups of society and immigrants are underrepresented or excluded from political decision making. But it is not only decisions that are taken by politicians that can serve to exclude or to be inclusive of people from different backgrounds and means. Private owners of land, buildings and the businesses that establish along the street also make decisions that affect public space. Looking at the ownership and the operation of St George's retail spaces is also an important factor in terms of social/political exclusion. While the existence of shops operated by one or two cultural groups might be welcoming for some cultures, it might exclude others.

Observations and interviews within the case study reveals that the ownership and the ethnic composition of the retail activities (management of the semi- public space) is not distributed equally among different cultural groups of St George Street and the percentage of businesses owned by cultural groups is not based on population ratios. While some cultures such as Asian are more represented in terms of commercial and retail activities, the businesses on the street are less owned and managed by Maoris and Islanders. It is important to understand that different cultural groups do not necessarily represent their cultural identity in similar ways. Analysis of the interviews suggests that an important factor that can draw people from different ethnicities to the street is the provision of ethnic shops and eating places. While some ethnic restaurants could be welcoming to other ethnic cultures, as one Pacific Islander participant comments, *"we wouldn't bother to have an island restaurant here; the Chinese takeaways are much similar to island food."* That might be a key reason that many Pacific Islanders go to Asian takeaways.

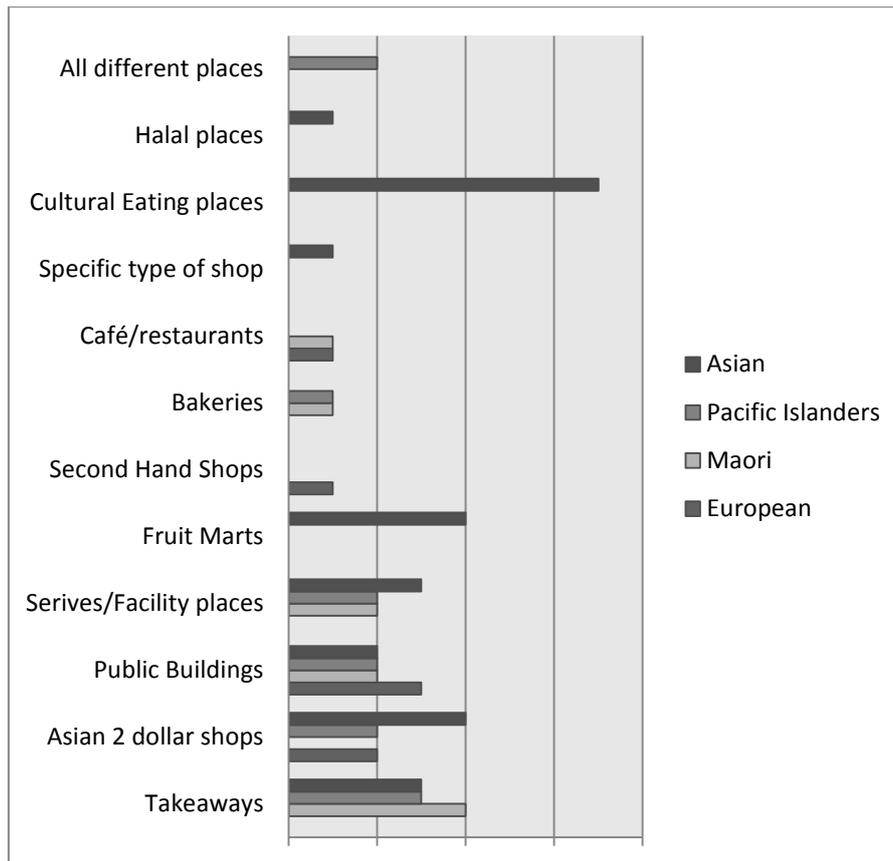


Figure 6: Participants were asked about the important places (buildings, specific locations, shops/restaurants on the street) for their ethnic members for their desired activities. response to open-ended question of 27 interviews.

Others could attract people from their own culture they could be exclusive to other groups. A Maori participant stated that other cultures would not like their food. *“Maoris wouldn’t set up here, because it is very exclusive to us. Other cultures won’t like our food, every Maori loves Puha.”* Another commented that Indian cuisine is a food they are unable to eat often as it is considered too spicy, *“We don’t eat the hot curry food, and all that, I like the food, but I can’t eat them all the time.”*

Thus, having a range of food shops catering to different tastes would be an important factor that increases diversity in the area and could attract people from different ethnicities. Ethnic theme restaurants can also act as cultural ambassadors, helping people from other cultures to gain an understanding about some characteristics of the customs and rituals of theirs (Wood & Lego Muñoz, 2007). Planning for such food to be used in this way it is important to take the financial capability of the potential users into account. Themed leisure restaurants often create an expensive image and their menu prices follow suit in an effort to cater to a specific audience. While it is important that retail activities along the street allow a wide range of choice, including on social and cultural grounds, to people, it is difficult to achieve this in reality. While higher level planning of retail and other activities on the streets could provide for social and cultural diversity as well as reinforce the image of the city, the free marketplace does not allow for this. Individual owners make their own decisions for their own reasons and not necessarily to help create more ethnic diversity.

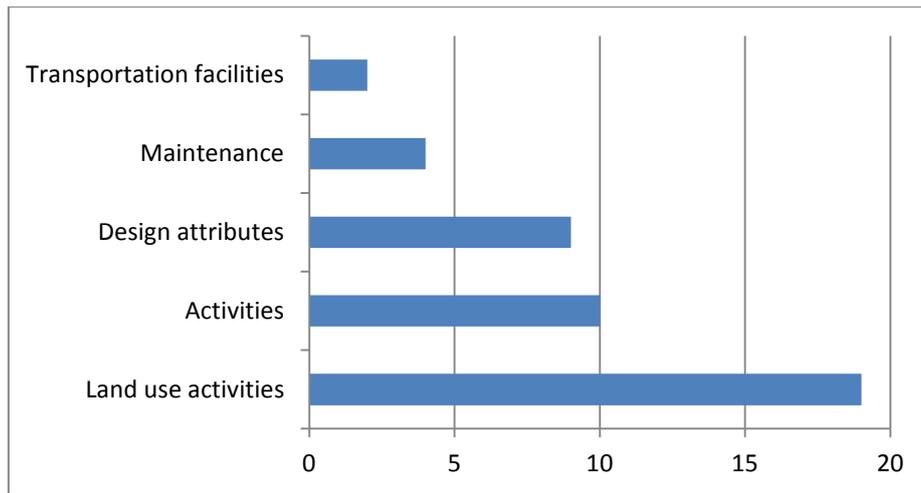


Figure 7: Response to open-ended question of what people would like to change or add on the street. data from 27 interviews.

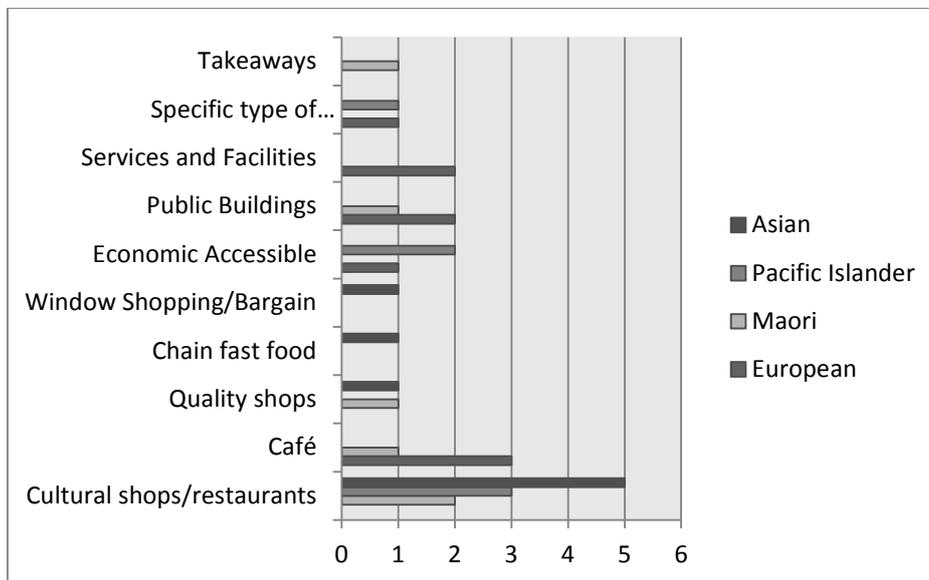


Figure 8: Response to open-ended question of type of retail activities that people would like to change or add on the street. data from 27 interviews.

Observation and interviews in the case study site suggest that, although Maoris and Pacific Islanders constitute a significant part of the users of St George Street, they rarely participate in the ownership or management of shops there. The majority of the retail activities are owned and managed by people from Asian and European backgrounds. Furthermore, managing a shop by a specific cultural group does not necessarily mean that they would run a cultural shop or ethnic restaurant. Not all immigrant-owned businesses target ethnic populations; many serve mainstream markets (Qadeer, 1997). For example; the photo shop or the fruit markets along St George Street are owned and managed by Asians but accommodate a wide range of ethnic cultures. This leads many users to consider that the overall social structure of the street is Asian. Not only are the restaurants mostly Asian but people are clearly aware that most other shops are managed by Asian people.

Several Maoris also commented that Maori people are really culturally proud and they would love to see wherever they go something that reminds them of their culture. Unfortunately there are no places in the street that sell souvenirs or mementos of the Maori culture.

Publicness in streets of multi-cultural societies requires ensuring equal opportunities for different cultural groups to participate in the management of retail activities (figure 9). Most of these activities are run privately, but public institutions (street management) can help to facilitate a fair distribution among both the type of retail activities and their management among different cultures.

Management of the Street[Semi Public Space]	
More Public Situation	Less Public Situation
Percentage of Businesses managed by each cultural group is based on population ratios	Percentage of Businesses managed by cultural groups is not based on population ratios

Figure 9: Descriptors of ‘more public’ and ‘less public’ for management dimension of the street’s semi-public spaces.

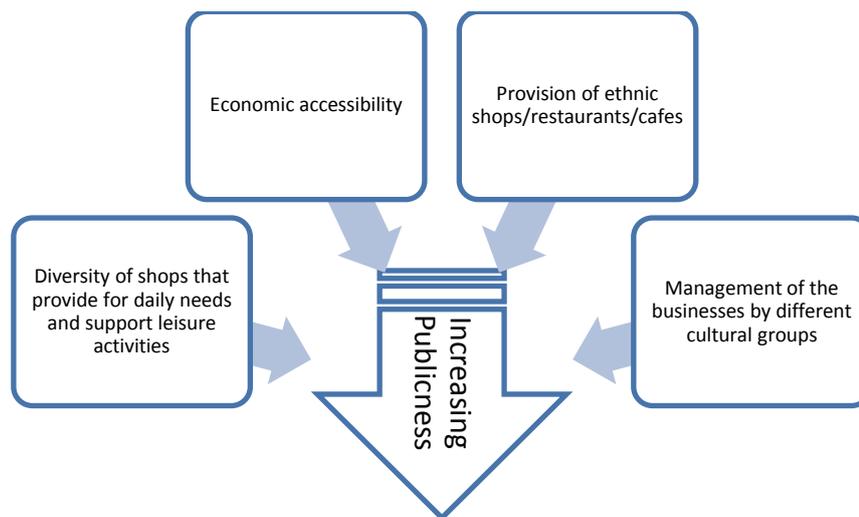


Figure 10: How publicness could increase in terms of the management of land use activities.

Retail activities can play a critical role in making diverse streets. Activities in streets are mainly related to the businesses, retail activities and services [semi-public space]. Those mixtures of business activities that allow for common daily activities and provide optional opportunities for leisure can increase attractiveness of the street for social and statistic activities among various cultures. Open-ended interviews also suggest that social class among different ethnic cultures plays an important role that influences their preference for specific types of retail activities. This provides a mix-support for both marginality and ethnicity theories in leisure research(Gómez, 2002; Hutchinson, 1987).In addition, publicness in streets could be achieved if not only divergent

preferences and needs (social and cultural) of different cultural groups are taken into account but also how this diversity is weaved and integrated in the retail and commercial activities (Qadeer, 1997). In other words, the way that various cultural groups manifest and exhibit themselves in the commercial structure (ethnic businesses) and management of the street is also an important factor which could affect publicness. According to Qadeer (1997, p. 490) "Supporting an enclave's special cultural character while keeping it open to all is the key challenge for multicultural planning in commercial areas". Thus, it could be concluded that when assessing publicness in the public spaces of multicultural societies, four factors should be considered simultaneously. This could ensure the success of the street in terms of their retail activities and services which seems to have a major role in attracting a diverse range of users. These four levels are; diversity of shops for daily use and leisure/recreational activities; economic access and affordability, provision of ethnic shops, restaurants and cafés and business management by different cultural groups (figure 10).

Conclusions

Retail activities can make important contributions to the perceptual quality of streets and in many instances help generate cultural diversity. The findings of this research suggest that people prefer the street to have a variety of different businesses and shops that cater to their daily needs. These findings confirm earlier studies that suggest retail tenant mix is the most significant factor in attracting people to a street (Teller, 2008). A key objective in street management would seem to be to create a mixture of necessary (daily needs) and optional (café, takeaways, restaurant, etc.) opportunities that are truly meaningful to residents and socially and economically inclusive of different groups with different financial capability. Interviews show that the provision of cultural shops and restaurants and the overall commercial makeover of the street could increase or decrease cultural inclusion. In general, it could be concluded that, the success of the street as a democratic place is mainly dependent on the right management of the mix of its retailers.

Unlike malls, streets lack a defined and determined management concept in terms of their tenant retail activities and store assortment. In other words, tenant mix cannot be controlled (Teller, 2008). Also, retail activities on streets do not follow contract-based obligations regarding policies and strategies as found in shopping malls. Lessons can be learnt from them in terms of how to create the right mixture of retailers on streets. Street management could encourage and motivate possible tenants which would enrich the retail portfolio of the street (Teller, 2008). This could also extend to the provision of cultural shops or ethnic restaurants which can also add flavour to the taste of multicultural streets and make them culturally diverse and democratic. As Mark Francis (2011) explains the provision of ethnic food can also attract and support mixed life.

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From Old Rooty Hill to Barangaroo

Landscape preservation as urban heritage in Sydney

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Campaigns to preserve the legacy of the past in Australian cities have been particularly focused on the protection of natural landscapes and public open space. From threats to Perth's Kings Park and Sydney's headlands to current proposals such as Barangaroo and the Perth waterfront, heritage activists have viewed the protection and restoration of "natural" vistas and landscapes as a vital part of the effort to preserve the historic identity of urban places. The protection of such scenic landscape elements has been a vital aspect of establishing a positive conception of the environment as a source of both urban and national identity. Drawing on the records of the National Trust of Australia (NSW) this paper unpacks the cultural and historical assumptions that motivated place protection in Sydney across the twentieth century. It also examines the ways in which those traditions have informed the debate surrounding Sydney's highly contested Barangaroo development in the twenty first century.

Keywords: Landscape, Heritage, History, Sydney

Introduction

Urban historians have long been aware of the shortcomings of trying to understand cities in isolation from the landscapes they inhabit and transform. William Cronon's *Nature's Metropolis* (1991) – a book about Chicago and its vast western hinterland – is perhaps the best example of an urban history that is at the same time an environmental history of a region. In Australia Andrea Gaynor's (2006) work has similarly refused simple categorisation as urban or environmental history. Writing the history of heritage and conservation as an aspect of urban history and planning history demands a similar commitment to undermining the settlement/wilderness, nature/culture divide. In the North American context Daniel Bluestone (2011) has argued that the familiar origin story of historic preservation – the protection of George Washington's home by the Mount Vernon Ladies Association – and the origin of wilderness protection – the creation of Yellowstone National Park – should be considered together. Both efforts, he argues, "aimed to protect valued resources from

the unfettered and often destructive prerogatives of a market economy... and both movements claimed that social refinement, cultivation and enjoyment” would result from the protection of these singular places (p104). Bluestone’s own account of the effort to save the “scenic landscapes” of the Hudson River Palisades is richly illustrative of the intertwined histories of city and nature in New York and New Jersey (pp104-131). To even begin to do the same for Australian cities and their settings demands that we understand something of the institutions and individuals who initiated and shaped place protection efforts in Australia. Using the archives of the NSW National Trust, especially the documents connected with its founding and early decades, this paper attempts to resituate our understanding of place protection in Australia by highlighting the importance of the “scenic landscape” to efforts to establish urban place identity and foster national belonging.

The task of building a comprehensive historical picture of place protection in Australia has been made easier by some interesting work that has been published since the year 2000. In his book *Colonial Earth* (2000), for example, Tim Bonyhady has argued that many Australian colonists in the nineteenth century were strongly attached to the Australian landscape. This view is in contrast to the historical clichés that have depicted European settlers as universally afraid of and hostile to the distinctiveness of the Australian landscape and careless of their physical surrounds generally. Moreover a desire to “protect and preserve” parts of that landscape was quite evident, he argues, and most of the places that were treasured were “within easy access of the cities” (p314). Indeed, Bonyhady argues that “preservation of Sydney Harbour’s beauty” was part of “a local tradition in which the encouragement of culture and protection of the environment were all of a piece” (p314).

The story of how such affection and care for Australian places evolved into an institutional apparatus has been taken up recently by Andrea Witcomb and Kate Gregory. Their history of the National Trust in Western Australia (2010) is attentive to the full range of activities that motivated Trust founders and members in that state and highlights the shortcomings of the existing literature on heritage and conservation in Australia. Witcomb and Gregory view the activities of the Trust as a wide-ranging effort to foster urban and regional place identity by protecting wild flowers, visual perspectives and parkland as well as significant historic buildings. “Embedded in the Trust’s early understanding of landscapes” they argue, “was a sense that they, just as much as buildings, were redolent of the evidence of the past and offered a connection to it” (p80). Protecting the existing course and expanse of the Swan River was just as important to early Trust activists in WA as the very well-known effort to save the Barracks at the end of St. George’s Terrace. The concerns of the National Trust’s founders in NSW, were similarly expansive. The landscape of the city and its surrounds was seen as integral to Sydney’s distinctive identity, and so the protection of parts of that landscape was viewed as absolutely essential to the Trust’s mission.

Rooty Hill and the Origins of the National Trust of Australia (NSW)

Most Australians are unaccustomed to imagining the Sydney suburb of Rooty Hill in the time before the Returned Service League (RSL) Club dominated its landscape. Today we are encouraged to view Rooty Hill as a kind of representative “Middletown” with the RSL as its central institution. Alongside the regular Elvis tribute shows and other cabaret acts this very large, poker machine-stuffed venue has, in recent years, regularly hosted televised national political forums where ordinary Australians address their concerns to national leaders. But there is a Rooty Hill landscape buried beneath the RSL that makes it an exemplary place in a very different way. The history of heritage and

conservation in Australia is steeped in the experiences of a largely forgotten Rooty Hill. It was the place where Annie Wyatt, one of the founders of the National Trust of Australia (NSW), grew up and the district was a source of inspiration for her pastoral evocation of the Sydney region in an earlier phase of its settlement. In 1956 she wrote a short memoir that described the area during her childhood in the 1890s:

I wish I could give you a glimpse of how lovely Rooty Hill was then; most of it was heavily timbered, yet large sections set out in orchards, vineyards and grazing land. The soil was deep and rich and all things grew to perfection. There were paddocks waving knee-high in bluebells and buttercups, and one which seemed to specialise in orchids, pink and yellow. Mother saw to it that the cows be kept out of those places many weeks before the flowers were due. After rain the low lands were white with mushrooms, as large as bread and butter plates – one never sees the like of them now-a-days.¹

It was not only the steady loss of Sydney's Edenic hinterland to urbanisation that motivated Wyatt in her activism, which began in earnest in the 1920s. The loss of some of the city's most recognisable early colonial buildings in the interwar years such as the Commissariat Stores in Circular Quay and Burdekin House in Macquarie Street also caused her "to lie awake and wonder desperately what could be done about the destruction".²

Wyatt's memoir makes quite clear that in enacting her place-centred citizenship she gave equal weight to protecting places of natural or scenic beauty and buildings of historical or architectural significance. This dual mission was imprinted in the National Trust of Australia (NSW) from its very early years. The group who came together with Wyatt to found an Australian version of the Trust first seriously considered the idea of forming the Trust at a "Save the Trees – Conserve our Forests" conference in 1944.³ For most of that group, therefore, the protection of flora and fauna had been the main factor motivating their civic engagement prior to their involvement in the Trust and would be intrinsic to their activities as Trust founders and members.

In 1948, less than twelve months after it was formally constituted, the Trust offered support and encouragement to the Mosman Council in its efforts to purchase Chinaman's Beach at Middle Harbour so as to protect "one of the few remaining beaches with unbuilt background in Sydney Harbour."⁴ Equally, however, it is evident that during the late 1940s that protecting a group of "Macquarie buildings" - the Hyde Park Barracks, St. James Church, and the Government House Stables, among others – was a very high priority.⁵ The founding group drew a distinction between natural beauty and historic buildings but they did not necessarily privilege one over the other. The motto they adopted when they formalised the group in 1947 was "For the preservation of historic buildings and natural beauty." Moreover, in the vision of Annie Wyatt the farms of Rooty Hill, the banks of the Hawkesbury River and the busy harbour and mellow old buildings at Circular Quay were a continuous landscape. In her romantic vision of the region, Sydney's historical and geographical identities were one and the same and therefore the protection of the city implied wide-ranging efforts that went beyond individual buildings or properties.

In recent decades the steady professionalization and specialisation of heritage assessment, heritage management and architectural conservation, the gradual extension of government powers to regulate land use, and the continued rise of environmentalism as a separate sphere of political

activity has had the effect of splitting place protection into two distinct terrains: nature conservation and heritage conservation. Each has its own subsets of specialised knowledge and skills, their own set of civic organisations and their own legislative apparatus. Consequently the earlier continuity between building conservation and place protection more widely has been obscured. We tend to forget that the impulse to keep places – as a way of enriching memory and promoting certain place-based identities – was shared by those who wanted to protect the natural environment and its scenic places from desecration and those who wanted to keep and repair old buildings.

To the extent that the shared terrain of nature conservation and heritage conservation has been recognised by researchers in this field it has mostly been in the context of discussions of the policy innovations of the National Estate programmes or the BLF-initiated Green Bans (NSW) and Black Bans (Vic) from the 1970s (Yencken, 2001; Burgmann & Burgmann, 1998). But there is a continuous tradition of place protection that stretches back to the efforts in the 1890s described by Bonyhady through the reform-oriented groups of the early twentieth century and on to the National Trusts and the widening efforts of government and civil society in the 1970s and beyond.

In the 1890s the effort to protect Sydney Harbour from being despoiled by industrial development – especially by the proposed colliery at Cremorne – became a major public issue and, as Bonyhady (2000) has noted, the issue was explicitly linked to issues of cultural heritage and national identity. The future parliamentarian A.B. Piddington remarked at that time that “We in Sydney are the trustees for all Australia and of all time of that national heritage of beauty which gives us our pride of place amongst the capitals of this continent” (p314). This same note of national feeling and pride in the Sydney region’s natural gifts motivated Annie Wyatt and her neighbours to form the Ku-ring-gai Tree Lovers’ Civic League in 1927. The aim of that group was to “foster the love of our own Australian trees, as being peculiar to our land, and likely to thrive best in its soil and climate.”⁶ The League’s activities included a significant 1931 project to work with the North Sydney Council to protect and restore the landscape at Ball’s Head on Sydney Harbour.

When Wyatt and like-minded protectors of the local environment came together in the 1940s to form the National Trust they quickly attracted significant interest from a range of existing civic groups. Prominent among them were the local historical societies but equally notable were the progressive planning groups and conservation-oriented societies. The Parks and Playgrounds Movement of NSW was one of those and, like the Tree Lovers’ League, was engaged in lobbying local government to maintain and restore coastal landscapes, such as the Kurnell Peninsula on Botany Bay. Others that affiliated with the National Trust in 1948 were the Rangers’ League of NSW, the Wildlife Preservation Society and the New Education Fellowship, a group that advocated for progressive or child-centred principles in education.⁷ This range of groups gave the National Trust its wide scope and left a powerful mark on the organisation. From our perspective today these affiliations and the culture of the Trust in its early years are a strong reminder of the links to older traditions of civic and urban reform as well as of its overt connections to nature conservation.

The evolution of the Trust in NSW in the 1950s has tended to colour perceptions of the organisation and obscure to some extent its origins and breadth of interests. In that decade the effort to create a register of historic buildings based on the advice of the Royal Australian Institute of Architects (RAIA) and the labours of architect and historian Morton Herman was the most prominent aspect of its activities.⁸ But the promotion of a National Parks act for NSW, the reserving of municipal land for

public use and the promotion of other planning tools and public powers to prevent the destruction of places of natural beauty all remained firmly on the National Trust agenda into the 1960s. During the Sixties lectures on fauna conservation, articles on the establishment of National Parks and reviews of books about a wide range of environmental concerns were a staple of National Trust bulletins. Rachel Carson's landmark book *Silent Spring* (1962) was given an extensive and favourable review in a 1963 bulletin and concern about the fate of bushland on Bradley's Head on the north shore of Sydney Harbour was a front page story for the Trust in May 1964.⁹ In other words, nature conservation and the wider realm of environmental protection both remained in the forefront of Trust activity even as architects took on growing prominence in the organisation.

Australian Outrage

A perennial complaint of non-architect heritage specialists in Australia has been that architects and canons of architectural taste have exercised too much influence on registers of historic places. Certainly this is borne out by the early years of the National Trust in Victoria where Roy Simpson, Robin Boyd and John and Phyllis Murphy all exercised considerable influence (Clark, 1996). However, while heritage conservation was guided by prevailing canons of architectural and cultural taste in that period, the most significant contribution of architects to the heritage discussion nationally was not related to the finer points of formal criticism and questions of stylistic development. Their most significant interventions were motivated by a broad-based environmentalism.

In their writing and activism architects Robin Boyd (1960), Donald Gazzard (1966) and Miles Dunphy drew explicitly on the work of North American and British commentators Peter Blake (1964), Ian Nairn (1955) and Gordon Cullen (1961) in criticising the visual environment of cities and their surrounds. Each of those influential critics addressed the public realm of streets and squares, highways and recreation reserves as total living environments. They also criticised the planning failures and the visual blight that characterised what Nairn called 'subtopia', the landscape shaped and organised around pervasive automobility. In 1964 Sydney based architect-planner Gazzard attempted to synthesize these concerns in an exhibition staged by the Royal Australian Institute of Architects (NSW). The exhibition had the title 'Australian Outrage' – which referred directly to a 1955 special issue of the British journal the *Architectural Review* edited by Ian Nairn, released later as a book – and Gazzard's exhibition shared Nairn's concern with what he called the "disfigured landscape" created by postwar urbanisation.¹⁰

Gazzard's international sources were overt and acknowledged (Atchison, 2013). But it is equally clear that the environmental protection discourse of the National Trust in the early 1960s deeply informed Gazzard's position and that it was something of a launching pad for his critique. In the text of the 1966 book that followed the Outrage exhibition, Gazzard quotes extensively from a 1964 National Trust *Bulletin*. The piece he quotes carried the heading "Preservation of Bush and Shore" and the author argues that the public must be more responsible for the destructive actions of their local authorities. The author of the Trust *Bulletin* piece warns that if a person wishes to drive all the way to sites of natural beauty "instead of his beauty spot he will probably find a car park not unlike the one at his nearest regional shopping centre."¹¹ Gazzard shared the Trust's concern with the intergenerational benefits that would be derived from the proper protection of such places and understood implicitly how the protection of "parks and bushland, beaches, headland and waterways" (p29) was connected to the wider effort to protect and foster place identity through the

conservation of buildings. He invoked the idea of custodianship of place and concluded that “If we let progress take its toll, we not only lose part of our visual inheritance, we somehow put a low value on man himself.” (p29) In other words, for Gazzard, fostering strong connections to place and a clear sense of the development of place over time had a profoundly humanistic justification. People, he believed, would ultimately be dissatisfied by material abundance and growing technical capacity if their society did not foster this broad environmental and temporal awareness.

It is no coincidence that Gazzard’s architectural practice in the 1960s has been strongly identified with the so-called Sydney school of architecture (Taylor, 1972). The best-known Sydney School buildings, Ken Woolley’s House, Mosman (1962) and the Johnson House, Chatswood (1963) emphasise the integration of building and landscape. Gazzard’s own Wentworth Memorial Church, Vaucluse (1965) is likewise a self-effacing building referring to vernacular precedents and establishing a strong relationship to its site. The operative ethic in this self-conscious Sydney regionalism was connected to the protection and enhancement of clear markers of place. Distinctive views, the preservation of bushland and topographical character were all vital to this architectural project. Sydney school architecture was therefore coherent with and supportive of the place protection efforts championed by the National Trust and Gazzard’s work as both designer and activist made this explicit.

The efforts of Sydney School architects and National Trust advocates to strengthen place identity in the Sydney region were supported by heritage legislation in NSW after 1977. Around the same time, the burgeoning landscape architecture profession undertook a series of large-scale landscape reclamation and restoration projects in places that had been degraded by industrial activities (Saniga, 2012). Such efforts to recognise and renew landscape elements in the Sydney region built upon the early traditions of Trust activism, traditions that acknowledged the landscape as a powerful source of cultural meaning as well as an important source of ecosystem services. The value placed on the visual quality of the harbour landscape in particular has also periodically been the source of significant controversy in Sydney. The development of the Sydney Harbour Bridge (1924-32) was heavily contested for its impact on the city’s scenic landscape as was the development Harry Seidler’s Blues Point Tower (1962). But rarely has the sense of how best to balance the protection and improvement of the harbour landscape been as contested as in recent years.

Barangaroo: “a new natural headland”

The vast Barangaroo project, on the site of the old wharf facilities at Miller’s Point, has challenged the apparent mutuality of landscape protection/restoration and heritage conservation in Sydney. The project is a mixture of generic high-rise commercial and residential development (South Barangaroo); a gambling palace that will make the Rooty Hill RSL blush (Central Barangaroo); and a landscape restoration project that is described by the Barangaroo Delivery Authority as a “new natural headland” at the north end of the site (Barangaroo Authority). Underneath the newly landscaped area – described as a “fattened version of the 1836 foreshore” (Butterpaper, 2011) – is to be a car park and a cultural centre of some kind. While it remains vague, the idea is that the cultural centre will be a place to interpret the history of early contact between settler society and Aboriginal people in the region. The trade-off, therefore, that has publicly justified the real estate deal is the establishment of a newly created piece of harbour landscape with a natural profile and the establishment of a prominent new site through which to promote reconciliation and a richer

understanding of Australia's history. Certainly these are the themes that the designer of the headland park, Peter Walker, has emphasised in his comments about the site. But questions remain about what heritage will be preserved, how and in whose interest.

In a keynote address to the 2006 Urban History Planning History meeting, several months before the Barangaroo project was announced, historian Graeme Davison introduced his discussion of the Australian city by describing the view from his room in the Palisade Hotel at Miller's Point, perched above what would become the Barangaroo site. "Nowhere in Sydney, perhaps nowhere in Australia" he remarked, "is the deposit of historical memory as deep as it is on Miller's Point" (Davison, 2006). What was most striking about the view, Davison suggested, was not the geography of the sublime harbour itself, but the incredible richness of the temporal layers visible in the landscape. Despite the relative brevity of Sydney's settlement history, Davison suggested that the landscape he observed had experienced as much change as some ancient cities. But Davison was also worried by some of what he observed. In the new millennium Sydney had become too enamoured of its status as a global city and in the process tried too hard to suppress the cultural and historical characteristics that have shaped its social and physical identity, characteristics so visibly evident from Miller's Point.

The Barangaroo project seems to fit squarely into Davison's historical schema in which Sydney has somehow lost sight of its distinctive historical qualities. In 2010 as the project took shape, the former NSW state Premier Kristina Keneally repeatedly asserted that Barangaroo would be all about positioning Sydney as a global city (Keneally, 2010). The large stock of office space and residential apartments included in the plans is explicitly directed at providing space to accommodate the growth of the financial sector and its workers. This much has been acknowledged and lauded by former Federal workplace relations Minister Bill Shorten (Saluszinsky, 2011). In this sense Barangaroo appears to disregard and perhaps displace aspects of the city's historical and cultural identity in favour of capital accumulation and deracinated and globalised flows of people.

Local residents in Miller's Point have strongly opposed Barangaroo on these grounds. They fear that Barangaroo is being used as a catalyst to gentrify their area, a process that many believe threatens their security of tenure in their department of housing controlled homes (Barlass, 2013). The corollary, they believe, of this pending attack on public housing in the area is the fraying of the community fabric in Miller's Point, with its preponderance of working class residents with connections to the wharf labouring traditions of the area. In the windows and on the doors of many of the area's early twentieth century terrace houses are yellow ribbons and yellow posters that proclaim 'Save our Community' and 'Save our Houses'.

The National Trust (NSW) has not embraced the Barangaroo project either. Indeed they have probably been its most prominent critic. But the nature of the criticisms the Trust has levelled are different to those of Miller's Point residents. Trust representatives have described the proposed naturalistic headland as "false" (ABC, 2010) and argued that the project "disregards the area's maritime history" (National Trust, 2010). The Trust has created its own alternative proposals that emphasise the protection of the industrial fabric of the area and suggested that an international passenger terminal be located at the site to animate activity in the area and maintain the area's connections to shipping.

Despite the widespread opposition to Barangaroo, which is articulated by reference to heritage, both in terms of local community and physical fabric, the issues are not quite as clear cut as they may seem. The landscape reconstruction/restoration scheme proposed for the northern end of the site sits squarely within the traditions of place protection and restoration that have been central to the heritage effort in Sydney since the late nineteenth century. It is about ameliorating environmental damage, damage that notably affected the scenic profile of the harbour environment. This is exactly what happened at Ball's Head in the 1930s, and at Kelly's Bush in Hunter's Hill in the 1970s – the battle that initiated the storied Green Bans.

Jack Munday, who led the NSW BLF Green Bans in the 1970s has recently given his support to the Miller's Pointy community campaign. He has invoked the Rocks and Dawes Point campaigns of the 1970s as precedents for opposing Barangaroo. But there is little or no evidence that resident populations and the communities they formed were ultimately assisted by those place protection campaigns. What was protected were aspects of the scenic profile and historic texture of the areas as well as a certain amount of open space. So it is reasonable to ask whether the public interest campaigns spearheaded by Munday in the 1970s are truly relevant to the aims of the Miller's Point residents with respect to Barangaroo today?

The point then is not to endorse or absolve the Barangaroo project either as urban strategy or in its particulars as design and landscape reconstruction. The point rather is to question what it is we are trying to achieve when we protect places under the banner of heritage. The eventual use and meaning of the Barangaroo site raises some interesting questions about how the past is recognised and understood in the urban environment.

A much earlier waterfront renewal project, the clearance of the Mississippi riverfront in St. Louis to make way for the St. Louis Gateway Arch, Jefferson National Expansion Memorial (1961-1966), raised some parallel questions. In the 1930s and 1940s many people asked whether it was appropriate to demolish such a large number of existing buildings, which possessed a tangible link with the past, for the purpose of creating a memorial to national history and a park. But as Daniel Bluestone (Bluestone, 2012) has remarked, it is undoubtedly true that in some cases new places, designed and constructed from scratch, can in fact better narrate and commemorate the past than authentic material remains in the form of old buildings and infrastructure (p132).

This is not a viewpoint that has enjoyed much currency with heritage conservation professionals in Australia in recent decades, nor with the Barangaroo competition winning architect Philip Thalys, whose vision for the site has largely been scrapped. The overt commitment to the 'anti-scrape' perspective of the Burra Charter has disposed heritage professionals toward maintaining fabric wherever possible. Design professionals, under the influence of high-profile recent projects such as New York's High Line have likewise seen great opportunities in the tough industrial residues of the urban environment and tended to want to work with them rather than erase them. Hence the position taken by both the architecture profession and the National Trust, and their suspicion of fakery in the landscape reconstruction project.

Former Prime Minister Paul Keating, however, who championed the landscape restoration concept for the Baranagaroo headland, has repeatedly described the 1960s container wharf facilities that extend out on reclaimed land into Sydney harbour as a piece of "industrial vandalism" with "no

heritage value” (Moore 2009). Moreover he has argued that the evocation of the pre-European landscape on this important piece of Sydney harbour represents a great opportunity to address Australia’s settlement history, one that is more important than the physical evidence of the shift to containerisation in late twentieth century shipping. He has not addressed the fate of the small residual community connected to the history of maritime work in the area.

Barangaroo has been named in honour of a Cammeraygal woman who played an important role mediating between Aboriginal people and British colonists in the Port Jackson area in the early days of settlement. It is arguable that constructing a new landscape that evokes the character of the environment in the period before and during this period of early settlement, is an appropriate way to address questions of Aboriginal dispossession and continue the cultural work of reconciliation. The lead designer for the landscape restoration project, Peter Walker, has expressed a desire to promote the significance of the site as a place of reconciliation. In a 2012 interview with the Sydney Morning Herald he explained that “Mr. Keating had educated him about its place in the area’s Aboriginal history and its connection to nearby Goat Island and surrounding headlands” (Moore, 2012). In other words, this part of the Barangaroo site might also be viewed as part of a larger landscape, one that testifies to the ongoing effort to protect and restore the harbour foreshore to a condition of natural beauty. The group of protected and recreated contours that define the harbour landscape might also become the setting for a new story of national origins.

Conclusion

The nature of the heritage enterprise in Sydney and its surrounds has been deeply marked by efforts to protect the natural landscape as a way of fostering the identity of the place and paying tribute to its early history. The pride of incipient nationalists such as Piddington in the glories of the harbour and its surrounds; the somewhat nostalgic pastoral vision of Annie Wyatt; the regionalist commitments and sense of authenticity of Donald Gazzard; and the critical revisionism of Keating each assumed that Sydney’s history and identity are embedded in its landscape. How each addressed the perennial conservation issues of renewal and restoration versus continuity and repair certainly differs, and is the subject for a separate paper. The ideological resonances of settler colonialism in each phase of these landscape protection and restoration efforts has shifted subtly and is likewise a subject deserving of its own paper. But the clear commitment to landscape protection as cultural heritage has remained fairly constant. Notwithstanding its position on the Barangaroo development, the National Trust of Australia (NSW) has been the central institution in promoting this view: a role contrary to the widely held idea that they have been mostly interested in fixing up nice old houses.

¹ A.F. Wyatt, “How the National Trust Began”, 15th September, 1956, reprinted in I.F. Wyatt *Ours in Trust: A Personal History of the National Trust of Australia (NSW)*, (Pennant Hills, NSW: Willow Bend Press, 1987) p.10

² A.F. Wyatt, “How the National Trust Began”, p.12

³ “Save the Trees – Conserve our Forests, Conference Handbook”, Correspondence 1947-1948, Wyatt Papers, The National Trust of Australia (NSW) Archives

⁴ *National Trust of Australia (NSW) Bulletin*, No.2, July 1948

⁵ “Why Hyde Park Barracks Should Be Preserved” June 1947, Correspondence 1947-1948, Wyatt Papers, The National Trust of Australia (NSW) Archives; and *National Trust of Australia (NSW) Bulletin*, No.1, April 1948, National Trust Bulletins 1947-1973, The National Trust of Australia (NSW) Archives

⁶ “Save the Trees – Conserve our Forests, Conference Handbook”

⁷ The National Trust corresponded with each of these organisations in 1947 and 1948. Correspondence 1947-1948, Wyatt Papers, The National Trust of Australia (NSW) Archives

⁸ See for example, draft list of "Places of Historic Interest in the County of Cumberland Interim Report by Committee Set up by the Cumberland County Council" Historic Buildings List, 1946-1956, Wyatt Papers, The National Trust of Australia (NSW) Archives

⁹ The National Trust of Australia (NSW), *Bulletin*, August 1963 and May 1964

¹⁰ On Dunphy see Philip Goad and Anne Higham, "Dunphy, Milo" in Julie Willis and Philip Goad (eds.), *The Encyclopedia of Australian Architecture*, (Port Melbourne: Cambridge University Press, 2012) pp.217-218

¹¹ National Trust, *Bulletin*, no.13, May 1964

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Reconciling Urban Landscape Values

A case study of Ottawa and Canberra's urban open space systems

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Protecting the landscape values of urban open spaces in the face of significant change to the surrounding urban structure highlights a particular tension between two apparently conflicting goals for more sustainable development. On one hand the compact city agenda seeks to increase the density of cities and on the other, large tracts of urban open space, left undeveloped for its scenic quality, conservation or recreation values, provide innumerable ecosystem services. The apparent tension is that these landscapes can contribute to the dispersed urban structure. Despite the innumerable ecosystem services these landscapes offer, they contribute to the dispersed nature of the city and are costly and difficult to manage.

This tension is further complicated when these urban landscapes are gazetted as part of a national significance narrative and remote from the municipal challenges of delivering a more sustainable urban form. For the capital cities of Australia and Canada, this has resulted in a complex set of policy issues that highlight the challenges of planning and managing urban landscapes.

This paper explores the history of open space systems gazetted by national governments in Ottawa and Canberra, the respective capitals of Canada and Australia. It examines how these cities have approached their metropolitan planning strategies and comments on the way landscapes have been accommodated in future urban growth through strategic plans and policies. In doing so it identifies the challenges faced when urban open spaces, deemed to be locally or nationally significant, compete for increasingly scarce government resources and face increasing pressures from urban consolidation.

Introduction

The last decade has seen a change in attitude toward the value of urban open spaces as citizens become increasingly literate concerning environmental challenges brought about by urban growth and climate change. The increasing interest in the environmental quality of cities has focused on a variety of landscapes ranging from single trees to urban forests and national parks. Such a change in attitude has brought about a greater awareness and political acceptance of the need for a coordinated approach to planning and management of urban open spaces (Goode 1998; Antrop 2004a; Baycan-Levent, Vreeker et al. 2009).

Developing policy to retain and manage these landscapes requires planning practices and systems to interrogate the social, economic and environmental values of those urban open spaces. At a metropolitan scale urban open space can provide ecosystem services important for human well being. However, because they also separate urban centres, it can be argued that they also contribute to urban sprawl (Erickson 2004). Defining and identifying these values provides a better understanding of the contribution the landscape plays in the urban structure and how the built form and open spaces can be appropriately modified to achieve sustainable cities.

From a governance perspective, questions are also being asked about how to distribute the cost of managing these open spaces (Pearson, Pearson et al. 2013). The attribution, and at what level communities (municipal, state or national) bear the real and opportunity costs of these open spaces gives impetus to the need to determine an objective, sustainable approach to valuing landscapes. Therefore a balanced approach is needed to determine a sustainable urban open space policy for sustainable growth.

This paper reviews historical and contemporary strategic plans, policy documents and reports pertaining to planning renewal and the creation and management of open space systems for Ottawa and Canberra. As capital cities, these case studies share similar governance structures based on the Westminster system. Both cities are also undergoing reviews of the planning systems at federal and municipal level in order to establish growth strategies for the next half century. Around these discussions, the notion of national significance is an important factor in planning for these cities. This paper draws out lessons for all cities faced with the challenge of balancing landscape values and urban identity in the face of urban growth.

The Ottawa and Canberra open space systems were gazetted by their national governments in 1958 and 1984 respectively. Spatially, they remain substantially unchanged- avoiding encroachment by development. This is largely due the national governments exerting authority over local municipal authorities in relation to metropolitan planning. Similarly both the National Capital Greenbelt (greenbelt) in Ottawa and the National Capital Open Space System (NCOSS) in Canberra were conceived as critical elements in determining the long term urban boundary of the city. These two themes are explored further in this paper as it supports the findings of this paper.

Values underpinning different approaches to conserving urban landscapes

Conserving landscapes can be thought of from two approaches. The first is to conserve certain landscape types and, by implication, practices and rituals that shape that landscape. The second identifies the landscape as a tool for implementing sustainability objectives (Antrop 2006).

The first approach recognises customary rituals that shape the landscape (Olwig 2002). Change to urban open spaces thought of in this way are characterised by loss of identity, diversity, and coherence of existing landscape values. It threatens stability which is often associated with loss of ecological integrity, community tranquility and authenticity (Lowenthal 1985; Lowenthal 2007). From a planning policy perspective, changes to the spatial structure of open spaces is often met with often vigorous resistance by community groups who view development in or even near urban open space as a threat to landscape values. This approach to sustaining landscapes sees human intervention in social or ecological systems as a disturbance. It resists the opportunity for changes that may also provide positive outcomes in the face of contemporary planning goals such as consolidation and containment.

The second approach focuses on the performance of the landscape, where the value is measured by indicators and performance measures (MacKenzie and Sumartojo 2012; MacKenzie and McKenzie 2013). This approach uses the capacity of the landscape to provide measurable benefits that drive policy settings for planning and management.

The benefits provided by urban open spaces are well documented. Measurable ecosystem services produced by urban open space contribute positive benefits through a variety of functions including; human health (Tzoulas, Korpela et al. 2007) and quality of life (Bolund and Hunhammar 1999; Chiesura 2004), spaces for working and living (Rottle 2006) and creation of 'new standards' for aesthetics and landscape management (Cranz and Boland 2004). Other environmental benefits include maintenance of biodiversity (Bryant 2006), wind protection (Kongjian Yu, Dihua Li et al. 2006), microclimate regulation (Gomez, Tamarit et al. 2001) and recreational activities like walking, nature viewing and education (Hamilton and Quayle 1999).

Notwithstanding the benefits provided by the landscape, changes to planning and management of urban open spaces result from a set of narrowly defined outcomes loosely connected to a vague definition of sustainability (MacKenzie and Sumartojo 2012). This metrics approach to determining landscape value in the context of achieving sustainable outcomes treats landscapes as form of 'natural capital' (Antrop 2006). The concept of natural capital is not governed by the landscape as a physical space with multiple and changing tacit and tangible values, but a single measurable outcome determined by indicators that are negotiated. In short, landscape values are determined by what indicators are included and what are left out (MacKenzie and McKenzie 2013).

The formulation of guidelines supported by metropolitan plans may provide a vision for a sustainable landscape at a holistic scale; however development projects are specific to sites and rarely coordinated. By adopting this performance approach to urban open space planning, the concept of landscape as a form of natural capital can be and is often severely reduced through incremental development (Antrop 2006). By examining the history of the development of

metropolitan planning of Ottawa and Canberra through the lens of landscape values we can develop a better understanding of the role of landscapes in metropolitan planning.

Canberra's Strategic Planning

The importance of the landscape in Canberra's urban structure was assured from its inception because of its particular planning history. It was a product of a vision resulting from the fathers of Federation, and through them the Australian people who embodied the idea of a national capital that expressed the symbolic union of the states to form the Commonwealth. Key to this vision was an aspiration to locate a capital in the Australian landscape, most visibly expressed in the site selection (Headon 2003) and the winning design for the city by Walter and Marion Griffin. While framework and landscape vernacular of the city was established in the inter-war years, the majority of urban development in Canberra occurred after World War II (Freestone 1989).

Prior to self-government, the Australian Capital Territory's strategic planning, design and construction of public infrastructure were all under the direction of the National Capital Development Commission from 1958 to 1988 (NCDC). The vesting of city planning and building in the NCDC allowed this organisation, on behalf of the federal government, to implement contemporary planning theories that continue to have a profound effect on Canberra's urban structure and reflect the community's strong association with 'landscape' and 'place' manifest in the term understood across Australia, 'the bush capital'.

From its inception to demise the NCDC was concerned to ensure Canberra would be an enviable city nationally and internationally (Lloyd and Troy 1981). This focus was driven by a sense of national pride and to ensure the public servants, transferred from Melbourne and Sydney, enjoyed every amenity and convenience. This included the provision of natural open spaces for recreation but also to build strong sense of community and belonging in the new Capital. The planners set out Canberra's polycentric urban structure with districts separated by open space surrounding suburbs that contained local centres and schools no more than a 5 to 10 minute walk from the majority of homes.

This polycentric structure set up multiple landscape values for Canberra's urban open space system. In 1977 Seddon's work recognised the significance of this and the need to reconcile these multiple landscape values if Canberra's open space system was to be retained and not inadvertently compromised by future growth of the city. Seddon emphasised the national importance of the open spaces in the system they established and this is reflected in the name, the National Capital Open Space System (NCOSS)

Seddon's investigation into the proposal to formalise an open space structure into the metropolitan plan raised a number of questions about landscape values and the purpose of an identified open space system. He emphasised the importance of understanding the NCOSS as more than a land use category. Seddon argued that 'land by its very nature, is a non-homogenous commodity, and sites differ greatly in their attractiveness' (Seddon 1977). He was most concerned about how the landscape would be valued for recreation and visual amenity. However, managing the visual impact of development remained an integral principle of the NCOSS objectives, in particular, how the visual setting or view from certain points around the ACT would represent the lineage to the original Griffin

design. Seddon was also concerned how the landscape setting invoked meanings of national significance.

As a direct result of Seddon's work, the NDCDC formalised the landscape structure of the Canberra metropolitan plan by recognising the NCOSS. The NDCDC emphasised the national importance of Canberra's urban open spaces by the formal adoption of the NCOSS in the metropolitan Y plan for Canberra (NDCDC 1984). In keeping with the Griffin landscape aspiration, the hills and ridges within and around the urban area of Canberra were to be kept free of development, to act as a backdrop and setting for the city, and provide a means of separating and defining the towns.

Further to this, notions of national significance, experienced through the landscape setting, were further complicated by the emerging concerns about managing the multiple goals of municipal land management and expressing national significance through the NCOSS. The major concerns were pragmatic issues to do with future land ownership between a territory administration and the federal government, access for recreation, environmental management and division of planning responsibility. As the city has grown, the division between the urban and non-urban spaces has become more prominent and pressure from users has increased.

In response to the adoption of the NCOSS into the Y plan, Seddon argued that a future territory government should adopt a 'honey pot' approach to land management and identify a few areas to be intensively used and managed. He believed largely dispersed medium intensity use of the NCOSS would be damaging both ecologically and economically (Seddon 1984).

Self government and its implications for NCOSS

In 1988, the federal government of the day granted self-rule to the ACT as a 'gift' to the Australian people to recognise the bicentenary of white settlement. Being Australia's National Capital, the Commonwealth reserved the right to ensure Canberra was planned and managed according to its national significance. This was an inspired act of cost shifting as it passed the financial responsibility of managing Canberra's urban open spaces along with providing state and municipal services to the people of the ACT, through its own territory government, while ensuring the Commonwealth had control over strategic development, effectively retaining planning control over 70% of the ACT.

By the early 1990s, the ACT, as a self-governing territory, was the focus of both the new National Capital Planning Authority (NCPA) and the ACT government. The major debates between agencies revolved around division and transfer of land management responsibilities (Reid 2002). At the time, the community was concerned about the apparent mismatch between infrastructure planning and the erosion of open space areas, containing high value ecological and scenic assets. The community cited poor communication between different agencies at Federal and Territory level. Central to this debate was the role of the NCOSS in sustaining both explicit and tacit landscape values held to be important to the community and as part of the City's planning legacy. The NCPA also continued to investigate how to promote and make meaningful the NCOSS to the Australian people. This included an investigation how NCOSS areas could be managed and classified to reflect conservation values as well as examining development potential for recreation and tourism.

At this time, the geographical spread of the city and the generous, but now ageing infrastructure posed significant tangible and opportunity costs to Canberra's social, economic and environmental sustainability. Of note were persistent tensions regarding the spreading greenfield developments and the challenges faced by land managers responsible for the NCOSS. Partly in response to these pressures, the Canberra Spatial Plan was developed. It identified the importance of creating a more compact city (Canberra Spatial Plan 2004) and applied a 'city limits' planning approach, similar to the growth strategy developed for Melbourne at the time.

In the decade after self-government many Canberrans considered the planning system to be developer driven, threatening the city's open space and suburban quality. The ACT Labour Party was elected on a planning platform to address this decline. Once elected the government undertook a number of actions. The first was to introduce the Garden City Territory Plan Variation No. 200 which essentially restricted subdivision to 'core' areas around shops and centres. Simultaneously it commenced the first comprehensive strategic planning review and introduced a consultative Neighbourhood Planning Program. Despite this, community resistance to redevelopment continued, along with growing concerns for a loss of accessibility and environmental amenity

For the ACT Government the costs of maintaining, let alone further investing in Canberra's social services, extensive urban infrastructure, inclusive of the urban open spaces and streetscapes, was becoming more critical given its limited sources of revenue. In a bid to be canvas these issues and the community's concern for Canberra's environmental amenity, the ACT Government, before reviewing its strategic policies undertook two key community consultation projects. The Sustainable Future project (2009) brought together key stakeholders to consider the issues and potential responses to managing Canberra's urban ecology. From this project, the consultation project, 'Time to Talk: Canberra 2030' canvassed the wider community. This consultation delivered back to ACT Government key messages. Central among them was the notion that the city should increase in density but not at the expense of the quality of the urban landscape or threaten the integrity of the NCOSS.

In 2012 the ACT Government replaced the 2004 Spatial Plan with the ACT Planning Strategy as the key reference for guiding development. The goal of the new strategy was to retain the metropolitan spatial structure while changing the built form and retaining the quality of open space at a local and district level. This Strategy reinforced the intention to create a more compact and efficient city and it adopted a more integrated, systemic approach to addressing the issues associated with this goal. The outcomes and actions, in response to Time to Talk: Canberra 2030, reinforced the principles behind the metropolitan structure set out by the NCDC. In keeping with the new town principles adopted by the NCDC, the new ACT Planning Strategy reinforced the identifiable town centres and directly linked land use and transport planning while advocating residential intensification in the town centres and along the major public transport routes. History shows that through conscious incorporation of the landscape in metropolitan planning, the landscape has been sustained as a land use classification, largely unchanged since the inception of the NCOSS and strongly linked to the original Griffin vision. However, the landscape has, more recently, been co-opted to perform essential measurable functions contributing to the City's sustainable development agenda.

In preparing the ACT Planning Strategy, the ACT Government undertook a vulnerability of assessment of the metropolitan structure to climate change (AECOM 2012). This work established

the importance and the value of the urban open space with regard to ameliorating extreme weather conditions. Further analysis also identified the importance of these open spaces for the migration of species, psychological and physical human health. This work established the performative value of the landscapes in the urban structure and the impact it has on the urban form such as on the design and construction of buildings and infrastructure. The lesson here has been to ensure the value of these landscapes is fully accounted as this will reveal that not all the landscapes are of equal value.

This, of course goes to the issue that Seddon raised in his review of the NCOSS. Treating all landscapes in the system as homogenous poses a threats to its integrity and management overall. Firstly, the extent of these landscapes presents a financial burden for the municipal authorities charged with their management. Maintaining basic pest and weed control is logistically impossible and the consequence that much of the system declines. Secondly, the opportunity cost for these authorities in development forgone is so great, that if the contribution that the landscape makes is not well understood, then the whole system may be compromised by incremental loss.

Ottawa's Greenbelt

Ottawa is an intimate, human-scaled city that emerged like many other North American forestry towns. Unlike Canberra, Ottawa's urban structure and form is less geometric. Whereas Canberra was designed around the ornamental Lake Burley Griffin, urban growth in Canada's capital fanned out from the Ottawa River in a more organic fashion (Erickson 2004). The City Beautiful urban design approach has been considered and debated for nearly a century in Ottawa, and yet the city has rejected such grandiose schemes, reflecting its origins as a mill town. Despite humble origins, Ottawa grew rapidly after the second world war, compelling the Prime Minister Mackenzie King to develop the city's first metropolitan plan in the late 1940s. Like Canberra, the urban open space was consciously incorporated into the plan. However, low density urban expansion has been the dominant shaping force of Ottawa for most of the second half of the 20th century.

The Ottawa Greenbelt covers an area of 20 000 hectares, with an average width of four kilometres and over forty kilometres in length. The landscape is a mixture of introduced species and native forests, agricultural land and large infrastructure sites such as the Macdonald-Cartier international airport (National Capital Commission 2002). The greenbelt was gazetted as part of the then Prime Minister Mackenzie King's commitment to formalise a metropolitan plan for Ottawa. The French architect and planner Jacques Greber, along with professional staff from the Federal District Commission completed the city's first plan for the capital in 1950. Consistent with new town – garden city principles, popular since the turn of the century, the inclusion of a greenbelt was a significant spatial element of the plan (Taylor, Paine et al. 1995). The planning of the greenbelt was based on containing the national capital region projected population and associated infrastructure. The size and shape of the greenbelt was primarily to provide access to nature for recreation for the urban population- rather than the protection of natural systems or ecological resources (Taylor, Paine et al. 1995).

However the primary function of the Ottawa greenbelt was to prevent urban expansion into the productive agricultural land surrounding the city. The boundary of the greenbelt and, by definition, the extent of the urban footprint was determined as the most efficient economic and practical area that could be serviced by a municipal agency at reasonable cost (National Capital Commission 1992).

Within eight years of the greenbelt gazettal, urban expansion was placing pressure on greenbelt boundary. In order to protect these urban open spaces, the federal government bought 15 000 hectares to add to the 20 000 hectares already in federal ownership between 1958 and 1966. In order to retain agricultural production close the city, the federal government leased back land to farmers. However the short term leases and the perceived lack of lease certainty have resulted in a lack of investment in infrastructure and a resulting retreat of farming from the area (Fung and Conway 2007).

Since then, the greenbelt has been successful in providing a land reserve for government and institutional buildings, containing the city within the reserve boundary, and providing a range of landscape types from natural forests to pastoral open space accessible to residents. However, the greenbelt has had limited success in containing urban growth or affecting urban densities. Satellite communities have expanded adjacent to the outer limits of the greenbelt (Fung and Conway 2007). The main contribution of the greenbelt has been to separate these newer satellite communities from the old urban area. While the greenbelt has not contained Ottawa's growth, it has significantly shaped the urban structure of the city. This was reflected in the federal government's 2001 decision to retain the greenbelt in the amalgamation of the former Ottawa urban area, the regional government and ten other local municipalities to create the City of Ottawa.

Ottawa's contemporary strategic planning

In 2011 the national and municipal agencies in the City of Ottawa partnered to prepare a long term plan for the National Capital Region. *Choosing our Future* set a goal of developing a sustainable, resilient and liveable region. The National Capital Commission (NCC) and the City of Ottawa have now commenced separate, complementary strategic planning reviews. The NCC's 'Horizon 2067' is a review of the metropolitan structure that commenced in August 2011 and this is due for completion in 2017. The City of Ottawa embarked, *Building a Liveable Ottawa 2031* in January 2013.

The NCC, similar to the NCA, has a statutory duty to prepare plans for and assist in the development, conservation and improvement of the National Capital Region. It is also required to ensure the nature and character of the seat of the government of Canada is managed in accordance with its national significance. However, the NCC has taken a greater role in the strategic planning of the capital than its Australian counterpart. The NCC review addresses, at the very broadest level, land use, public transport, employment, economic viability and quality of living – issues critical to urban growth - as well as national issues pertaining to symbolism and promotion of the capital region.

In its draft form the review contains three objectives that specifically relate to the management of open spaces in the greenbelt. These include; better integration of natural areas into the urban fabric, pilot projects focused on ecological and sustainable agriculture and new tools for the protection of valued ecosystems. In a similar vein to the ACT Government's strategic planning exercise, *Horizon 2067* has repositioned the landscape values of these urban open spaces to incorporate metrics to measure the performance of the landscape as part of its sustainable development agenda.

Despite very little conscious collaboration¹ between the respective planning agencies concerned with the review of metropolitan plans in Canberra and Ottawa, both cities are undergoing similar processes of renewing approaches to metropolitan planning at both state and federal levels. The

evidence from both case studies show that the role and function of the landscape continues to provide the symbolic role, underpinned by planning legacies and heritage values implicit in the urban open spaces. In addition, each city is looking for ways to incorporate more contemporary understandings of landscape values underpinned by ecological function and ecosystem services.

Discussion

The spatial structure of cities are a product of the geo-physical constraints of the land and the path dependencies generated by the decisions of city founders (Troy 2004). The strategic planning exercises and the issues of dealing with dual planning system in the national capitals of Ottawa and Canberra can provide some insight as to how cities might reconcile their changing urban structure while retaining these urban open spaces and meeting the challenges of a establishing a more sustainable city.

Canberra and Ottawa, like all cities, emerged around specific geographic patterns such as rivers, hills and forests, however from their inception, the competition for land uses has necessitated the protection of landscape values through formal incorporation into metropolitan plans. The challenge for cities remains that modern planning separates and is continuing to break the nexus between landscape and the urban structure. In the cases presented in this paper, the notion of national significance unites the concept of the urban and the landscape, making separation of these planning functions impossible. The landscape is central to the identity of these cities which complicates urban open space planning and management.

The logic and attraction of a compact urban form presents a spatial structure to deal with demographic, economic and environmental change. However such an approach creates ongoing challenges for how we manage urban landscapes and the associated values that are held to be important to the community and in the case of Canberra and Ottawa, the nation.

If planning policies are to be effectively administered for these landscapes, a value must be ascribed, as well as objectives and/or controls for its management. Whether the underpinning values focus on conservation or performance, attempting to make what is often subjective, more objective in a planning system is what could be instructive for the management and allocation of urban landscapes.

The 2012 ACT Planning Strategy has attempted to achieve this. It differed from the previous strategic plan, by taking the approach to set out principles and actions to guide change in Canberra's urban form, not just its spatial structure. The 2012 Strategy reinforced the value of the metropolitan open space structure but also reinforced the need for the urban open space to be of a higher quality, working harder with what ecosystem services and the landscape values it provided. Ottawa on the other hand has focussed on a stronger relationship between the different levels of government to ensure the significance of the landscape is recognised, while at the same time allowing for development to occur adjacent to and inside the greenbelt.

The capital city status of the case studies sets out what is important about urban open spaces in the context of the urban structure. In other words, the landscape provides a setting for the national institutions as well as defining the urban edge. In the case of Ottawa the landscape contains the city,

where as in Canberra it separates the self contained towns. However, this only partially ascribes a value for while the respective federal and municipal plans attempt to articulate what is important about their urban open spaces, they do not go on to define the relative value of these spaces to the city. In order to achieve the goals of sustainable urban development, both cities need to comprehend the value of compact urban form while conserving the relative value of urban open spaces. These concepts are not mutually exclusive, but rather, combine to deliver a better outcome than what currently exists.

Conclusion

This paper has established that the structure of the city and hence the structure of the urban landscape are a legacy of conscious incorporation of urban open spaces into metropolitan planning. Similarly, conserving landscape values requires a more thorough assessment of the goals of retaining essential landscape characteristics while allowing cities to grow. Canberra and Ottawa demonstrate the advantages of addressing the spatial structure (delivered through the urban open spaces) and built form at the same time to achieve a more sustainable city.

A more rigorous establishment of the multiple values of the landscape will make setting out objectives for its management and the development of a compact city agenda clearer. For both national capitals, it is necessary for the federal planning administrations to define what is significant about these landscapes. Determining the value of these landscapes makes decision making more transparent in the endeavour to achieve a more sustainable city.

¹ Canberra and Ottawa are members of Capital Alliance an informal association of planned capital cities around the world. <http://capitalsalliance.org/default1.aspx> accessed 5th December 2013.

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Indigenous Heritage in Cities Representing Wellington's past

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This paper aims to examine how indigenous heritage values are represented within western urban environments. By using an urban design lens, this paper builds on an emerging body of knowledge by analysing existing designed heritage landscapes in an attempt to recognize the contrasts between western and indigenous heritage values.

Through the study of a selection of indigenous landscape precedents from America, Canada and South Africa, common representational trends of heritage design are understood. These examples illustrate some of the issues that arise when landscapes of indigenous significance are presented within a western heritage framework. As the world's urban environments change in the face of rapid population growth, issues involving the interpretation and representation of indigenous values will become more frequent.

The second section of this paper relates the common trends of heritage representation to New Zealand's current heritage position. The documents, *Tapuwae* and *Te Aranga: Māori Cultural Landscape Strategy* are introduced as guides to Māori intangible heritage. These guides are discussed in relation to the New Zealand urban design discourse. Contemporary outcomes of this current heritage climate, Waitangi Park and Te Aro pa Visitors Centre, are discussed and found to be two examples of a progressive approach to indigenous heritage design within Wellington's challenging urban environment.

Keywords: Heritage, Intangible Heritage, Maori Heritage, Urban Design

The *United Nations World Urbanization Prospects Report* states that the world's urban population is expected to increase 72% by 2050, from 3.6 billion in 2011 to 6.3 billion in 2050 (United Nations, 2012, p. 3). If this projection is met, cities will experience an increase in infrastructural development to support this population influx. As Rolleston and Awatere note "Modern urban expansion has a

propensity to overlies landscape, natural features, resources, settlements, occupations, land use and activities, with little recognition of what was previously there” (2009, p.2).

In post-colonial cities there are many landscapes that once formed the livelihood of indigenous communities. Today, the physical and spiritual ‘unearthing’ of these indigenous heritage landscapes due to urban infrastructure development has offered a window on the past. Subsequently this has enabled an examination of heritage practices typified by the work of Australian anthropologist Laura-Jane Smith. In her book *The Uses of Heritage*, Smith explores the varying cultural definitions and interpretations of heritage (2006, pp. 276-299). This paper will elaborate on this theory through a landscape and urban design lens by exploring what techniques have been used to interpret and present a selection of indigenous cultural heritage landscapes from post-colonial countries. The understanding gained from this exploration will then be compared to heritage processes and representation within New Zealand. Before this however, a definition of heritage is presented; introducing the different concepts of western and intangible heritage approaches to the field.

Defining ‘Heritage’

A fascination with the past stems from humankind’s need to construct individual and group identities (Harvey, 2001, p. 320). Colonial expansion and new concepts of race and cultural identity within the context of eighteenth century modernity led Europeans to believe that evidence of their evolution from the primitive past was important (Smith, 2006, p.17). In the 1960s and 1970s archaeologists, lobbied for legislation to cover their right to protect and manage heritage sites. Many gained stewardship and control over heritage including that of many indigenous cultures (Smith, 2006, p.278). As archaeological heritage values gained more power through legislation, a trend developed in the type of heritage that was being privileged. In this period for example it was common for built structures that were: monumental, of a grand scale and which had identifiable boundaries to be protected under developing heritage legislation (Smith, 2006, pp. 18, 20, 21, 23, 31). Consequently, in the twenty-first century, there is a tendency to perceive and present heritage in an idealistic fashion, as relics and ruins of the past. The tendency in New Zealand to privilege nineteenth century architectural heritage up until recent times is indicative of these heritage trends.

The New Zealand criteria for the registration of historic places and historic areas can be found in section 23 of the *Historic Places Act 1993*. Some of the criteria demonstrate an emphasis on civic or national importance, for example:

- (a) the extent to which the place reflects important or representative aspects of New Zealand history;
- (b) the association of the place with events, persons, or ideas of importance in New Zealand history;
- (c) the potential of the place to provide knowledge of New Zealand history;
- (i) the importance of identifying historic places known to date from early periods of New Zealand settlement (Historic Places Act, 1993, section 23).

An emphasis on tourism potential, heroics of tragedy or loss, and rarity are expressed by the following clauses:

- (e) the community association with, or public esteem for, the place;

- (f) the potential of the place for public education;
- (g) the technical accomplishment or value, or design of the place;
- (h) the symbolic or commemorative value of the place;
- (j) the importance of identifying rare types of historic places (Historic Places Act, 1993, section 23).

These heritage criteria rely on professional opinion and analysis to objectively allocate importance to heritage landscapes, and therefore archaeology, architecture and social sciences have become professions of authority on heritage issues (Smith, 2006, p 284). Smith states that this “ability to control the values and meanings given to heritage becomes vital in the struggles for political and cultural recognition” (Smith, 2006, p 284).

Thought-out Smith’s work she refers to this type of heritage understanding as a ‘western heritage’ paradigm. In contrast to this heavily professionalised understanding of heritage, many indigenous peoples intrinsically hold information on their personal heritage within their communities. This is often defined and conveyed through oral history and tradition (Smith, 2006, p.284). It is described as a:

cultural and social process which engages with acts of remembering that work to create ways to understand and engage with the present (Smith, 2006, p.2).

Objects, sites and landscapes are tools that can facilitate this process rather than being heritage themselves (Smith, 2006, p.44). This form of heritage is called intangible heritage, and has been defined in the *Convention for the Safeguarding of the Intangible Cultural Heritage 2003* as being:

- Oral traditions and expressions, including language as a vehicle of the intangible cultural heritage;
- Performing Arts;
- Social practices, rituals and festive events;
- Knowledge practices concerning nature and the universe;
- Traditional craftsmanship (2003, article 1, pp. 2, 3).

This paper will review case studies in which western heritage management and interpretation has been used to represent indigenous heritage landscapes in post-colonial cities. Firstly, case studies from America, South Africa and Canada are explored to extract some of the common representational themes present in these designed urban heritage landscapes. This is followed by exploring the current urban design approaches to indigenous heritage landscapes in New Zealand/Aotearoa and supported by the contemporary case studies of Waitangi Park and Te Aro pa.

Cahokia and Nquuz Hill

Cahokia was an Indian American city dating from before A.D. 1000, and was formed of a grand plaza, homes, and large human-constructed mounds. The mounds were demolished in the 1800s to make way for the city of St Louis (Hodges, 2011, p.2). Today, in the areas where Cahokia would have overlapped with urban St Louis, there are no physical traces of its existence. However, within the industrial block that borders the Mississippi River where the largest of the Cahokia mounds once stood, a cobblestone memorial has been erected (Hodges, 2011, p. 7).

The significance of memorials can be traced back to legislative development in the second half of the nineteenth century that was used to protect ancient monuments alongside historically significant buildings (Smith, 2006, p.19). Both architects and archaeologists at this time took a role in identifying and protecting significant monuments and assigning them public value. Memorial, as an architectural heritage tool, has therefore become entrenched in the western heritage design language.

Bakker and Müller investigate memorials, identifying their common aesthetic as being blunt, static and simplistic with a common avoidance of narrative and cultural dimensions of landscape (Bakker and Müller, 2010, p. 50). This technique can be seen in South Africa where a post-apartheid interest with heritage and creating a united national identity has resulted in a number of state governed initiatives towards erecting new monuments and statues. These are intended to commemorate previously misrepresented or suppressed history (Bakker and Müller, 2010, p. 49). However, a lack of guidance in South African heritage legislation on the nature of intangible heritage had led to an ignorance of the cultural dimensions of heritage landscapes (Bakker and Müller 2010, p. 50). This ignorance is typified at Nquuz Hill on the Eastern Cape where, in June 1960, the Ikondo revolt led to a massacre of local indigenous Mpondo people. Today this event has been acknowledged by a memorial erected by the government (Bakker and Müller 2010, p. 50). Bakker and Müller state that it has:

....created a schism in the community, with a general apathy to and disengagement from the event by the younger generation. The opportunity to appropriate and present the memory contained in the entire site — the hill, valley, graves, and monument — has been lost, and subsequently also the possibilities of transferring those intangible values and traditions crucial to the formation of identity (2010, p. 50).

With a lack of tangible, physical heritage material to display or highlight at Cahokia and Nquuz Hill, memorial acknowledges past indigenous significance in a way that presents it to the voyeur as being frozen in time or ancient. Smith states that this separation of past and present is a common basis of many actions within the western world, however, “for many indigenous people the issue of depth of time simply does not apply (Smith, 2006, p.19)”. The value of an element of heritage is not directly attributed to age and therefore the ‘past’ is not deemed as a separate entity from the present. The following case study explores this issue through the use of interpretative signage in an indigenous heritage tourism site.

Head-Smashed-In Buffalo Jump

Head-Smashed-In Buffalo Jump is situated in the foothills of the town of Fort McLeod in southern Alberta, Canada. The sharp drop in the plains was once a hunting tool for local nomadic Blackfoot tribes and earlier first nation’s people dating back 3,000 years. Today, it is a UNESCO World Heritage Site and has become a popular tourist destination (Opp, 2011, pp. 255-259).

Head-Smashed-In Buffalo Jump has become a tourist consumer object though heritage practitioners’ misunderstanding of its past. Accuracy of the knowledge of the indigenous significance of a landscape can often be overlooked by Western heritage professionals if it contradicts with the public

images that are desired. Waterton and Smith, likewise illustrate the injustice that can occur under the guise of heritage management programmes, stating:

We [non-indigenous] go into the field and observe them, build up abstract notions of 'community' from material remains, or report on the quirky traditions of geographical 'backwaters'. We reserve the right to speak for them and interpret them, and sometimes, ultimately, we reject them, especially if they fail to conform to our nostalgic ideals. (2010, p.8)

Head-Smashed-In Buffalo Jump seemed to capture the qualities of ancientness that fired the imagination of many who wanted to develop the site as both an area protected from collectors and a tourist attraction (Opp, 2011, p. 255). However, the jump holds little heritage significance for the neighbouring Blackfoot communities. Though it was well known, the jump was far less significant than comparable buffalo jumps in the area, such as the Kipitaakii Pisskaan (women's buffalo jump). In addition many local elders believe that the story that the 'Head-Smashed-In' name derives from, refers to another jump further north (Opp, 2011, p. 256). Despite these discrepancies, archaeological reports promoting the site emphasised the age and the aesthetic impact of the jump which subsequently raised its international tourism and heritage status (Opp, 2011, p. 257).

The design of the multi-levelled interpretative centre on site raised a number of issues between heritage practitioners and the indigenous Blackfoot, particularly due to its use of interpretative signage. When reviewing signage text local Piikani elders insisted on adding the sentence "Naapiikoaiksi ipahtsiinikatoomiaawa amo pisskani", meaning white people incorrectly named this buffalo jump, but this was quickly removed (Opp, 2011, p. 257). Traditional objects within the centre, that have notable significance in modern Blackfoot tradition, have also been misrepresented though signage that implies that they are unused in Blackfoot tradition today (2011, p. 258). In this case there is a marked separation between the past and the present not only thought the inaccuracy of the signage, but through the removal of local tribe's responsibility for the landscape by heritage practitioners. It can therefore be concluded that signage can have benefits to visitors of a heritage site, but not necessarily to the indigenous culture that the landscape is associated with. Signage that presents inaccurate or inflexible interpretations of a landscape can negatively affect the intangible processes associated with these elements of the past.

Indigenous Urban Design Approaches in New Zealand/Aotearoa

What can be learnt from the previous case studies is that often Western heritage techniques of representing heritage landscapes can have the tendency to contradict intangible heritage beliefs of some indigenous cultures. Static memorials, signage and misunderstandings of tribal knowledge can limit or hinder the opportunity for indigenous people to express their own heritage practices and legitimise their heritage in the present. New Zealand is a unique country that is today grappling with this dichotomy of heritage values.

In New Zealand, there are a number of guides applicable to the representation of Māori heritage landscapes in urban environments. For example, section 84 (part 4) of the New Zealand Historic Places Act 1993 introduces the Māori Heritage Council, and stipulates its rights and roles within the Historic Places Trust. Intangible heritage is touched on though documents developed by the council such as *Tapuwae: Guide to Māori Heritage* (Māori Heritage Council, 2009). This is intended to "guide

the work of the New Zealand Historic Place Trust” on matters of Māori heritage (Māori Heritage Council, 2009, p. 4). Running parallel to the work of the act is the *New Zealand Urban Design Protocol 2005*. These stipulate protocol of best urban design practice for the country. According to the Protocol seven design qualities form the basis for quality urban design. These are context, character, choice, connections, creativity, custodianship and collaboration (NZUDP, 2005).

Though a number of Māori values can be associated with the categories of the *New Zealand Urban Design Protocol*, the *Te Aranga: Māori Cultural Landscape Strategy 2008* presents a more appropriate Māori urban design methodology. This document has been developed to ensure iwi (extended kinship group) are well placed to positively influence and shape the design of cultural landscapes within their tribal boundaries (*Te Aranga*, 2008, p.4). Underlying the *Te Aranga: Māori Cultural Landscape Strategy 2008* is an understanding of Mātauranga Māori which can be described as knowledge based on a Māori world view (Rolleston and Awatere, 2009, pp.4-6). The key principles of this knowledge base are:

- Whanaungatanga - Participation and membership in the community and social setting.
- Kotahitanga - Collective cooperative and effective partnerships and collaboration with community.
- Wairuatanga - Emotional connection with the environment that links people (p.4).
- Mauritanga - Accounting for the presence of existing mauri of an environment and maintaining or enhancing the mauri (life principle) within a community.
- Orangatanga - Contributing to better social, cultural and environmental interaction for people. Enhancing well-being.
- Manaakitanga - Acceptance and hospitality given to visitors, and protection and security of community.
- Kaitiakitanga - Protection of significant landscape features important to the local community.
- Rangatiratanga - Community taking responsibly for creating and determining their own future.
- Mātauranga - Acknowledgement of the role of history, mythology, genealogy and cultural traditions as a way of shaping present attitudes, beliefs, values and behaviours (Rolleston and Awatere, 2009, pp.4-6).

Te Aranga: Māori Cultural Landscape Strategy 2008 seeks a means to contextualise tikanga (correct procedure, customs) through Mātauranga Māori and facilitate cultural practice through design (*Te Aranga*, 2008, p.6). A nineteenth century example of the concepts presented in *Te Aranga* is the whareniui. Drastic loss of Māori land during this period led in part to the nineteenth century development of the whareniui (meeting house) (Austin, 2003, p.43). Whareniui have become integral spaces for Māori to maintain their traditional practices in Eurocentric city formats (Austin, 2003, p.44). The building achieves this by articulating social relations within and around it. For example, the open space in front is called the marae ātea and is used for pōwhiri (formal greeting/welcoming protocols); and the internal structure is seen as an ancestor and used to catalyse discussion over recollection of the past (Austin, 2003, p.44). As locals and guests interact with these spaces the past is constantly being revisited by active interaction with it in the present.

Drawing from the methodology of the wharehenui, urban design in Māori heritage landscapes has the potential to be influenced by intangible heritage practices and traditions that have been defined previously as protocols, rituals, social practices, oral traditions, performing arts, festive events, knowledge practices and traditional craftsmanship etc (CSICH, 2003, pp.2,3). This approach differs from the western heritage aesthetic of designing heritage landscapes to become places of passive commemoration that instill a sense of being separated from the past (Smith, 2006, p. 31). This is explored by Bakker and Muller in their explanation of heritage design in post-apartheid South Africa. They call for:

open ended heritage places where the emphasis is not necessarily on achieving consensus, but where contradictions, complexity and conflicts, due to inevitable differences in interpretation, may be continuously explored and debated, and seen as an opportunity for an increase in cultural vibrancy and cultural tolerance (Bakker and Muller, 2010, p. 54).

Despite an intimate understanding of their own pasts, indigenous communities have often been overlooked as being authorities over their own heritage within western heritage frameworks (Waterton and Smith, 2010, p.10). However, global movements towards acknowledgement of indigenous rights in the past suggest that marginalisation of alternative understandings of heritage is subject to change. Cultural interaction in the present is actively challenging cultural and social meanings of the past (Smith, 2006, p. 29). The *Convention for the Safeguarding of the Intangible Cultural Heritage* 2003 formally addresses this notion in article one, which states:

This intangible heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity (CSICH, 2003, pp.2,3).

It can be concluded that within New Zealand, there already exists a strong collection of documents that can be utilized in the process of approaching the representation of Māori heritage landscapes. Some, such as *Tapuwae* and *Te Aranga: Māori Cultural Landscape Strategy*, strongly address the need for design that acknowledges intangible heritage values and processes. The nature in which indigenous heritage landscapes are presented in public environments can determine the ensuing awareness of this cultural presence. These landscapes “have a consequence, in wider social, cultural, economic and political networks” Smith states (2006, p. 276). These consequences will be discussed in the following section through the analysis of two contemporary urban indigenous heritage landscapes in Wellington, New Zealand; Waitangi Park and Te Aro pa.

Waitangi Park

Waitangi Park is located on the intersection of Cable Street and Oriental Parade on Wellington’s waterfront. The park was completed in 2006 and designed by the local landscape architecture firm Wraight and Associates. The park is 5.8ha, and boasts a large grass field, Skate Park, basketball courts, riparian zones and native vegetation areas (Wraight and Associates, 2006). It has become the venue for concerts, markets and is an important thoroughfare in the functioning of the city’s waterfront.

The pivotal heritage element of the park has been the incorporation of Waitangi Stream in this design. Prior to the development of Wellington City, the Waitangi Stream and lagoon were a vital source of sustenance and material for local Māori, including the settlement at the Te Aro pa (Love, 1996, p. 5). The stream and its lagoon were said to once be the home of a taniwha (water spirit), that fled upon European arrival (1996, p. 5). As the city grew, the stream was piped to allow building over it. This is how it remained until 2002 when construction of the park began (Waitangi Park, 2006, p.1).



Figure 1: Wetland Paths (Author, 2013).



Figure 2: Wetland meeting sea (Author, 2013).

The act of unearthing past landscapes or infrastructures is commonly referred to as day-lighting, and at Waitangi Park it achieves many positive heritage outcomes. A synopsis by Wraight and Associates introduces their design approach for this project:

to fully integrate site interpretation into built form, is possibly the most evident in the revitalisation of Waitangi Stream, which is both a major component of the sites water sensitive infrastructure and a clear acknowledgement of the sites historical past and its significance to the local Iwi and Tenth's Trust (Wraight and Associates, 2006).

An essence of Māturanga Māori that underpins *Te Aranga: Māori Cultural Landscape Strategy* is present in the park's design, firstly through the revitalisation of the stream and its ecologies and secondly through the water sensitive urban design approach. Kaitiakitanga (guardianship) over the health of the heritage landscape is achieved as water from both the stream and storm-water system is directed through beds of native wetland vegetation that improves the overall water quality (Wraight and Associates, 2006).

In addition to a sense of kaitiakitanga present within this revitalised landscape, day-lighting the Waitangi Stream encourages interaction with heritage in a way that differs from traditional heritage design that facilitate a removed and controlled interaction with heritage places, through techniques such as signage or memorial. Waitangi Park is a modern example of heritage design that successfully represents a landscape that has been physically lost to modern development and makes it relevant to the evolving nature of the urban places of today.

Te Aro pa

In 2005, foundation work for the development of the Bellagio apartments on Taranaki Street, Wellington began (McCarthy, 2006, p. 517). During this process three ponga (silver tree fern) whare (houses) of Te Aro pa, were unearthed. The whare are the only known physical trace of the Taranaki whānui's pa (village), which stood from 1835 to 1902 (Broughton and Ngaia, 2013). Negotiations between Wellington Tenth's Trust (mana whenua), Historic Places Trust, Wellington City Council and the developers Washington Limited, resulted in an agreement to preserve the whare in-situ as part of the proposed apartment complex (McCarthy, 2006, p. 522).

Mana whenua (local Māori) saw the Te Aro pa site as an opportunity to 'share the story' of their heritage (Broughton and Ngaia, 2013). The heritage of Te Aro pa is complex. From the arrival of the British in 1840 Taranaki whānui were, over time, forced off their land (McCarthy, 2006, p. 518). By 1902 the pa was left uninhabited and the city of Wellington grew (Broughton and Ngaia, 2013). The re-emergence of the remains of the three whare (houses) had the potential to replay some of these early cultural tensions. In contrast, the negotiations between Māori, heritage professionals, government and the developers were concluded amicably, and the whare remained in-situ. The remains were displayed within glass imbedded pits in a publicly accessible gallery on the ground floor of the commercial apartment building (McCarthy 2006, p.517).



Figure 4: Te Aro pa whare under glass (Author, 2013).

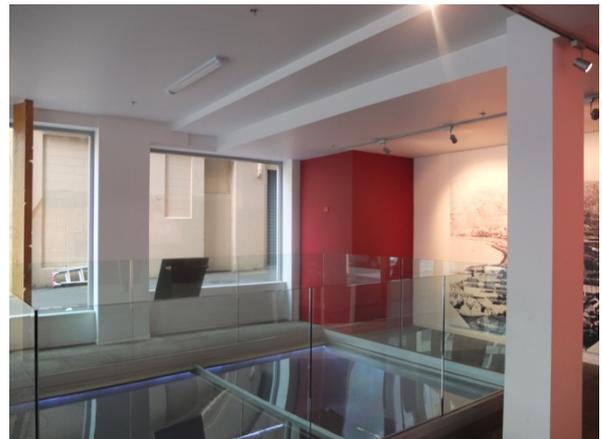


Figure 3: Te Aro pa visitors centre gallery (Author, 2013).

Glass displays have become a common tool in many cultures globally and used most prominently to present archaeological heritage material. Glass has the pragmatic advantages of being able to protect the often fragile archaeology, whilst also allowing it to be clearly viewed. Despite the positive heritage management on this site, the 'glass case' aesthetic facilitates passive viewing of heritage material (Smith, 2006, pp. 31). The "preciousness" of the embedded pits that house the archaeology under ground-level, and their glass chambers, are reminiscent of a museum-like environment (McCarthy, 2006, 524). Further supporting this observation Conel McCarthy observes that "the impression is that the Māori people lived in a distant past and do not play an important role in modern New Zealand life" (McCarthy, 2009, p.115).

However in light of the legislative, financial and physical barriers of the site, it is a notable achievement that mana whenua (local Māori), represented by the Wellington Tenth Trust, were afforded an opportunity to express their rangatiratanga (right to exercise authority) over the Te Aro pa site. Unlike Waitangi Park, the heritage landscape can be quantified by a Western understanding of heritage through the presence of physical remains of Māori archaeology. However, the whare also represent a living, evolving intangible Māori heritage present in Wellington today. It could be said therefore, that the Te Aro pa site poses a unique challenge to the heritage discourse and its traditional modes of representing indigenous heritage landscapes. With the changing infrastructure of our cities, sites similar to Te Aro pa have the possibility of being brought to light in the future.

Conclusion

The *Te Aranga Cultural Landscape Strategy* (2008) observes “there is a general lack of understanding and knowledge on how to engage with Māori processes and design principles within mainstream design professions” in New Zealand (*Te Aranga*, 2008, p. 14). However, Austin argues that the resurgence of urban marae (meeting [wharenuī] house complex) around the country, illustrates New Zealand’s growing awareness and acceptance of a Māori presence in urban design (Austin, 2003, p. 49). Critically for heritage practitioners and urban designers, this means that the traditional Western heritage techniques of memorial, exploitative tourism ventures and glass museum-like displays may too become questioned. As discussed these techniques often present perceptions of the past as being removed or distant. In contrast intangible heritage in many indigenous communities involves active interaction with heritage landscapes through protocols, rituals, social practices, oral traditions, performing arts, festive events, knowledge practices and traditional craftsmanship etc (CSICH, 2003, pp.2,3). These actions give relevance to the past within present contexts.

It can be concluded that documents such as the *Te Aranga: Cultural Landscape strategy*, which introduce the concept of intangible heritage within design, are having a resonating effect within the urban design field. Western urban frameworks provide a challenging environment to represent intangible heritage landscapes within. The legislative, financial and physical barriers of urban environments are favourable of a western heritage aesthetic as seen in elements of the Te Aro pa visitors centre design. However, some contemporary designs such as Waitangi Park, are beginning to reflect an awareness of indigenous values of heritage through elements of its design. As our cities shift and change in the face of population growth an increasing dialogue over how the integrity of the past layers of landscapes are represented and maintained is inevitable. It is hoped that these case studies can create a stepping stone for this line of heritage inquiry to ensure indigenous heritage sites in the future are appropriately represented.

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Making Wellington

Earthquakes, survivors and creating heritage in the town

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The Canterbury earthquakes of 2010-2012 have triggered a reappraisal of building policy and regulation – both for new buildings and existing buildings. This reappraisal is influenced by the recommendations of the Canterbury Earthquakes Royal Commission and currently being implemented by the earthquake-prone policy review of the Building Act 2004.

Earthquakes, war and other disastrous events cause trauma for affected communities. This trauma influences what types of heritage is preserved (and memorialised) as opposed to those places that are actively forgotten.¹ Often the effect of historical trauma can last many years after the disastrous event. As described by Susanne Jaeger, in Germany ‘more historical monuments were lost as result of urban rebuilding and modernisation between 1945 and 1975 than of the war itself.’²

The historic Wellington earthquake experience took place at the early phase of European settlement and had a formative impact on the life and townscape of early Wellington. Many hundreds of buildings survived the 1848 and 1855 earthquakes with minor damage except for the loss of chimneys. Only a few of these buildings, however, have survived since 1855. The few remaining pre-1855 buildings are a special and unique collection associated with early Wellington history, its people and early building techniques.

Despite the dominance of timber-framed buildings in the pre and post-1855 period, concern about fire risk triggered new building regulations in the Wellington CBD and influenced the construction of a large number of unreinforced masonry buildings (URM) after 1870. The new large civic and commercial buildings eventually became the heritage of Wellington’s future.

This paper reviews the impact of the 1848 and 1855 earthquakes on public attitudes relating to heritage buildings in Wellington. Earthquakes and the risk of fire have influenced Wellington’s historic townscape and have developed perceptions of heritage

value. Recalling Wellington's earthquake experience of 1848 and 1855 can also make a valuable contribution towards current building policy and regulation.

Keywords: historic earthquakes, historic heritage, building policy, resilience, Wellington

Wellington settler arrival 1840

Systematic colonisation, as led by the New Zealand Company, was principally concerned with acquiring, purchasing and making land available for settlement. To make this happen, the establishment of urban settlements at key strategic port locations was a critical component.³

Life in the late summer of 1840 at Te Whanganui ā Tara did not progress to the plans of the New Zealand Company and the proposed City of Britannia. Unseasonal (typical) weather and flooding (2 March 1840) was followed by a severe fire (which destroyed 15 raupo houses) and then followed by an earthquake at 5.00 am on the morning of 26 May 1840. A further 24 earthquakes occurred in the district between 1849 and 1845. This all occurred despite the claim of the Company that earthquakes were unknown in New Zealand or were a 'one-off' event.⁴ As noted by Eiby in 1970:

The New Zealand Company remained sensitive about this kind of thing [earthquakes] to the end of its days, and its reports of natural disasters (when it couldn't ignore them altogether) are full of traps for the conscientious historian.⁵

Following the shift from Petone to Thorndon in April 1840 and the arrival of additional migrant ships and supplies, building activity accelerated. Charles Heaphy, draughtsman for the Company, estimated that, in November 1841, 195 wooden and brick buildings had been constructed in Wellington with 250 Māori dwellings.⁶ There were also a number of raupo and clay buildings. Ensign Best, on 5 June 1840 for example, described in his journal the wattle and daub Government House at Wellington with interior timber framing.⁷

Bricks had been produced locally since mid-1840 and four brickworks were in operation by 1844.⁸ Brick building increased in Wellington after a fire in 1842 when "more than 40 raupo and timber houses were destroyed,"⁹ Some public opinion blamed the fire on Māori buildings and welcomed their removal to create space for new development.¹⁰ Despite the fire and some brick buildings, the majority of Wellington buildings were timber-framed and weatherboard buildings – giving an overall impression to any visitor of a wooden town.¹¹

While the experience of earthquakes influenced the dominance of timber and raupo buildings, it appears that the more substantial drivers were the practicality of using local and cheap building materials, the influence of Māori building practices,¹² and, considering that many of the Company settlers were from Kent and Cornwall, the introduction of English timber weatherboarding which was popular in the 1830s.¹³

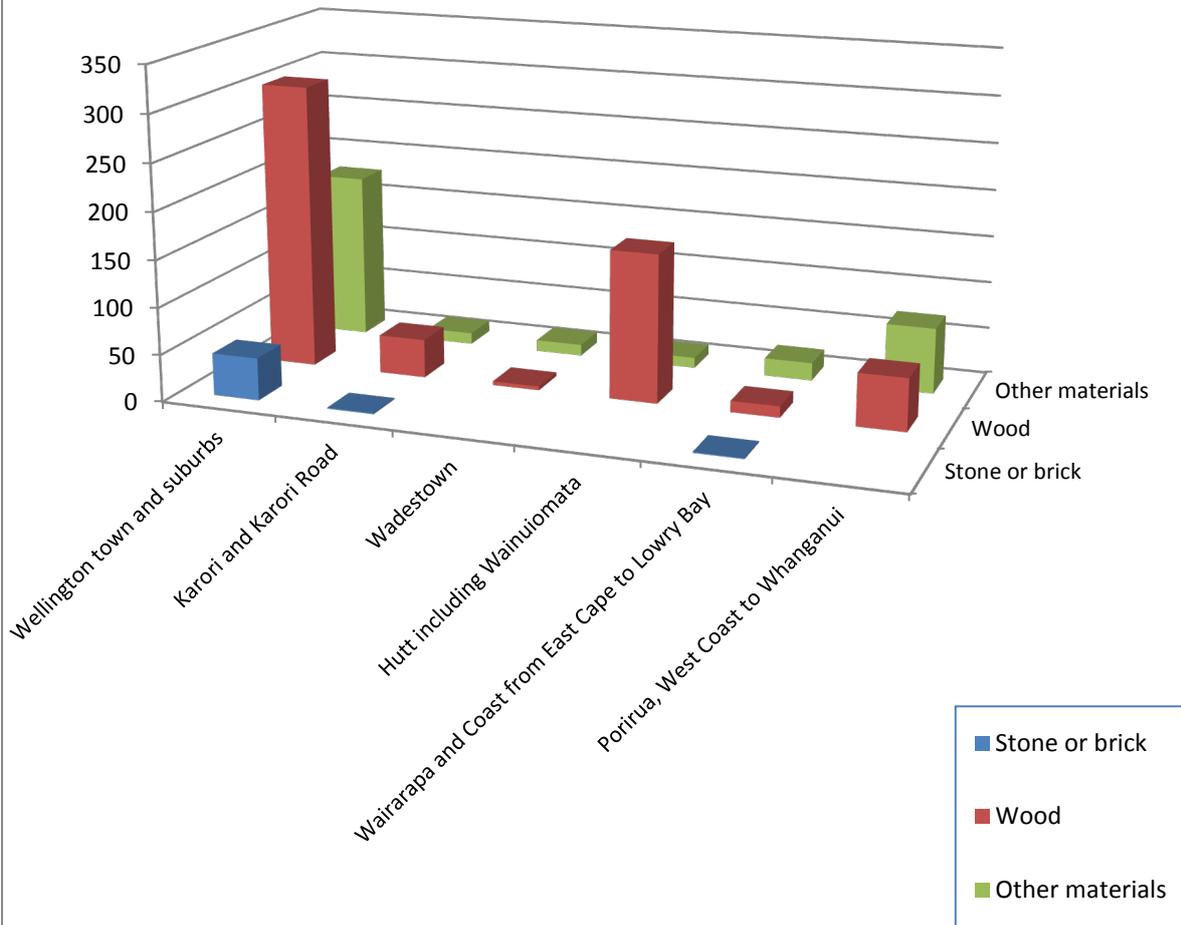
Available official statistics from the period also indicate the prominence of Māori buildings in the early phase of Wellington's settlement. As indicated in the table below there was an estimated 491

Maori buildings in 1843. By 1845, this figure had dropped to 213 with a corresponding increase in buildings planned to a European design.

Buildings in Wellington, 1843 and 1845		
(Source, Colonial Secretary Correspondence, Statistics of NZ for the Crown Colony Period, 1849-1852, ATL NZ Pacific Collection) ¹⁴		
	1843	1845
Houses built on European plan	386	467
Houses built on Maori plan	491	213
Warehouses and shops not included in above	24	50
Forges and workshops	8	
Wind, water and steam mills	3	4
Public buildings	10	12
Estimated cost of houses (pounds)	76,699	
Estimated cost of other buildings (pounds)	23,335	
Number of householders	852	
Number of proprietors of buildings	63	

While European-style buildings increased in Wellington during the 1840s, the use of timber remained the primary construction material. In August 1848 (just prior to the October 1848 earthquake), the New Ulster Government Gazette published the statistics outlined below for buildings in Wellington. As indicated in the table, the Wellington region had only 47 brick or stone buildings with nearly all of these located in central Wellington.¹⁵

**Building construction type in Wellington and West Coast
(south of Whanganui),
August 1848 (source, *New Ulster Government Gazette*)**



	Wellington town and suburbs	Karori and Karori Road	Wadestown	Hutt including Wainuiomata	Wairarapa and Coast from East Cape to Lowry Bay	Porirua, West Coast to Whanganui
■ Stone or brick	45	1			1	
■ Wood	303	41	4	158	12	56
■ Other materials	177	12	12	11	19	70

The Marlborough earthquake 1848

In 1848, Wellington’s population was about 4,400 persons including the Hutt Valley, Porirua and the Kapiti Coast.¹⁶ This population experienced the Marlborough earthquake when on 16 October 1848 at 1.40 am the Awatere Fault ruptured releasing an Mw 7.7 earthquake.¹⁷ The earthquake involved a large number of major aftershocks until 24 October 1848 and continued until October 1849. The earthquake was felt at a level of MM8 at Wellington.¹⁸

Severe damage occurred from continual aftershocks, especially the earthquake of 17 October 1848 which occurred at 3.40 pm.¹⁹ Loss of life resulted when Barrack Master-Sergeant Lovell and his two young children were walking down Farish Street (now Bond Street) at the time of the quake and were buried by falling bricks from the collapsing walls of Fitzherbert's Store.²⁰ The aftershocks were also a threat to workers repairing damage from the first earthquake, such as John Plimmer who nearly died fixing a brick store damaged by the first quake.²¹

Following the earthquakes, a Board of Inquiry was formed consisting of Robert Park, Henry St Hill and Captain Thomas Collinson. The Report of the Board Inquiry provides an account of damage to masonry and clay buildings and chimneys.²² A total of 49 buildings were reported as damaged by the earthquakes. Of these, 20 were brick buildings, 17 were of clay construction, 10 were a brick and clay combination and two were timber-framed. The two timber-framed buildings were the Union Bank of Australia where damage was limited to a brick safe within the building and the Messrs Bethune and Hunter building was slightly damaged from falling store boxes.²³ It reported that all "almost every chimney in the town, has been broken down close to the roof."²⁴

Despite the performance of timber houses which mostly survived the earthquake without damage (except for loss of chimneys), the Board of Inquiry did not wholly support the construction of new timber buildings. Instead it focused on the need to improve the construction of brick buildings to safeguard against fires. It considered that the brick buildings were largely damaged because of lack of support of bond-timbers and with mortar consisting of lime and clay (instead of lime and sand) and recommended new timber-supported masonry buildings.²⁵ Acknowledging, however, the timber building preference of most of the population, the Board also recommended greater separation between buildings.²⁶

As indicated, the Board considered one of the primary reasons for masonry building failure was the quality of the mortar. This reason was often quoted in local newspapers after the earthquakes to explain earthquake damage, to 'play down' the threat of earthquakes in the settlement, and to use the earthquake as an opportunity to construct new higher quality buildings.²⁷

The 1848 earthquake did damage Wellington's masonry buildings and strengthened the dominance of timber buildings in the fledgling settler town. However, there was also a strong view that much damage was a result of masonry buildings with insufficient quality mortar. This view was reflected in the third report of Lieutenant-Governor Eyre to Sire George Grey which, in summary, considered that there were four primary learnings from the disaster:

First, such convulsions appear to be rare...Secondly the worst shocks have not been the first, and thus a timely warning has been given to quit brick or other dangerous buildings, and little loss of life has ensued. Thirdly, not a single wooden building has been destroyed or, as far as I am aware, even injured. Fourthly, there is no doubt whatever that not a single brick building in the town has been really well and properly built....²⁸

The Wairarapa earthquake 1855

By 1855, Wellington's population had risen to 5,966, including Porirua and the Hutt Valley.²⁹ Timber-framed and weatherboard buildings again dominated Wellington township with most

masonry buildings damaged in 1848 rebuilt in timber.³⁰ Chimneys had also been secured by iron braces.³¹ A noticeable exception was Baron Alsdorff's hotel which was rebuilt in brick following the 1848 earthquake.³²

While timber-framed/weatherboard buildings dominated, there were still a number of raupo and clay buildings in Wellington, especially within Māori settlements.³³ Raupo buildings had been the subject of the New Zealand's first building tax legislation with the *Raupo Houses Ordinance* passed by the Legislative Council back in 1842.³⁴ This original Auckland Provincial Council legislation was in response to a "disastrous fire which started in a bake house with a thatched roof on the night of 9 November 1842".³⁵ The Raupo houses legislation was extended to Wellington in 1843.

Earthquakes had continued in Wellington after October 1849. As recorded by Charlotte Godley during her six month Wellington stay in 1850, no less than 8 earthquakes were felt between 7 May and 27 July 1850. C.R. Carter also recorded minor earthquakes in 1851 with his first experience of a 'slight shock' on 5 January 1851.³⁶

While some of these earthquakes were loud enough to be mistaken for volcanic eruption, they caused little or no damage. This changed when New Zealand's most powerful recorded earthquake occurred at 9.00 pm in the evening on 23 January 1855. The magnitude Mw 8.3 Wairarapa earthquake was felt at MM10 in Wellington.³⁷ This time 7-9 people were killed and 5 injured. Aftershocks continued until 10 October 1855.

A Commission was established to report about the earthquake to the Provincial Government. The Commission, consisting of C. Mills and C.R. Carter, completed their report on 6 October 1855. Much of the report repeated the findings from the earlier 1848 report - that brick and stone buildings were unsafe without solid timber support and that well-built buildings with solid foundations suffered little damage. However, some 15 years had now passed since the founding of the Wellington settlement and much of the early building timber work had already deteriorated and parts of the town had expanded onto poorer quality low-level land:

In those parts of town the most damage occurred, namely dilapidated buildings and defective foundations; buildings erected on loose gravelly or swampy foundations; buildings with ground plates partially or entirely decayed or destitute of braces – have suffered severely while both houses and stores where the timbers were sound and the foundations good, have escaped without almost any injury.³⁸

Essentially, the Commission considered that future buildings should be low level, fire resistant, earthquake resistant structures to be hopefully maintained in good condition. While the Commission promoted well-built stone or brick buildings, the *Wellington Independent* reflected public opinion in favour of enhanced 'progress' based on new timber-framed structures by stating:

We can dispense in future with high massive buildings, and can make very pretty and comfortable the city of Wellington, even though our houses should be one storey high and the material used in their construction, be nothing more substantial than painted boards.³⁹

Heritage and the pre-1855 Wellington earthquake buildings existing today

The 1847 and 1855 earthquakes occurred when Wellington European settlement was in its infancy and with the assistance of the New Zealand Company and the local 'boosters', the prevailing public attitudes were preoccupied with progress of the small developing settlements.⁴⁰ In fact, disasters such as earthquakes and fires were often viewed in a positive light in removing poorly constructed early buildings and providing opportunities for new development.⁴¹ Consequently, the post 1847 and 1855 rebuild period was marked by removal and demolition of damaged existing buildings. Clearly, in this context, historic heritage, or the need to preserve existing buildings, was not a high or predominant view within the settler community.

An exception to the wholesale removal of damaged buildings in Wellington was the case of the 1st Wellington Council Chamber building which was severely damaged in the 1855 earthquake and was purchased as a partial ruin by Charles Carter soon after the earthquake. Carter repaired the building and in 1871 noted that that it was 'still standing'. He commented that it was the oldest public building in Wellington and a "certain historical interest clings to it; and as from sheer decay it must soon pass away along with the old Colonists who have witnessed its creation and vicissitudes."⁴²

Another damaged building that was not wholly removed was Paremata Barracks at Porirua. Paremata Barracks was built by the colonial government in 1846 for the Porirua military operations against Ngati Toa Rangatira and their allies. Built on a former Māori settlement and burial site and was a two-storey structure with towers. It was constructed of local stones with poor mortar of beach sand/gravel.⁴³ Damage to the barracks in both the 1848 and 1855 earthquakes was severe and has been attributed by Māori to violation of wāhi tapu. Following the earthquakes and the departure of the colonial forces, the damaged barracks was converted into a barn or farm shed.

In terms of Māori buildings, the Te Aro Pa foundations (Toenga o Te Aro) on Taranaki Street illustrate a rare example of housing built from Ponga from the 1820s onwards. The foundations of Te Aro Pa, which were discovered in 2005, and associated historical photographs, illustrate that the Te Aro Māori buildings survived the earthquakes and were not wholly demolished in the post-earthquake disaster rebuilding period.

Taylor-Stace Cottage at Pauatahanui was possibly built in 1847 as the residence of William and Anne Taylor.⁴⁴ The cottage is a timber-framed structure with the exterior walls sheathed in plain weatherboards on the back or south wing, and rusticated weatherboards on the front or north wing. It has a gable roof sheathed in corrugated iron. The front two rooms of the cottage are a 1906 addition built by David Greig.⁴⁵

Homewood in Karori was also built in 1847 as residence of Henry Samuel Chapman, first Judge of the Supreme Court.⁴⁶ The Chapman diaries record in some detail the construction of the house and daily life of the Chapmans, noting that they shifted into the house on 24 April 1847 and that the house was substantially enlarged in 1903 while retaining the 1847 cottage as servant's quarters. It is the L-shaped wing on the south-west elevation of the house that is considered to date from April 1847 – having a two storeyed steeply pitched roof and low ceiling studs.

Collet House in Petone dates from 1848 and was the home of Henry and Eliza Collet. The Collets arrived in Wellington on the ship *London* in 1841. After setting up a carpentry business in Te Aro, the couple moved to Petone in 1847.⁴⁷ Henry Collet established himself as a wheelwright, servicing carts and coaches travelling on the main road leading north from Wellington. By 1848 the Collets had constructed a simple four roomed, two-storey dwelling from pitsawn weatherboards on land adjacent to the road. Collet House has had substantial alterations with extensions between 1874 and 1890 and a bungalow-style roof added in 1945.⁴⁸ Also in the Hutt Valley, Christ Church opened for service on the 1 January 1854. It was constructed by Sidney Hirst of heart totara, pit sawn from local forest and hauled to the site on bullock drays.

Other potential pre-1848/1855 candidates are Papakowhai Homestead, Porirua, Harrison Cottage at Glenside and Fernhill at 15 Fern Hill Terrace, Wadestown. The earliest part of Fernhill possibly dates from the mid-1840s when the owner of the property was Charles Pharazyn.⁴⁹ The bulk of the house, however, was constructed in the early 1860s for Samuel Grimstone. The rear part of Papakowhai Homestead is thought to date from 1848 when the Bowler family farmed the area. In 1855 the house was purchased by Anthony Wall who constructed a large Victoria addition in 1888.⁵⁰ Spinks Cottage at St John's on Willis Street could also be a potential 1855 survivor as it was built sometime between 1854 and 1863.⁵¹

Outside of Wellington, St John's Church, Wakefield dates from 1846 and Rangiatea Church, Otaki, was built between 1848 and 1951. Prior to its destruction by arson in 1995, Rangiatea was hailed as symbolic of Māori and European spiritual and building traditions.⁵² There is also a surviving 'stud and mud' cottage at Robin Hood Bay in Marlborough which may possibly date from 1848.⁵³

Dicky Sayer's Slab Whare, Dalefield Road, Carterton, was built about 1854. It is a slab and batten construction with floorboards on the ground. David Kernohan notes that this building is possibly one of the last remaining examples of this type in New Zealand and is subject to severe neglect and deterioration.⁵⁴

All the pre-1855 survivors are timber-framed-weatherboard buildings and were originally on large 100 acre country sections. They were relatively 'new' buildings at the time of the 1848-1855 earthquakes and the author can only assume that the buildings had not suffered sufficient physical deterioration to cause any damage. The author also assumes that damage was not caused by liquefaction. The primary source of damage would have been in cracking and falling chimneys as recorded by Chapman at Homewood.

Except for the pre-1855 churches and Dicky Sayer's Slab Whare, the surviving buildings have been substantially altered and modified for domestic or other purposes reflecting various phases of use and adaptive re-use of buildings.

Post-1855 Wellington Reconstruction

The 1855 reconstruction period was initially characterised by continued construction of timber-framed buildings in the Wellington region. The first large civic building constructed after the earthquake was for the Wellington Provincial Council. This was built on the current site of the General Assembly Library in the gothic rival style in 1857. The Provincial Council building became

Parliament Buildings in 1864 when the capital shifted to Wellington. The establishment of the capital in Wellington also triggered the need for other large civic buildings such as Government House (1871) and Government Buildings (1876). These buildings were accompanied by new churches and public buildings including Old St Paul's (1866) and St Peter's on Willis Street (1879).⁵⁵

The use of timber to construct civic and commercial buildings declined from the mid-1870s onwards as the memory of the 1848-1855 earthquakes faded. This trend was driven by the establishment of new commercial offices and colonial engineers/architects who advocated for masonry buildings to enhance fire safety and achieve greater perceived permanence.

This shift from timber to masonry in the central city was also influenced by new building regulations under the Municipal Corporations Act 1876. This law enabled local authorities via bylaws to prohibit or restrain the use of combustible materials, distance between buildings and wall dimensions and materials.⁵⁶ In Wellington, the central area was labelled 'No.1 District' and this area was subject to a bylaw control from 1877 onwards that restricted the use of timber as an external building material.⁵⁷ While the bulk of these buildings were built of unreinforced masonry, building technology advanced by the early 20th Century with the use of steel framing as found in the Public Trust Building built of granite supported by steel in 1908.

Heritage regulation and building reform

In the mid-20th Century period, further legislative and policy work was undertaken by government in light of both the 1931 Hawkes Bay and 1942 Wairarapa earthquakes. This resulted in new regulations to regulate earthquake risk buildings in 1968. Under the Local Municipal Corporations Act 1968 and the Local Government Act 1974, local authorities were given the right to apply to the Minister to regulate the strengthening of buildings deemed to constitute an earthquake risk. The legislative powers were adopted by councils such as Wellington and Auckland which took a proactive stance on the issue.⁵⁸ David Hopkins reports that Wellington City Council achieved the strengthening or demolition of 500 out of 700 buildings identified as earthquake-prone between 1968 and 2003.⁵⁹ For example, in 1973 a total of 758 buildings in Wellington City had been identified by the Council as 'earthquake risk'. By 1983, 261 of these buildings had been demolished (34%) and 17 buildings had been strengthened. This activity focused on Lambton Quay and the CBD where a total of 213 buildings had been demolished of a total of 592 identified earthquake risk buildings.⁶⁰

The small number of buildings strengthened in Wellington during the early 1970s involved pioneering engineering techniques influenced largely by the Californian experience. These buildings included the DIC, State Opera House, the Maritime Building, AMP Head Office, Public Trust Building and later the Hunter Building and the St James Theatre. Often these buildings were strengthened as a result of intense and high profile preservation campaigns.

The heritage campaign triggered a new 'generation' of heritage regulation under the Town and Country Planning Act 1977 and then under the Resource Management Act 1991(RMA). In all the major urban cities, new heritage advocacy groups prepared 'lists' of significant heritage buildings, many of which were earthquake-risk or threatened by demolition.⁶¹ The bulk of these buildings on these lists became officially-recognised heritage as registered historic places under the Historic Places Acts of 1980 and 1993.

The Canterbury earthquakes of 2010 and 2011 have triggered a new review of heritage and building policy reform. The Canterbury Earthquake Royal Commission (the Royal Commission) report was released in 2012 and this report contains a wide range of recommendations for building policy reform. Effectively, the Royal Commission recommendations promote proactive regulation to manage and reduce the risk of earthquake-prone buildings, including heritage buildings. The Government has responded to the Royal Commission with the publication of new proposals for improving building seismic performance in December 2012.⁶² The proposals involve new timeframes for strengthening or demolition of earthquake-prone buildings, a new public register of earthquake-prone buildings and provision of exemptions of low-use or rural buildings. The Government has now refined these provisions in a policy announcement in August 2013 which included the possibility for registered Category 1 historic places and National Historic Landmarks to obtain a 10-year extension for earthquake strengthening.⁶³ The Government is also continuing to reform the RMA in terms of developing stronger national guidance and new consenting processes and timeframes which will eventually influence the management of historic heritage as with a range of other resource management issues.⁶⁴

The reference to Category 1 historic places and National Historic Landmarks links to an associated legislative review of the Historic Places Act 1993. This review is expressed in the Heritage New Zealand Pouhere Taonga Bill which will establish a new legislative basis for the registration of historic places, archaeological authorities, the functions and powers of the NZHPT (which will be renamed Heritage New Zealand) and the establishment of a new list of National Historic Landmarks (the historic landmarks) which will comprise New Zealand's most significant heritage places in terms of having outstanding historical, cultural and physical significance.⁶⁵ The intention of the new historic landmarks provisions of the Bill is to ensure New Zealand's most significant heritage places are not destroyed or lost in an earthquake or other damaging event. For this reason, the management of historic landmarks is required to mitigate the effects of natural disasters under provisions for a risk management plan.⁶⁶

With priorities shifting to protect the most significant heritage places, there are some indications of increased public acceptance (especially in high earthquake-risk regions of New Zealand) of removal or demolition of heritage places considered to be of 'lower value.' Recent examples include the demolition of Dalton House, Nelson (formerly registered Category 2 historic place under the Historic Places Act 1993) and Holland Hall, Westport (also formerly registered Category 2 historic place). Both places were deemed to be earthquake-risk and the proposed demolition did not attract widespread public interest with the NZHPT being the only submitter on the resource consent process in opposition in both instances. The author suspects that demolition of these heritage buildings would have been more highly contested prior to the Canterbury earthquakes.

Discussion - earthquake heritage

Critical heritage discourse views heritage as part of the production and reproduction of social values in which heritage is viewed as a process of classification and authorisation as part of complex economic, environmental and cultural processes. While the role of memory is fundamental to the concept of heritage and the construction of national identities, also critical is the 'process of forgetting'. As explained by Rodney Harrison, 'much of the literature on personal and collective memory suggests that the process of *forgetting* is integral to the process of remembering – that one

cannot properly form memories and attach value to the memories without selecting some things to also forget.⁶⁷

Historic trauma, generated by events such as earthquakes, heightens sense of risk and threat to key public infrastructure (ie, water, food, shelter) and significant public spaces and networks. Heritage, by definition, is about places perceived to be at risk or threatened – “the risk might simply be the implicit threat of time itself – forgetting, decaying, eroding or becoming worn with age. More often, the threat is one of demolition or destruction...”⁶⁸

Clearly earthquake trauma did influence the rebuilding and construction of Wellington as a ‘timber-town’ up until the 1870s. As with the Canterbury earthquakes of 2010-2012 (and similar overseas experience such as the Australian Newcastle earthquake of 1989), the Wellington post-earthquake period was marked by demolition of commercial and public buildings and the creation of new development opportunities for rebuilding. Further, the Canterbury, Newcastle and Wellington earthquakes all highlight the high value of timber-framed and reinforced buildings for safety.⁶⁹ Rather than ‘romantic’ views of historic heritage, the practical considerations of resilience and adaptation were key for the survival of buildings.

While commercial and public buildings shifted to masonry forms of construction from the mid-1870s, domestic timber-framing remained the popular choice as expressed by the large historic suburban areas of Newtown, Mt Victoria, Mt Cook and Thorndon. It was also adopted for dwellings by the upper classes as symbolised by buildings such as Antrim House (1905) designed by Thomas Turnbull and, like the Government Buildings, was intended to give the appearance of masonry permanence. This public perception of the value of timber-framed construction has remained constant for domestic dwellings to the present era.

The Wellington post-earthquake environment focused on building new civic buildings to generate confidence and catalysts for political, economic and social regeneration. These new public status symbols eventually obtained heritage interest and prominent recognition, including registration under the Historic Places Act 1993 (and former heritage legislation) and acquisition by the Crown. Old St Paul’s Church, St Peters Church and the Government Buildings are three examples which gained early recognition as historic places in the 1970s. This recognition aligns with other cities such as Art Deco Napier and Hastings which has placed high value on buildings and architecture associated with the post-earthquake reconstruction period.

Contrasting with the prominent post-earthquake civic buildings in Wellington and other cities such as Napier, pre-earthquake building survivors have generally attracted less recognition and attention. Perhaps this reflects the smaller-scale and practical domestic nature of many of the timber-framed buildings that survived the earthquakes and these buildings became part of the accepted and ‘ordinary’ built environment – as opposed to the ‘special’ post-earthquake reconstruction built environment. It also may reflect often common post-disaster public attitudes that tend to favour taking advantage of development opportunities that arise from the removal of existing historic buildings and infrastructure.⁷⁰

Rodney Harrison advocates for a critical reappraisal of existing heritage classifications and lists in order to avoid over-‘heritagisation’ of society where the abundance of heritage presents a ‘crisis of

accumulation' which will "ultimately undermine the role of heritage in the production of collective memory."⁷¹ As outlined in this paper, reappraisal of existing heritage classifications is occurring as part of the new Heritage New Zealand Pouhere Taonga Bill and will likely to continue as part of RMA reform and 2nd generation district plan reviews. This reappraisal will be influenced by the recommendations of the Canterbury Earthquakes Royal Commission and Government's developing policy for earthquake-prone buildings.

The author considers that the reappraisal of existing heritage classifications will provide opportunities for recognition of the 'ordinary' but resilient timber-framed heritage buildings that have survived major disasters such as earthquakes and continue to provide new uses via adaptive reuse and retrofit.

Conclusion

Earthquakes are often remembered as 'one-off' events associated with a particular year or date. The early Wellington settler experience of earthquakes, however, began soon after the colonists arrived in 1840 and appeared to continue largely until late 1855 with many minor shocks and the major earthquakes of 1848 and 1855.

Buildings constructed before 1855 provide a unique insight into building history and technique and can help inform current approaches to building regulation following the Canterbury earthquakes of 2010-2012. While many hundreds of buildings did survive the 1848 and 1855 earthquakes, few of these buildings survive today as a consequence of urban expansion, neglect or other events such as fire. All of the 1848 and 1855 survivors and the post-quake buildings should have a role in helping to ensure that earthquake experience does not fade from public memory and this heritage can influence decisions about new building standards and design today.

Heritage values are about the values that people associate with a place. These types of values were not prominent early in Wellington's settler history. Instead disasters provided opportunities for urban clearance and new building and these views remain prominent in the post-Canterbury earthquake environment.

Despite the resilience of the small-scale timber buildings, it was the reconstruction-period buildings, especially the new 'generation' of larger timber buildings for public purpose during the 1860s and 1870s that eventually were recognised as 'heritage' during the mid-late 20th century. These buildings form the basis to New Zealand's stock of post-disaster heritage buildings.

Disasters result in social trauma for people and communities and reappraisal of both heritage and building regulation. In the post-Canterbury earthquakes environment, there is a greater emphasis of reducing earthquake-risk and improving resilience of the building stock. Timber-framed heritage buildings, especially the survivors of historic earthquakes, should be prominent in the reappraisal process and the identification and protection of these buildings will more closely align with changing public values concerning heritage and building safety.

Note: The contents of this paper or the opinions expressed in no way reflect or express the views or position of the Ministry for the Environment.

¹ Matthew Rampley, ed (2012) *Heritage, Ideology and Identity in Central and Eastern Europe, Contested Pasts and Contested Presents*, Woodbridge, The Boydell Press, p 14.

² Susanne Jaeger, 'Interrupted Histories: Collective Memory and Architectural Heritage in Germany 1933-1945-1989', In Matthew Rampley, ed (2012) *Heritage, Ideology and Identity in Central and Eastern Europe, Contested Pasts and Contested Presents*, Woodbridge, The Boydell Press, p 82.

³ Hamer, David (1990) *New Towns in the New World* New York: Columbia University Press, p 253.

⁴ Grayland, E.C (1957) *New Zealand Disasters* Wellington: AH & AW Reed, p 16.

⁵ Eiby, G.A (1970) "Shaking down in Wellington", N.L. McLeod & B.H. Farland (eds), *Wellington Prospect*, Trentham: Wright & Carman Ltd, p 36.

⁶ Quoted in McGill, David (1984) *The Pioneers of Port Nicholson*, Wellington: AH & AW Reed, p 33.

⁷ Shaw, Peter (1991) *New Zealand Architecture From Polynesian Beginnings to 1990*, Auckland: Hodder & Stoughton, p 15.

⁸ Cochran, Chris (1990) "Styles of Sham and Genuine Simplicity: Timber Buildings in Wellington to 1880" David Hamer & Roberta Nicholls *The Making of Wellington 1800-1914*, Wellington: Victoria University Press, p 108.

⁹ Salmond, Jeremy (1986) *Old New Zealand Houses 1800-1940*, Auckland: Reed, p 47.

¹⁰ *New Zealand Colonist and Port Nicholson Advertiser*, Volume I, Issue 31 (15 November 1842) p 2

¹¹ Angas, G.F (1847) *Savage Life and Scenes in Australia and New Zealand* Smith London: Elder & Co, 1847, p 232. Nigel Isaacs provides building construction statistics for Auckland between 1842 and 1852 which provides a summary of stone/brick, wood and raupo buildings (Isaacs, Nigel "Early New Zealand Building Codes" *CHS Magazine The Magazine of the Construction History Society*, Issue No.90, December 2011, p 9). The author has not been able to identify similar statistics for Wellington.

¹² Shaw, Peter (1991) *New Zealand Architecture From Polynesian Beginnings to 1990*, Auckland: Hodder & Stoughton, p 14.

¹³ Toomath, William (1996) *Built in New Zealand The Houses we Live in*, Auckland: Harper Collins, p 21; Yska, Redmer (2006) *Wellington Biography of a City*, Wellington: Reed, p 20.

¹⁴ I wish to acknowledge Nigel Issacs, Victoria University of Wellington, for assistance in locating these statistics.

¹⁵ It is noted that the statistics did not include Paremata Barracks at Paremata which was constructed of stone and mortar in 1846.

¹⁶ *Wellington Independent*, Volume III, Issue 232 (1 January 1848) p 3.

¹⁷ Mw or Moment Magnitude Scale is a measure of the quantitative measure of the size of the earthquake at its source. It is a base-10 logarithmic scale. Source, GNS NZ: <http://www.gns.cri.nz/>

¹⁸ MM or Mercalli Intensity Scale is a measure of the severity of earthquake shaking using a descriptive scale. Source, GNS NZ: <http://www.gns.cri.nz/>

¹⁹ Grapes, Rodney (2011) *The Visitation, The Earthquakes of 1848 and the Destruction of Wellington*, Wellington: Victoria University Press.

²⁰ Grayland, E. C (1957) *New Zealand Disasters*, Wellington: AH & AW Reed, p 14.

²¹ Grapes, Rodney (2011) *The Visitation, The Earthquakes of 1848 and the Destruction of Wellington*, Wellington: Victoria University Press, p 35.

²² Captain T. B. Collinson, R.E., to the Hon. the Colonial Secretary, Official Report on the Earthquakes of October, 1848. Wellington, 21st November, 1848. In, Turton, Hanson *An Epitome of Official Documents Relative to Native Affairs and Land Purchases in the North Island of New Zealand*, Wellington: George Didsbury, 1883, Wellington (published on-line by Victoria University, NZ Electronic Text Collection, 2012).

²³ Schedule of Buildings in Wellington and the Neighbourhood which have been damaged by the Earthquakes in October 1848,' in Grapes, Rodney (2011) *The Visitation, The Earthquakes of 1848 and the Destruction of Wellington*, Victoria University Press, pp 177-182.

²⁴ Captain T. B. Collinson, R.E., to the Hon. the Colonial Secretary, Official Report on the Earthquakes of October (1848) Wellington, 21st November, 1848. In, Hanson Turton, *An Epitome of Official Documents Relative to Native Affairs and Land Purchases in the North Island of New Zealand*, George Didsbury, 1883, Wellington (published on-line by Victoria University, NZ Electronic Text Collection, 2012).

²⁵ Captain T. B. Collinson, R.E., to the Hon. the Colonial Secretary, Official Report on the Earthquakes of October (1848).

- ²⁶ Captain T. B. Collinson, R.E., to the Hon. the Colonial Secretary, Official Report on the Earthquakes of October (1848).
- ²⁷ Godley, John R (ed) (1951) *Letters from Early New Zealand by Charlotte Godley*, Christchurch: Whitcombe & Tombs Ltd, p 41.
- ²⁸ Third Report of Lieutenant-Governor Eyre to Sire George Grey, 29 October 1847, Quoted in Grapes, Rodney (2011) *The Visitation, The Earthquakes of 1848 and the Destruction of Wellington*, Wellington: Victoria University Press, p 88.
- ²⁹ *New Zealand Government Gazette, Province of Wellington*, Vol II, No.13 (26 September 1855).
- ³⁰ Extract from Commander Drury's Remark Book, H.M.S *Pandora*, 25 January 1855. In *Great Britain Parliamentary Papers*, Vol 10 (1854-1860) p 92.
- ³¹ Commander Drury's Remark Book, H.M.S *Pandora* (25 January 1855).
- ³² Commander Drury's Remark Book, H.M.S *Pandora*, (25 January 1855).
- ³³ Hodgson, Terence (1990) *Colonial Capital Wellington 1865-1910*, Auckland: Random Century, p 9; For example, the Native Secretary, H. Tacy Kemp, Survey of Wellington pā in 1850 recorded that at Pitone Pa there was 1 chapel, 3 weatherboard houses and 35 raupo huts. Quoted in Butterworth, Susan (1988) *Petone A History*, Petone: Petone Borough Council, p 77.
- ³⁴ Isaacs, Nigel (2011) "Early New Zealand Building Codes", *CHS Magazine The Magazine of the Construction History Society*, Issue No.90, p 8.
- ³⁵ Isaacs, Nigel (2011) "Early New Zealand Building Codes". Note, the *Raupo Houses Ordinance* and other related raupo legislation was considered by Māori to be a way of removing Māori buildings (and removing Māori settlements) from within towns and has been claimed as a Breach of the Treaty of Waitangi as part of claims to the Waitangi Tribunal.
- ³⁶ Carter, Charles (1866-1875) *Roeking Life and Recollections of a New Zealand Colonist*, Vol III, London: Madley Ltd, p 11.
- ³⁷ MM10 at Wellington: Very destructive, many buildings damaged, most weak buildings destroyed. Source, Geonet.org.nz.
- ³⁸ Grapes, Rodney (2000) *Magnitude Eight Plus, New Zealand's Biggest Earthquake*, Wellington: Victoria University Press, p 196.
- ³⁹ *Wellington Independent*, 10 February 1856, Quoted in Grapes, Rodney *Magnitude Eight Plus, New Zealand's Biggest Earthquake*, p 135.
- ⁴⁰ Hamer, David (1990) *New Towns in the New World* New York: Columbia University Press.
- ⁴¹ Dirk H.R. Spennemann and David W. Look (2004) 'From conflict to dialogue, from dialogue to cooperation, from cooperation to preservation', in Dirk H.R. Spennemann and David W. Look (eds), *Disaster Management Programs for Historic Sites*, digital edition, US National Parks Service.
- ⁴² Carter, Charles (1866-1875) *Roeking Life and Recollections of a New Zealand Colonist*, Vol II, London: Madley Ltd, p 6.
- ⁴³ Bowman, Ian, Johnston Warwick and O'Keeffe (2005) Mary "Paremata Barracks Conservation Plan" NZHPT.
- ⁴⁴ Carman, Arthur (1956) *Tawa Flat and the Old Porirua Road*, Wellington: A.H. Carman, p 96.
- ⁴⁵ Cochran, Chris (1994) *Taylor-Stace Cottage Pauatahanui, Conservation Report*, Wellington: Works Consultancy Services ; Taylor-Stace Cottage, NZHPT file, HP 12013-277.
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- ⁴⁷ Butterworth, Susan (1988) *Petone; A History*, Petone: Petone Borough Council, p 67.
- ⁴⁸ Collet House, NZHPT file, HP 12013-486.
- ⁴⁹ Parr, Nora (1981) "Early Fernhill" *The Onslow Historian*, Vol 11, No.1, p 19.
- ⁵⁰ Kay, Barbara & Kay, Robin (1996) *Anthony Wall, Settler of Porirua: The Papakowhai story*, Porirua: Organising Committee for Wall Family 150th Reunion.
- ⁵¹ Burgess and Treep Architects (2005) "Spinks Cottage Dixon Street, Wellington" Conservation Plan.
- ⁵² Shaw, Peter (1991) *New Zealand Architecture From Polynesian Beginnings to 1990*, Auckland: Hodder & Stoughton, p 22.
- ⁵³ Cochran, Chris (1983) *Cobb Cottage, Robin Hood Bay Marlborough*, Wellington: Ministry for Works and Development.
- ⁵⁴ Kernohan, David (2003) *Wairarapa Buildings Two centuries of New Zealand architecture*, Masterton: Wairarapa Archive, p 47.
- ⁵⁵ Cochran, Chris (1990) "Styles of Sham and Genuine Simplicity: Timber Buildings in Wellington to 1880" David Hamer & Roberta Nicholls *The Making of Wellington 1800-1914*, Wellington: Victoria University Press, pp 117-126.

⁵⁶ Section 349(5), Municipal Corporations Act 1876.

⁵⁷ Cochran, Chris (1990) "Styles of Sham and Genuine Simplicity: Timber Buildings in Wellington to 1880" David Hamer & Roberta Nicholls *The Making of Wellington 1800-1914*, Wellington: Victoria University Press, p 123.

⁵⁸ Wellington City resolved to adopt the powers under the Municipal Corporations Act in relation to earthquake risk buildings in February 1972.

⁵⁹ David C Hopkins, 'Earthquakes and existing buildings New Zealand experience 1968 to 2008' *Proceedings of the 2009 ATC & SEI Conference on Improving the Seismic Performance of Existing Buildings and Other Structures*, p 6. See also Alistair Russell & Jason Ingham, 'Prevalence of New Zealand's Unreinforced Masonry Buildings' Draft forthcoming article for *NZSEE Bulletin*, January 2010; Ian Smith records that in 1972, the Wellington City Engineer targeted Lambton Quay and recommended that all buildings be replaced by new buildings or that existing buildings be strengthened by 1982. Ian C. Smith, 'Renovation of a New Zealand City – Lessons from Refurbishment and Replacement in Wellington City Business District' unpublished paper (February 1985) HP 12001-040, NZHPT.

⁶⁰ Sir Michael Fowler, 'The 1983 Dobson Lecture, The Seismic Upgrading of Buildings – Its effect on Wellington City', unpublished paper, HP 12001-040, NZHPT.

⁶¹ For a discussion on the relationship between the growth of heritage regulation, lists and earthquake-risk in Christchurch during the 1970s and 1980s, see McClean, Robert (2012) 'Heritage Buildings, Earthquake Strengthening and Damage, The Canterbury Earthquakes September 2010-January 2012', Report for the Canterbury Earthquakes Royal Commission.

⁶² Ministry of Business, Innovation and Employment (2012) *Building Seismic Performance, Proposals to improve the New Zealand earthquake-prone building system*, Consultation Document, December.

⁶³ <http://www.beehive.govt.nz/release/earthquake-prone-buildings-policy-announced>

⁶⁴ <http://www.beehive.govt.nz/release/major-reform-resource-management-system>

⁶⁵ Section 81B, *Heritage New Zealand Pouhere Taonga Bill* (as reported by the Select Committee), 2013.

⁶⁶ Section 81C, *Heritage New Zealand Pouhere Taonga Bill* (as reported by the Select Committee), 2013.

⁶⁷ Rodney Harrison (2013) *Heritage Critical Approaches*, Routledge, p 167.

⁶⁸ Rodney Harrison (2013) *Heritage Critical Approaches*, Routledge, p 7.

⁶⁹ A selection of post-earthquake newspaper letters relating to buildings in provided in Grapes, Rodney (2000) *Magnitude Eight Plus, New Zealand's Biggest Earthquake*, Wellington: Victoria University Press, pp 117-129.

⁷⁰ Dirk H.R. Spennemann and David W. Look (2004) 'From conflict to dialogue, from dialogue to cooperation, from cooperation to preservation', in Dirk H.R. Spennemann and David W. Look (eds), *Disaster Management Programs for Historic Sites*, digital edition, US National Parks Service.

⁷¹ Rodney Harrison (2013) *Heritage Critical Approaches*, Routledge, p 166

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Soldiers and School Children

Military performances and national identity during the Prince of Wales' 1920 visit to Wellington

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Early royal visits to New Zealand were episodes of intense symbolic activity played out on an urban scale. These events are generally understood as affirmations of British identity. However, this paper shows how the Prince of Wales' 1920 tour of New Zealand was also used to promote the distinct character of the young dominion. The research examines two military performances in Wellington: a review at Newtown Park and a quasi-military parade of school children in parliament grounds. Analysis of these events reveals dual narratives in which New Zealanders both reaffirm their links with the Motherland and acknowledge their own difference. The two sources of identity are found to be compatible but dependent on malleable images. The paper argues that military images and narratives were flexible enough to convey New Zealanders' "imperial" and "national" allegiances. However, while a dual narrative operated successfully during the "Children's Day" display, the more conventional military review at Newtown Park failed because it was unable to reconcile the antipodean traits of discipline and vigour. Both performances required a degree of improvisation because Wellington lacked dedicated sites for military ceremonial. The choice of venues contributed to the disparate outcomes of the two events. In parliament grounds, school groups exhibited the health and dynamism of New Zealand's youth but also reinforced the latent order and unity of New Zealand's pre-eminent "national" space. At Newtown Park, the measured performance of troops and returned soldiers failed to bring to life claims about the battlefield prowess and down-to-earth resilience of the "digger".

Military Narratives within Royal Visit Discourse on Identity

In 1920, the Prince of Wales travelled to Australia and New Zealand as the emissary of monarch and Motherland. His mission conveyed Britain's gratitude for the terrible sacrifices made by its dominions during the Great War. The visit also conveyed a positive message about imperial solidarity and the strategic value of Britain's possessions.¹ Speaking at the government's lunch for

In *UHPH_14: Landscapes and ecologies of urban and planning history*, Proceedings of the 12th conference of the Australasian Urban History / Planning History Group, edited by Morten Gjerde and Emina Petrović (Wellington: Australasian Urban History / Planning History Group and Victoria University of Wellington, 2014).

the Prince of Wales in Wellington, Prime Minister Massey observed that, despite its “dreadful scourge,” the war had produced a “more solidly united” empire.² The prince’s tour was presented as a continuation of this wartime project. As one souvenir publication claimed: “The Royal visit...serves more strongly to cement those ties of Empire which the common sacrifice from every corner of the World welded so strongly during the years of War.”³

At the same time, the 1920 royal tour appeared to herald a new post-war era for imperial relations. London’s *Daily Telegraph* observed: “A new volume in the history of the British peoples is about to be written, and there is none better fitted to pen what we may describe as a preface than the Heir-Apparent”. On his return from an earlier visit to Canada, the prince used the newly coined term “British Commonwealth” to describe “a partnership of free nations” based on “national patriotism”:

...the people in the Old Country must realise that the patriotism of the Dominions is national patriotism, and not merely loyalty to Great Britain. It is loyalty to their own institutions, loyalty to their life, and loyalty to their Government and to the British Empire, of which Great Britain, like the Dominions, is only one part.⁴

Like other British dominions, New Zealand was said to have been transformed by the war. As it entered the “new epoch,” the country acquired its own voice in international affairs and a greater role on the world stage.⁵ Independent participation at the League of Nations and the Peace Conference at Versailles were emblematic of this new status (Aronson 86). Drawing attention to these events, the Prince of Wales concluded: “[The British Empire’s] young nations are now universally recognised as nations, as they are signatories to the Peace Treaties which they fought so magnificently to secure.”⁶ The prince repeated this observation on arrival in Auckland when he offered New Zealand’s presence at Versailles as a sign that “this young nation has nobly won its spurs”. This metaphor interpreted wartime sacrifices as a right-of-passage. Suggesting battle honours and an ancient chivalric code, the figure of speech provided the dominant theme in the prince’s reply to the Government Address. As such, it set the tone for the 1920 royal visit by depicting New Zealand’s coming-of-age as a military image.⁷

Depictions of war as a right-of-passage were closely aligned with images of rebirth or rejuvenation, and the interplay between these two ideas helped to shape claims about New Zealand’s identity in the discourse of the 1920 royal visit. Referring to the empire as a “body” which was “exhausted” by war and prone to “disintegrating influences”, the British Prime Minister predicted that the prince’s recent visit to Canada and his forthcoming tour of Australasia would act as a “tonic” and would have a “consolidating, bracing, and reinvigorating effect upon the whole Empire.”⁸ Once again, the message emanating from London was echoed at the government lunch in Wellington. Massey observed that New Zealanders often referred to Britain as “the old country” but never spoke of “the Old Empire.” This was because the empire included “young and virile nations.” Significantly, Massey’s prescription for restoring youthfulness and vigour to the British world looked not to the monarchy and the imperial centre but to “new countries” on the periphery.⁹ In the aftermath of the Great War, Massey’s implication was clear. As the youngest of Britain’s dominions, New Zealand had an important role to play in maintaining Greater Britain’s vitality.¹⁰ The Prince of Wales responded to Massey’s address with his own optimistic vision of the empire’s future. Interpreting these remarks, Wellington’s *Dominion* newspaper attributed the prince’s confidence to the fact that he had witnessed “the British race prove its undying youth on the battlefields of Europe.”¹¹

Provisional Military Spaces and Evolving Commemorative Practices



Figure 1: Anzac Day ceremony at temporary war memorial, Molesworth Street, Wellington, 1921. Photographer: Sydney Charles Smith. Reproduced with the permission of Alexander Turnbull Library, Wellington, N.Z. File print: G-48325-1/2. S. C. Smith Collection.

In the aftermath of the Great War, such rhetoric drew attention to Wellington's deficiencies as a place for war commemoration and other forms of military ceremony. While the Prince of Wales' visit was being planned, several initiatives were underway which sought to inscribe the city with new commemorative spaces dedicated to fallen soldiers. None of the projects was instigated by the royal visit, but several attempts were made to co-opt the prince's support and engage him in foundation rituals.

If the New Zealand Government had been receptive to these efforts, the 1920 royal visit would have left a permanent spatial footprint not just in Wellington but in towns and cities throughout the country. War memorials and returned servicemen's clubs were under development in many locations and the Prince of Wales was the ideal person to lay foundation stones, unveil monuments or open chapels and clubrooms. However, the Minister for Internal Affairs excluded all but a handful of such ceremonies from the prince's itinerary. He justified this measure by claiming that too many official functions would tire the prince and prevent him meeting the people of New Zealand.¹² In Wellington, the minister's proscription meant that the Prince of Wales did not lay the foundation

stone for a new commemorative landscape at the “Soldiers’ and Sailors’ Memorial Cemetery” in Karori.¹³ Nor did the prince attach his name to a proposed Anglican cathedral and military chapel, although this ceremony was briefly included in the Wellington itinerary.¹⁴

Even if time had allowed, Wellington’s other commemorative projects were too undeveloped to attract royal patronage. There was no prospect of the prince dedicating a national war memorial during his visit. A government committee had just begun its deliberations on this subject, and a lively public debate was in progress between the proponents of “utilitarian” schemes and those who favoured a conventional monument.¹⁵ Meanwhile, Wellington City Council had yet to decide whether it would contribute to the national project or build a separate citizen’s memorial honouring the capital’s war dead.¹⁶

Wellington’s commemorative landscape was not entirely empty. In 1920, the local branch of the Returned Soldiers’ Association (RSA) built a temporary “cenotaph” in a small triangle of open space on the corner of Lambton Quay and Charlotte Street (now Molesworth Street) (Figure 1). This simple white obelisk was modelled on its famous counterpart in Whitehall. The Wellington monument was erected in time for Anzac Day, 1920, and served as the venue for a children’s wreath-laying ceremony on April 24th.¹⁷ On Anzac Day itself, the city’s main commemorative service was held at the Town Hall. However, the RSA invited the relatives and friends of fallen soldiers to place wreaths at the foot of the diminutive cenotaph. Many did so and, by evening, the obelisk was surrounded by floral tributes.¹⁸

Although permanent spaces for military ceremony were slow to develop in the capital, New Zealand’s post-war commemorative practices were rapidly evolving and acquiring a distinctive character. April 25th was the anniversary of Australian and New Zealand troops landing at Gallipoli. However, by 1920, Anzac Day services had already been recast to honour all New Zealanders who had fallen in war. Prime Minister Massey considered making the day a statutory holiday despite advice from Lord Milner, the Colonial Secretary, that the anniversary of armistice on November 11th was the preferred date for an “Imperial Holiday”.¹⁹ Wellington’s *Dominion* newspaper promoted Anzac Day in an editorial entitled “War Commemoration.” Published on 24th April, the leader argued that the “Battle of the Landing” remained uppermost in New Zealanders’ experience and recollections of the war. Regardless of the form commemoration took in Britain and in other British dominions, April 25th deserved to be “perpetuated” because it would continue to have “historic meaning” for New Zealanders and Australians.²⁰

The two anniversaries indicate how New Zealand’s commemorative practices were diverging from those of Britain. Lord Milner’s “Imperial Holiday” celebrated “victory and peace”²¹ whereas remembrance services for the Gallipoli landing emphasised a “great beginning”²². As the *Dominion*’s editorial observed, the original Anzac Day “witnessed the opening of the first chapter in the history of the New Zealand Expeditionary Force”. It offered the “promise” of “glory” and marked the occasion when “our untried soldiers first gave proof of their martial quality”.²³ Anzac Day’s significance – why it “strikes home to the heart of the people of [New Zealand]”²⁴ – was captured in a sermon delivered during a special April 25th service at St. Paul’s Cathedral in London. Here, the congregation was reminded that “the glorious deeds which the youngest nations had performed on the battlefields of the ancients...gave to the Australians and New Zealanders what they needed – historic traditions.”²⁵

In February 1920, the President of the NZRSA, Dr E. Boxer, proposed a “general Anzac Day memorial service” which aimed to standardise observance and unite the country in a truly national event. Modelled on a military funeral, Boxer’s ceremony was “solemn”, “sacred” and performed on an urban scale. Troops and returned men paraded through city streets to a town hall or similar place of assembly. The procession was “as fully military as possible”. It was led by a “firing party, marching with reversed arms”, followed by bands and a “gun carriage with wreaths and attendant bearers”. The service itself was designed to produce a dramatic, almost mystical effect as though the RSA’s president was trying to summon the war dead from their distant graves on the battlefields of Europe. According to Boxer’s script, the stage was draped in purple and black, and there was a line of cypress trees along the front of the platform. The ceremony focused on a “reading desk” and a “symbolic bier”. The desk was covered with a Union Jack and a New Zealand Ensign in front of which hung a white floral cross. Two simple white wreaths lay on top of the desk, one on each of the flags. Boxer’s final poignant gesture was a single soldier’s hat placed on top of the bier.²⁶

Into this active but provisional commemorative landscape travelled the Prince of Wales. He arrived in Auckland on April 23rd, just days before the fifth anniversary of the Gallipoli landing. The timing was fortuitous, but much significance was read into the fact that the prince joined his former comrades for the first Anzac Day celebration since full repatriation of the New Zealand Expeditionary Force (NZEF). The service in the Auckland Town Hall followed Boxer’s model and the prince’s presence gave authority to the new commemorative practices being trialled (Turley 38).²⁷ Styled as the “Digger Prince”, Prince Edward assumed a distinctive antipodean identity which had been forged on Europe’s battlefields. A “Special Souvenir Edition” of the *N. Z. School Journal* concluded: “The Prince himself seemed to realize fully what ‘Anzac’ means to all New Zealanders” (188).

Military Review at Newtown Park

Military displays confronted the Prince of Wales at every turn. From its earliest draft, the royal tour programme contained military reviews in all four of New Zealand’s main cities.²⁸ Elsewhere, plans were made for ranks of returned men to be drawn up on railway platforms and recreation grounds because no civic reception was complete without an opportunity for local “diggers” to meet the heir to the throne. At the Army’s General Headquarters in Wellington, Colonel James Sleeman was placed in charge of military arrangements for the royal tour and he left “nothing to chance” when he prepared Preliminary Orders for the military ceremonies.²⁹ He drew up a detailed plan showing the exact formation of the parades at the four big reviews.

The configuration of troops conveyed a clear message about intergenerational succession and the persistent strength of the Empire’s armed forces. As viewed from the saluting base, Sleeman’s “order of sequence” ran from left to right across the ground (Figure 2). The series began with the veterans of earlier military campaigns. These elderly men were followed by

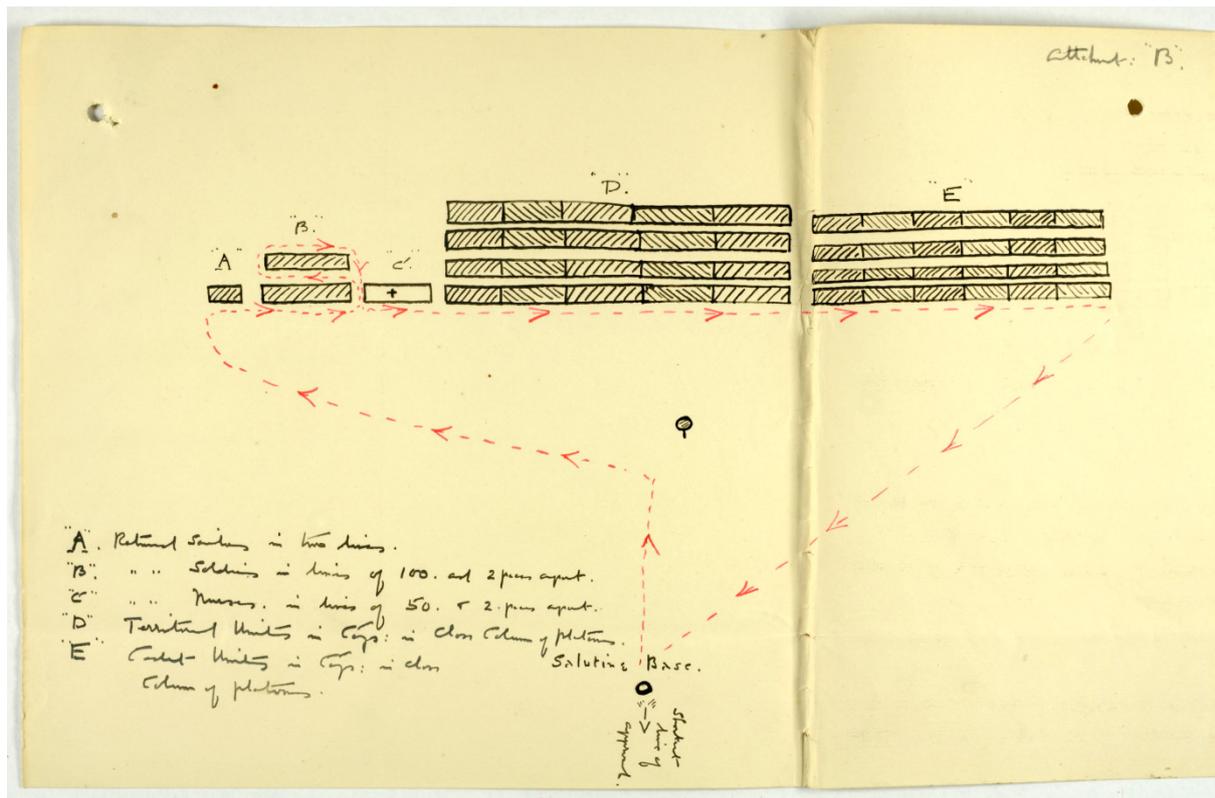


Figure 2: Lieutenant-Colonel Sleeman's diagram for parade order at military reviews, 1920. Reproduced with the permission of Archives New Zealand (Wellington). Record group: G48 23 "Visit of Prince of Wales".

sailors and soldiers who had recently returned from the war in Europe. Next came members of the Army Nursing Service and the various women's "auxiliaries" (WRAFs, WNRs and WAACs) who had also served overseas. Completing the parade were the "close columns" of New Zealand's present and future fighting forces: companies of territorials and battalions of senior cadets.³⁰

In case the symbolism of parade order was overlooked, official commentaries assigned meaning to the spatial and temporal relationships among the different military groups. Replying to the Mayor of Wellington's address of welcome, the Prince of Wales made specific mention of "the great numbers of veterans of three wars who have been good enough to parade for me everywhere." The prince observed:

The impression made upon me by those three generations, the old, the present, and the new, is very strong. In the older veterans, I recall the early struggles of the colony to spread British civilisation in the wild. In the veterans of the South African and European wars, Pakeha and Maori alike, I saw the great development of the Dominion as one of the bulwarks of British unity, freedom, and peace. In the cadets and the school children I read a splendid future, certain to be yours, if your children live up to the example of their fathers, who won, and made, and fought, to defend this lovely and fertile land.³¹

Sleeman's orders also described the correct military protocol for conducting a review. As the prince arrived at the saluting base, the parade stood to attention; returned men removed their hats; the guard of honour presented arms; and a royal salute was fired while King's and regimental colours were unfurled and lowered in the prince's honour. After six bars of the National Anthem, the parade shouldered arms and waited for the prince to begin his inspection.³² At the end of the review, the prince returned to the saluting base to receive three hearty cheers and a second royal salute concluded the proceedings. Efficiently handled, the whole ceremony might take no more than 30 minutes.

When the government announced plans for the Wellington visit, the Minister for Internal Affairs asked the City Council to "consider which of the City parks would be most convenient" for the military review.³³ Brief consideration may have been given to staging the event at the Basin Reserve,³⁴ however Newtown Park was named in first published.³⁵ This choice of venue reinforced the park's status as the capital's de facto parade ground and confirmed the site's long-standing association with the military.

The Public Works Department built temporary stands to accommodate nearly 1000 people at Newtown Park. The "Royal Stand" housed the prince and his entourage together with the prime minister, cabinet ministers and leading military figures. Behind this, the less exclusive "Royal Enclosure" provided seating for members of parliament, local councillors and other invited guests.³⁶ An estimated 40,000 spectators crowded onto the embankments which surrounded three sides of the ground.³⁷



Figure 3: Military Review for the Prince of Wales at Newtown Park, Wellington, 1920. Photographer: Guy. Reproduced with the permission of Alexander Turnbull Library, Wellington, N.Z. File print: PAColl-0362-15. F. J. Grant Collection.

Wellington's review followed Sleeman's prescription almost to the letter, although the lieutenant-colonel's parade order was altered to give greater prominence to returned servicemen.³⁸ Returned soldiers and sailors formed a double line across the full width of the parade ground directly in front of the "Royal Stand". Territorials and cadets stood in "mass formation" behind the returned men. About fifty veterans from South Africa and the New Zealand Wars were also present.³⁹ Many of these men were too old to stand for long periods. So, the veterans were allocated prestigious seats on the perimeter of the parade ground, just to the left of the Royal Stand. Returned nurses and members of the women's auxiliary services were stationed on the embankment immediately to the right of the larger and less exclusive "Royal Enclosure".⁴⁰

The prince was received at the ground by Major-General Sir E.W.C. Chaytor and introduced to other senior military figures before he took up his position on the reviewing stand (Figure 3). After the royal salute, veterans and returned servicemen filed past the prince and shook his hand "in rapid procession". Servicewomen followed. Then the prince presented decorations to some 100 men and women who had served with distinction during the war. When this phase of the proceedings was complete, the prince left the reviewing platform to inspect the ranks of territorials and cadets drawn up on the field.⁴¹

Described in this manner, the Newtown Park review presented a picture of order and discipline. It reproduced a centuries-old ritual which maintained continuity with British military practices and values. The *Evening Post* reported: "[The] various units flying their colours, made a most imposing sight."⁴² In truth, the review's expressive power derived from memories and associations rather than spectacle. There were no mass manoeuvres or impressive displays of horsemanship and weaponry. Battle honours from the recent war meant that the men and boys assembled on the parade ground could lay claim to British military traditions without offering further proofs of discipline and capability. So, the ranks of soldiers and cadets stood impassively on the grass and the whole scene was the subject of quiet contemplation. As troops and onlookers waited for the prince to arrive, the mood at the park was a mixture of melancholy and anticipation:

The whole spectacle was one of quiet beauty and impressiveness. The returned soldiers' mufti and the khaki uniforms of the Territorials and Senior Cadets were thrown up well against the green sward, while the background was formed by the sombre-coloured mass of spectators in winter garb, fringed on the outskirts by tall rows of pine trees in their darkest green.⁴³

The physical setting for the review helped to produce the crowd's sombre and reflective mood. It was not just the backdrop of brooding pines which had this effect. Newtown Park was "historic ground" where, six years earlier, citizens bade farewell to a sizable contingent of the NZEF. Early drafts of reinforcements were mustered and dispatched from the same location. Recalling these occasions "evoked many sad and proud memories".⁴⁴ Depicted as a hallowed military site, Newtown Park was Wellington's closest approximation to a dedicated military space where the ephemera of a performance could be reinforced by the permanent symbolism of the place itself.

Children's Demonstration in Parliament Grounds

There was another "military" performance on prince's second day in Wellington. The "children's demonstration" in parliament grounds imitated many of the features of the previous day's review.

Indeed, early plans for the royal visit combined school children and returned soldiers in a single massive parade at Newtown Park. Transport problems caused the children's gathering to be moved to a more central location.⁴⁵ But the change in venue did not uncouple the symbolic relationship between the two events. The demonstration continued the inter-generational "human timeline" described in Sleeman's orders and remarked upon by the prince during his reply to Wellington's civic address. During the "Children's Day" display, contingents from the city's schools modelled characteristics which resembled much-admired traits attributed to New Zealand soldiers. By assembling 10,000 children in the dominion's pre-eminent "national" space, the demonstration showed that a "rising generation" of New Zealanders possessed traditional martial qualities such as loyalty and discipline. In this way, the parade of young Britons demonstrated New Zealand's ability to maintain ties with the Motherland and fill the ranks of future imperial armies (*N.Z. School Journal* 191).

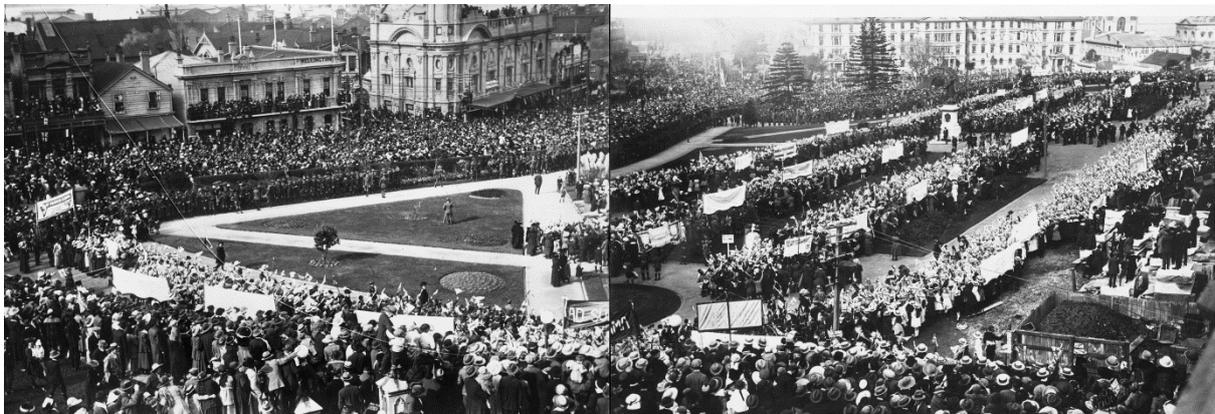


Figure 4: Children's Demonstration, Parliament Grounds, Wellington, 1920. Photographer: Guy. Reproduced with the permission of Alexander Turnbull Library, Wellington, N.Z. File print: PAColl-0362-14. F. J. Grant Collection.

These objectives are evident in the military terminology which describes the demonstration. Children were "marshalled" in the streets around Parliament. Schools were organised in six "columns" and were "fallen in" with "a fair approach to military precision". They were "armed" with paper flags and marched to Parliament "in formation" led by city bands. Each school was identified by a purpose-made banner. Like regimental colours, these standards featured the schools' signature colours and mottos (*N.Z. School Journal* 220-225).⁴⁶ Bringing the children into Parliament Grounds was a "difficult manoeuvre" which even "skilled troops" would find challenging. The "parade ground" was marked out "in true military fashion" with signed positions for every school.⁴⁷ When all the groups were in place, children stood in "massed formation" and waited for the prince carry out an "inspection" of the "ranks". Boys and girls were instructed to "come to attention and salute" when the prince approached. The children were told to "stand at ease" after the prince passed by (Figure 4).⁴⁸

No real troops took part in Wellington's "Children's Day" celebration however uniformed cadets provided an overt connection with the armed forces. 1500 senior cadets and naval trainees formed a "guard of honour" along both sides of the main driveway through Parliament Grounds. Cadets also

lined the perimeter of the grounds along Molesworth Street. The royal motorcade stopped at the corner of Lambton Quay and Bowen Street and the prince walked up the drive between the lines of boy-soldiers. In effect, the demonstration began with an informal inspection of future recruits (*N.Z. School Journal* 207).⁴⁹

New Zealand's military cadet system offered rudimentary military training to schoolboys and these child-soldiers featured prominently during the royal visit. To British observers, the cadet system was a colonial novelty which nonetheless promoted traditional English values. One chronicler of the 1920 royal tour praised the programme for bringing a British "public school" ethos to boys' education:

...the system of cadet-training now in force in New Zealand...is doing wonders in the matter of infusing the best public-school spirit into previously unkempt national schoolboys and larrikins, teaching them to play the game, giving them a pride in themselves, and interesting them in physical culture, and in the duties of citizenship...(Cotes 61)

The cadets provided an unusually versatile image within royal visit discourse. As well as being the hybridised product of metropolitan and colonial cultures, the boy soldiers could evoke military and civilian worlds and they could bridge between childhood and adult life. The prince recognised some of these possibilities in his speech at the government lunch in Wellington. He linked military training in schools with New Zealand's distinguish war record, and he described the cadet programme as an effective way to rebuild the country's defence capability. At the same time, the prince drew attention to the economic benefits of the cadet system. By following "in the footsteps of past generations", these young New Zealanders would learn how to "serve their country in peace-time" by harnessing its "natural resources and industry".⁵⁰ In this way, the prince reinforced connections between military values and civilian life. Furthermore, he assigned martial attributes not just to troops and cadets but also to school children and the New Zealand population at large.

Martial music added to the military atmosphere in parliament grounds. Before the prince arrived, the band from H.M.S. *Renown* entertained the children by playing "rousing patriotic airs".⁵¹ While school groups were being inspected, an 1100-strong children's choir sang "patriotic" or "national" songs including *The British Grenadiers* and *Hearts of Oak*. The first song recognised that the prince was an officer in the Grenadier Guards. The second was a traditional naval anthem which the choir performed as a compliment to the officers and men of H.M.S. *Renown*.⁵²

Wellington's school children received a "souvenir card" as a memento of the historic event.⁵³ The card's central feature is an informal portrait of the Prince of Wales in military uniform. The prince appears "in khaki, with his happy smile, and a cigarette in hand". Relaxed, casual, and framed by a Maori decorative motif, he is the picture of the "Digger Prince". The prince's portrait is flanked by sketches depicting battle scenes, the Straits of Dover, Captain Cook's *Endeavour* and the *Renown* at sea. These images confirm the military and naval themes of the royal visit and also draw attention to geographical similarities between the British Isles and New Zealand. The idea of an "island home" and a sea-borne British diaspora is also conveyed in a short poem composed by the card's designer.⁵⁴ In text and image, the souvenir reminded Wellington's children of their British origins and linked this heritage to an unbroken tradition of military service. The demonstration did likewise. By performing like little troopers, children signalled their readiness to maintain links with the Motherland and discharge their duty towards the empire.

Alternative Reading of the Review at Newtown Park

An alternative reading of events at Newtown Park shows that the review was compromised from the start by flawed planning, poor training and scarce equipment. Hoping to conceal these weaknesses, Lieutenant-Colonel Sleeman scripted an undemanding static display which assigned fundamentally passive roles to the territorials and cadets. He designed a simplified ceremony without weapons, horses or even a march past.⁵⁵ Aside from the prince and the rest of the review party, the only active participants were the returned servicemen and women as they stepped forward for the perfunctory handshake or to receive their medals.

Shoddy construction by the Public Works Department deprived even this measured performance of any dignity. Seats collapsed in the Royal Enclosure displacing official guests onto the field near the saluting platform. To the vast crowds on the embankments this was an invitation to occupy the ground as well. When it came time for the prince to inspect troops and cadets, he was surrounded by a throng of enthusiastic onlookers.⁵⁶ The chaotic scenes which ensued underscored the fragility of claims about the martial spirit of New Zealanders.

The review presented the troubling image of troops standing rooted to the spot while spectators marched animatedly onto the parade ground. This alarming role reversal made it difficult to depict the territorials as vigorous self-sufficient types who combined a healthy distaste for authority with a rough-and-ready ability to get the job done. Applied to “rough riders” in South Africa or “diggers” during the recent war in Europe, this appealing caricature had often been employed to excuse a lack of polish during military ceremonies. When the Duke and Duchess of Cornwall and York visited Wellington, mounted troopers cut dramatic figures as they processed through city streets. Their horsemanship was largely self-taught and their manoeuvres lacked precision. Nevertheless, their appearance elicited admiration and a sense of pride. In the royal visit discourse of 1901, the adventurous untamed spirit of these rugged, supposedly rural men on horseback was superior to the more disciplined yet docile character of the professional British “Tommy”.⁵⁷

Nineteen years later, this characterisation was entirely missing in accounts of the unruly Newtown Park review. Sleeman’s precautions stripped the event of panoply and colour, and these omissions distanced Newtown Park from the grand military performances staged for royalty “at Home”. Under more favourable circumstances, the edited ceremony might have confirmed the New Zealanders’ aversion to “tin soldiering”.⁵⁸ However, Sleeman’s review also lacked opportunities to depict the resilience of the “digger” or the swagger of mounted volunteers. These absences narrowed the symbolic repertoire of the review and limited the performance’s contribution to royal visit discourse about an emerging national identity.

As a result, the military display bore little relationship to extravagant claims about military prowess circulating in royal visit discourse. Disarmed and immobilised, the formation of men and boys on the parade ground evoked memories of the recent war but could not bring to life the distinctive qualities which had earned New Zealand servicemen their battle honours. Instead of supporting the performance, the venue drew attention to the event’s shortcomings. The immensity of the arena further diminished the display and made it impossible for most spectators to follow the proceedings. A poor turnout by returned servicemen and the motionless ranks of territorials and cadets stationed in the centre of the field meant that much of the parade ground remained unclaimed.⁵⁹ The

downsized review combined with the unprecedented crowd meant that conditions were ripe for the unscripted events which disrupted Sleeman's carefully planned show. First, onlookers became "restive"; then they began "encroaching on the forbidden ground"; finally, they "took complete charge of the parade grounds".⁶⁰ The scene at Newtown Park quickly deteriorated and began to resemble a bizarre parody of the solemn military ceremony described in the tour programme.

Sleeman may have taken consolation from the fact that military personnel performed well. Returned soldiers demonstrated their resourcefulness by holding back the crowd. The territorials' "steadiness on parade was noteworthy" although, after the inspection, some of the younger cadets broke ranks to join the crush of people around the prince's car.⁶¹ However, in symbolic terms, servicemen and civilians could not be easily separated. The military narratives in royal visit discourse attempted to generalise attributes like discipline, loyalty, bravery and self-sacrifice; applying these martial qualities to New Zealand's population at large. This trope was important for the construction of identity because it allowed figures like the colonial "rough rider" and the antipodean "digger" to represent the nation and explain peacetime achievements as well as prowess on the battlefield. The Newtown Park review undermined such claims because the public's behaviour was so demonstrably different from that being modelled or rewarded on the parade ground. There was no concealing the fact that a large section of the crowd appeared to disregard military values and turned a dignified ceremony into a melee.

Dual Reading of Children's Demonstration at Parliament

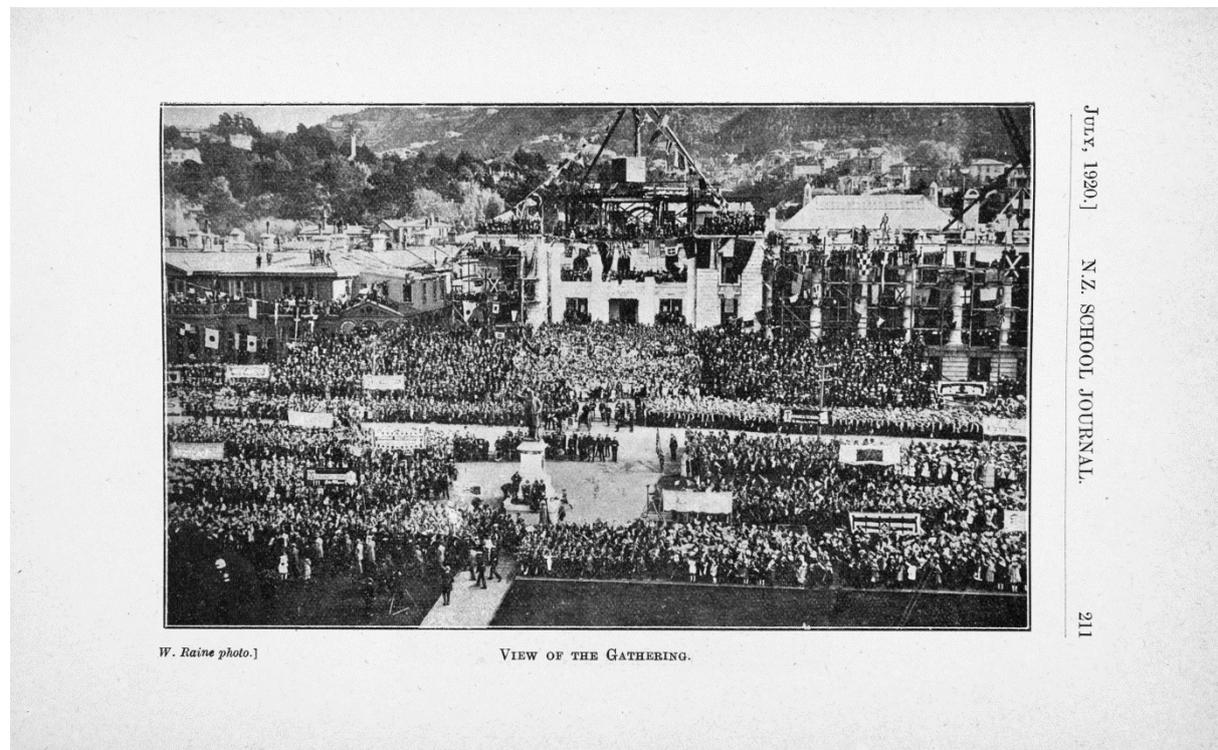


Figure 5: "View of the Gathering." Published in *N.Z. School Journal*. July 1920. (page 211) Photographer: unknown. Reproduced with the permission of Alexander Turnbull Library, Wellington, N.Z. File print: S-L 1031 VERSO.

The simulated military review at in parliament grounds combined discipline and vigour in a single convincing performance. Like real military reviews, the children's demonstrations involved large numbers of participants in a series of coordinated actions. Results were judged in terms of complexity and precision (Figure 5). Successful displays were hailed as triumphs of organisation and discipline.⁶² At the same time, the demonstrations contained moments of spontaneity. During these outbursts, the children's uncontained enthusiasm attested to intense loyalty and a deep affection for the royal family. The youngsters' exuberance also exhibited the energy and potential of the rising generation. The Prince of Wales' reported reactions to the demonstrations acknowledged the dual qualities on display. He described the children's actions as the product of "splendid training and discipline".⁶³ He advised his young audience: "I am going to tell my Father & Mother, the King & Queen, what a fine & loyal future generation is growing up in this Dominion" (Prince of Wales 1920). At the same time, the prince recognised that the youngsters formed a "sturdy and promising race"⁶⁴ and new "breed" of "young Britons".⁶⁵ With these remarks, he gave tacit support to the claim that New Zealand children were not just loyal British subjects but were also healthier and more robust than their European counterparts.

This contention featured prominently in the discourse on "difference". New Zealand's unusually robust children recalled earlier assertions that colonial troops were physically superior to British conscripts and professional soldiers in the Imperial Army.⁶⁶ During the 1901 royal visit, the mounted volunteers who escorted the Duke and Duchess of Cornwall and York through Wellington were depicted as exemplars of strength, fitness and the virtues of outdoor work.⁶⁷ In 1920, the picture was somewhat different. After four years of war, New Zealand's territorial force was sadly depleted and the demeanour of returned soldiers could not be predicted. Consequently, it was more difficult for military personnel to represent the critical mixture of qualities which underpinned the distinctive identity of New Zealander's. For the Prince of Wales' tour, mass gatherings of children offered a more reliable way to model not just discipline and order but also the vigorous loyalty and persistent vitality of the young nation.

This substitution helped to conflate idealised depictions of the New Zealand soldier with flattering images of the nation's school children. The children were "strong", "well-nourished" and "red cheeked" and they were distinguished by their "fine appearance and bearing".⁶⁸ (Cotes 64) When the prince visited Waitaki Boys' High School near Oamaru, he was welcomed by a "magnificent assembly of boys, perfect in physique".⁶⁹ This message was transmitted to London where the *Times* reported that the Waitaki boys were "glowing with lusty physical health" and the *Daily Telegraph* described the lads as an "assembly of solid, big-framed, well set-up boys" who received the prince with "energy" and "full-throated cheers".⁷⁰ More than 30,000 children toured H.M.S. *Renown* while it was in New Zealand. To their Royal Navy hosts, these "bright-eyed and efficient" children were "the picture of health and happiness". The ship's magazine reported: "Never have such children been seen in Europe. There was not a weed or a degenerate among them..." The children's countenance was all the more remarkable because they were not a favoured "selection from the various schools" but a representative cross section of society.⁷¹ These flattering portraits of the children supported a broader argument that the British "race" had not just adapted to life in the Antipodes but was thriving "under conditions fresh and far from its source" (Cotes 48; Turley 33).

A similar mix of attributes was on display in parliament grounds. When he briefed organisers of the “Children’s Day” demonstration, the chairman of Wellington’s Education Board emphasised the need for a balance between spontaneity and control. W.H.L. Foster stressed that the children’s display of loyalty should be enthusiastic but “always orderly”. Referring to an incident in Auckland when children mobbed the prince’s car, he warned: “There must be no breaking ranks [because] that was bad discipline”.⁷² On the day of the performance, few of the capital’s children obeyed Foster’s instructions to the letter. However, the ranks held and, if the conduct of some spectators was overlooked, the demonstration could be judged a success. The *Dominion* reported: “The children were never at any moment other than extremely orderly and well-behaved.” Despite their high spirits, “they were brought into the grounds in an orderly fashion, led by their teachers on to their markers on the parade ground, and there kept in rows in massed formation to await the arrival of the royal visitor.”⁷³ The commissioner of police boasted about the “marvellous conduct” of the young people “who seemed to respond so readily to the control of those in authority”.⁷⁴ The prince’s chief-of-staff was so impressed he informed the King that New Zealand’s school children were “extraordinarily well disciplined”. Admiral Halsey praised the dominion for its handling of young people, giving credit to the state-run education system and the distinctive Australasian practice of providing military training in schools. Halsey concluded: “This country is undoubtedly head and shoulders above every other country that I have ever been to with regard to the organisation and training of the children...”⁷⁵



Figure 6: Children’s Demonstration, Parliament Grounds, Wellington. 1920. Photographer: Guy. Reproduced with the permission of Alexander Turnbull Library, Wellington, N.Z. File print: PAColl-9163-12.

At the same time, accounts of the demonstration emphasised the almost uncontrollable excitement of the participants. When the prince entered Parliament Grounds: “Cheering and flag-waving erupted” and “thousands of young hearts poured forth their fervent patriotism”.⁷⁶ A “storm of cheering broke loose” and the “lusty young voices” delivered a “magnificent and hearty welcome”. The *N.Z. School Journal* reported: “Thousands of flags, waved by sturdy and energetic arms, fluttered merrily in the air” (208). The display of school banners “lent a carnival air to the scene”.⁷⁷

As metaphors for the children’s performance, the terms “review” and “carnival” capture how the event fluctuated between solemn military ceremony and festive abandon. Sometimes the two conditions merged to create a single moment. Witnessed from the top of parliament buildings: “the scene presented by the orderly great mass of people was quite without parallel in the history of Wellington”. Simultaneously, the grounds were alive with movement: “Repeatedly waves of cheers like passing rays of sunlight moved across the grounds, and thousands of flags sent coloured ripples eddying about”.⁷⁸ At other points in the ceremony, order and vitality followed one another in quick succession. As the proceedings drew to a close, children dutifully sang two verses of the national anthem while the prince stood to attention on the steps of Parliament: “Then came the order, ‘Three Cheers for the Prince of Wales,’ and they were given in such a manner as to leave no room for doubting the loyalty of Wellington’s children” (*N.Z. School Journal* 208).

More frequently, fragments of “carnival” and “review” were interspersed as the spontaneous response of the young participants met with constraints imposed by the organisers’ careful planning. Most school groups were arranged in three long columns which ran from north to south, parallel to the front of parliament buildings. There were no rope barriers, although assembly areas were delineated by wooden planks and sheets of “rubberoid” laid out on the grass.⁷⁹ During the ceremony, the columns retained their overall structure but individuals within the ranks became animated and some were almost overcome with excitement. Few children waited quietly for the inspection or stood to attention when the prince approached. Nor did they keep their paper Union Jacks lowered until the designated time for a “flag rally”. Instead, when the prince entered Parliament Grounds there was a “mighty roar of enthusiasm”. During a “perfect deluge of applause”, flags were thrown and one harmlessly grazed the prince’s cheek.⁸⁰ As the prince walked among the school groups: “the joy of the children knew no bounds, and they cheered and cheered until they could cheer no more”.

Conclusion

At the Newtown Park review, vitality and individual agency were suppressed in a misguided attempt to preserve military order. The unintended outcome was a shameful role reversal when spectators stormed the parade ground while the ranks of soldiers remained impassive and immobilised in the centre of the field. At the children’s demonstration in parliament grounds, the dual attributes of discipline and dynamism were modelled in a single performance which presented New Zealand’s distinctiveness in a positive light. The principal message of the Children’s Day display was continuity. The fervent patriotism of individuals and the disciplined conformity of school groups connected the children with British values and military traditions. To the prince’s hosts, the vigorous displays of affection and the sheer number of participants reinforced New Zealand’s claim to be the most loyal of British dominions. At the same time, the children’s exuberance conveyed the idea that young New Zealanders were healthier and happier than their cousins “at Home”. So, the children’s hearty

welcomes served two purposes. They provided assurances that a new generation of Britons was being raised under the Southern Cross. They also characterised young New Zealand as a robust variant of British stock which would reinvigorate the Empire and secure the future prosperity of their country.

¹ *Evening Post* "A Country's Best Asset." [editorial] 11 May 1920:6.

² *Evening Post* "Prime Minister Proposes. 'Our Royal Guest.'" 7 May 1920:7.

³ *Welcome Souvenir* May 1920. Wellington: Geo. W. Slade Ltd. ATL. B ROYAL 1920:1.

⁴ *Evening Post* "A New Message from the Prince of Wales. Etc." 10 March 1920:3.

⁵ Prince of Wales. Speech at Government Luncheon Wellington. Thursday May 6th, 1920. In *Visit of Prince of Wales Addresses of Welcome etc.* ANZ. ACHK series 16603 acc. no. G48 box/item 23 rec. no. P/13. [second file]

⁶ *Evening Post* "A New Message from the Prince of Wales. Etc." 10 March 1920:3.

⁷ Prince of Wales. Reply to Government Address. Auckland. 24 April 1920. In *Visit of Prince of Wales Addresses of Welcome etc* ANZ. ACHK series 16603 acc. no. G48 box/item 23 record no. P/13 [second file]

⁸ *Evening Post* "British Commonwealth of Nations." 5 May 1920:9.

⁹ *Evening Post* "Prime Minister Proposes. 'Our Royal Guest.'" 7 May 1920:7.

¹⁰ *Dominion* "The Petone Pageant. Scenes of Old New Zealand. Captain Cook and the Pioneers." 8 May 1920:8.

¹¹ *Dominion* "Speeches at State Luncheon. Great Civic Reception." 7 May 1920:7.

¹² Minister of Internal Affairs. Draft letter to mayors of towns. [undated] In *Prince of Wales Visit 1920 – Correspondence with Minister.* ANZ. acc. no. IA1 rec. no. 13/362/-.; Bell, Sir Francis. Telegram to W.J. Napier, 6 March 1920. In *Prince of Wales Visit 1920 – Public Functions etc.* ANZ. acc. no. IA1 rec. no. 13/362/23.

¹³ WCC Minutes. 11 March 1920:63; 22 July 1920:219. In *Volume No.30: Minutes of meetings of the Wellington City Council 27 Jan 1920 to 10 Feb 1921.* WCA. Reg. no. 00166:0:28 location E21.

¹⁴ Bell, Sir Francis. Letter to Liverpool, 26 February 1920. In *Prince of Wales. Visit of His Royal Highness, 1920. Public Functions. Etc.* ANZ. acc. no. IA1 rec. no. 13/362/23.; Bell, Sir Francis. Letter to Liverpool, 5 March 1920. In *Visit of Prince of Wales, 1920 – Correspondence other than with Imperial Government etc.* ANZ. ACHK series 16603 acc. no. G48 box/item 22 re. no. P/12.

¹⁵ *Dominion* "War Memorial. A National Gallery. Art Society's Proposal." 20 April 1920:8.

¹⁶ *Evening Post* "National War Memorial. Co-operation between City and Government." 23 April 1920:8.

¹⁷ *Evening Post*. "Floral Memorial Service." 23 April 1920:7; *Evening Post* "Anzac Day. A Touching Tribute. Floral Memorial Service. Gathering at Cenotaph." 24 April 1920:5.

¹⁸ *Evening Post* "Sunday Celebrations." 23 April 1920:7.

¹⁹ Liverpool, Lord. Telegram to Milner, 30 January 1920; Milner, Lord. Telegram to Liverpool, 8 April 1920; In *Telegrams to and from the Secretary of State – 31 January – 2 May 1920.* ANZ. ACHK series 16561 acc. no. G5 box/item 21.

²⁰ *Dominion* "War Commemoration." [editorial] 24 April 1920:6.

²¹ Liverpool, Lord. Telegram to Milner, 30 January 1920. In *Telegrams to and from the Secretary of State – 31 January – 2 May 1920.* ANZ. ACHK series 16561 acc. no. G5

²² *Dominion* "War Commemoration." [editorial] 24 April 1920:6.

²³ *Ibid.*

²⁴ *Ibid.*

²⁵ *Evening Post* "ANZAC Day. Service in London. An Impressive Sermon." 26 April 1920:6.

²⁶ *Dominion* "Anzac Day. Proposed Dominion Celebrations. Etc." 3 February 1920: 7.

²⁷ *New Zealand Observer* "Commemoration Day." 24 April 1920:17.

²⁸ Liverpool, Lord. Telegram to Secretary of State, 17 January 1920. In *Visit of His Royal Highness the Prince of Wales Letters and Telegrams etc.* ANZ. ACHK series 16603 acc. no. G48 box/item 23 rec. no. P/21.

²⁹ Sleeman, Lieut.-Colonel James. Letter to Lord Liverpool, 20 February 1920. In *Visit of Prince of Wales, 1920 – Programme.* ANZ. ACHK series 16603 acc. no. G48 box/item 23 rec. no. P/15; Sleeman, Lieut.-Colonel James.

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³⁰ Bell, Sir Francis. Letter to Liverpool, 1 March 1920. In *Visit of Prince of Wales, 1920 – Correspondence other than with Imperial Government etc.* ACHK series 16603 acc. no. G48 box/item 22 rec. no. P/12; Sleeman, Lieut.-Colonel James. Letter to Lord Liverpool, 25 February 1920. In *Visit of Prince of Wales, 1920 – Programme*. ANZ. ACHK series 16603 acc. no. G48 box/item 23 rec. no. P/15; Sleeman, Lieut.-Colonel James. Letter to Liverpool, 28 February 1920. In *Visit of Prince of Wales, 1920 – Correspondence other than with Imperial Government etc.* ANZ. ACHK series 16603 acc. no. G48 box/item 22 rec. no. P/12.

³¹ *Evening Post* "The Prince's Reply." 6 May 1920:8.

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³³ Bell, Sir Francis. Letter to Mayor of Wellington, 19 February 1920. In *Prince of Wales – Visit of His Royal Highness, 1920 Wellington*. ANZ. acc. no. IA1 rec. no. 13/362/62.

³⁴ *Dominion* "Prince of Wales's Visit. Acting-Mayor Reveals Local Arrangements. Little for City to Do." 21 February 1920:9.

³⁵ *Dominion* "Prince of Wales's Visit. His Stay in Wellington. Etc." 27 February 1920:7.

³⁶ Deavoll, W. I. Memo to Hislop, 24 April 1920. In *Prince of Wales Visit 1920 – Wellington*. acc. no. IA1 rec. no. 13/362/62; Hislop. Memo to Sharp, 19 April 1920. In *Prince of Wales Visit 1920 – Wellington*. acc. no. IA1 rec. no. 13/362/62.; *Dominion* "Royal Military Review. Fine Spectacle at Newtown Park. Ceremony Watched by Many Thousands. Prince Greets Veterans and Returned Heroes." 7 May 1920:7.

³⁷ *Evening Post* "Royal Military Review. 5700 Troops on Parade. Ovations for the Prince. Etc." 7 May 1920:7.

³⁸ *Ibid.*; *Evening Post* "Big Military Review. Completed Arrangements. Imposing Ceremony Promised." 4 May 1920:7; *New Zealand Times* "The Prince's Review." 5 May 1920.

³⁹ *Evening Post* "Unabated Enthusiasm. Prince Holds Military Review. Etc." 7 May 1920:7.

⁴⁰ *Dominion* "Royal Military Review. Fine Spectacle at Newtown Park. Etc." 7 May 1920:7; *Evening Post* "Local and General." 29 April 1920:6.

⁴¹ *Evening Post* "The Royal Review. Big Military Display. Proceeding at Newtown Park." 6 May 1920:8.

⁴² *Ibid.*

⁴³ *Evening Post* "Royal Military Review. 5700 Troops on Parade. Ovations for the Prince. Etc." 7 May 1920:7.

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⁴⁶ *Dominion* "Pylons and Banners. Brave Display in Course of Preparation." 28 April 1920:7; *Dominion* "Children's Day. An Inspiring Welcome. Demonstration in Parliament Grounds. Excellent Arrangements." 8 May 1920:8.

⁴⁷ *Ibid.*; *Evening Post* "Greeting the Prince. Ten Thousand Flags. A Wonderful Spectacle. Young Wellington's Welcome." 7 May 1920:8; *New Zealand Times* "Children's Review. Official Arrangements. Details of Parade and Demonstration. A Comprehensive Programme." 5 May 1920.

⁴⁸ *Evening Post* "Local and General." 28 April 1920:8.

⁴⁹ *Dominion* "Hearty as Ever. Demonstrations in the Street. Cheering that Rent the Air." 8 May 1920:7; *Evening Post* "Greeting the Prince. Ten Thousand Flags. A Wonderful Spectacle. Young Wellington's Welcome." 7 May 1920:8.

⁵⁰ *Evening Post* "The Prince in Reply." 7 May 1920:7.

⁵¹ *Evening Post* "Greeting the Prince. Ten Thousand Flags. A Wonderful Spectacle. Young Wellington's Welcome." 7 May 1920:8.

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- ⁶⁵ *Evening Post* "The Prince's Reply." 6 May 1920:8.
- ⁶⁶ *Evening Post* "The Visit of the Imperial Troops." 9 February 1901:5.
- ⁶⁷ *Evening Post* "At the Wharf Gates." 18 June 1901:5.
- ⁶⁸ *Evening Post* "A Country's Best Asset." [editorial] 11 May 1920:6; *New Zealand Observer* "Free Lancings." [column] 24 April 1920:2; Prince of Wales. Reply to Address from Mayor of Wellington, 6 May 1920. In *Visit of Prince of Wales Addresses of Welcome and Replies of His Royal Highness.* ANZ. ACHK series 16603 acc. no. G48 box/item 23 rec. no. P/13. [second file]
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Abbreviations

ANZ Archives New Zealand (Wellington)

ATL Alexander Turnbull Library

NLNZ National Library of New Zealand

RA Royal Archives

Cooperation and Canals

Beacons for a 'Good Life' in Queensland

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The nature of what constitutes a 'good life', or at least a better life than that on offer, is varied and contentious. This paper focuses on two historical examples of the search for a good life in Queensland in which the mechanisms involved were the creation of locally innovative forms of settlement.

The first of the two examples is the cluster of cooperative settlements set up in parts of Queensland, including the more populous South East, during the turbulent years of the 1890s. An influential source of the cooperative ideal was the radical journalist William Lane, who in 1893 took a group of like-minded people to start the utopian New Australia settlement in Paraguay; but the cooperatives were also a reaction to the appalling conditions of the 1890s economic depression and the government's desire to populate and develop the Colony. The second example is the canal estates, initiated in Australia on the Gold Coast in 1957, driven by a desire for a good life by the sea, a craving to emulate (and to sell) the perceived golden lifestyle of Florida in the USA as well as by consumerist capitalism.

The two examples identify some of the potential elements of a 'good life' sought by the community or sold by the market, but more importantly they point to different conceptions of the role of the state in achieving the 'good life'.

Keywords: Cooperative settlements, canal estates, Queensland, William Lane, State government, local government

Introduction

The idea of a 'good life', or at least a better life than that currently on offer, has inspired a spectacular legion of thinkers, novelists, dissidents, activists and philosophers for centuries. There are, of course, many bases for this better life. It can, for example, be seen as better in the sense of

morally more worthwhile (or morally good) or better in the sense of more successful, more personally meaningful or of a higher quality (Tafarodi et al. 2012, p. 787, Bonn & Tafarodi 2013). The two approaches often overlap, as will be seen below.

Whatever this improved life might look like it usually involves people living as individuals or in groups in some locality – that is, living in a social arrangement in an identified place. This place might not be real. More's eponymous book, *Utopia*, (More 1965), is based on a description by a sailor More calls 'Teller of Tales' of a mythical island in the New World, a 'good place' that at the same time is 'no place'. But what of good places that do (or did) exist? Exploration of such places could help us understand the role of the perceived form of a 'good life' in their creation.

The two examples used here are located in Queensland, Australia. They are the cooperative settlements started under the *Co-operative Communities Land Settlement Act* of 1893 and the canal estates that sprang up on the Gold Coast in the 1950s in an attempt to bring a local version of the lifestyle of Florida to Australia. The two examples span a long time period (from 1893 to the present day). Although it is not the intention of this paper to debate the place of utopian thinking in historical settlement planning in Australia it may be useful to visualize the two as potential beacons marking the shift in Western conceptualizations of utopia identified by Baeten (2002), who describes the move from writing about essentially socialist utopias in the 19th and early 20th centuries (the last of which he claims was H. G. Wells' 1905 *A Modern Utopia*) to the capitalist and eventually neo-liberal "revanchist utopias" of the late 20th and early 21st centuries (Baeten 2002, pp. 146-7). The cooperative communities of the 1890s were firmly anchored in socialist and communitarian idealism (although also described through government channels in decidedly entrepreneurial rhetoric); the canal estates of the 1950s were created by capitalist developers and sold to both property investors and residents who wanted to be part of a consumerist capitalism.

Although they at first might appear quite disparate in approach, form and impact there are still two common threads linking them: the very idea of actually creating a 'good life' rather than just thinking about it and the fact that intervention was required by the state actually to make them happen. I use the two examples to explore for whom this good life was intended, by whom it was created, and the role of the state in its implementation.

Queensland's Cooperative Settlements

The early 1890s were a turbulent period in Queensland's history, for "following the collapse of the economic boom of the 1880s and the crash of major banks, Queensland and Brisbane in particular, suffered high unemployment and severe poverty..." (Metcalf 1995, p. 556). The financial crisis of 1890-3 triggered industrial unrest that tested the newly formed labour unions. Employers organized amongst themselves with the aim of breaking these unions. A strike by shearers began in the first weeks of January, 1891, but was essentially at an end by June of that year after the forces of state intervention through the police and defence forces were vigorously used to support the pastoralist employers (Wilding 1980, pp. [12]-[15]).

The latter part of the nineteenth century was also a period of social unrest and new thinking in other parts of the world. There were growing concerns about living conditions in the industrial cities of the United Kingdom. The Royal Commission on the Housing of the Working Classes had reported in

1885, leading to the *Housing of the Working Classes Act* of 1885. Charles Booth's survey of the poor in London, presented in 1887, showed that little had changed after the legislation, leading to the revised *Housing of the Working Classes Act* of 1890 (Hall 1996, p. 31). Utopian and socialist thinkers and their writings had a considerable influence in America, Europe and Australia. These included the socialist Edward Bellamy and his book *Looking Backward 2000-1887* (Bellamy 1967). Henry George, with his radical ideas about land-based taxation, had lectured in Australia in 1890 as part of a global tour, although locally his ideas were not well received (Nairn 1972). Arturo Soria y Mata proposed his linear city for Madrid, an ideal that like Howard's garden city was intended to marry town and country to provide a better life for the working population, in 1882 (Collins 1959a, b). It was a time of great social and philosophical ferment, including in the problematic areas that underpinned the early town planning movement, such as public health, public finance and the built environment.

In Australia, this soup of international ideas was spiced by the difficult local social and economic conditions at the century's end. In Queensland the mix of ideas was strongly influenced by William Lane, the socialist writer and visionary. Lane was born in the UK then worked in Canada and the United States before moving to Australia. He became "one of Australia's foremost radical journalists, addressing himself mainly to the bushworkers of Queensland, whom he idealized" (Souter 1983, no page). He was heavily involved in the developing labour movement. This included publishing the ironically-titled, semi-utopian novel *The Working Man's Paradise* in 1892 (under the pseudonym of John Miller) to raise funds for the families of the strikers convicted in the Rockhampton conspiracy trials from the 1891 shearers' strike (Souter 1983; see also Wilding 1980). According to Souter (1983) he had corresponded with the communitarian settlement of Topolobampo in Mexico and was familiar with the North American utopian settlement of Icaria started by followers of Robert Owen. In 1891 the newspaper he edited, *The Worker*, which was supported by a range of labour organisations, announced that the New Australia Cooperative Settlement Association had sent a representative to South America to find suitable land for a settlement. Then on July 1893 Lane, his wife and four children, his brother and his wife and another 220 settlers set sail to Paraguay to found the cooperative settlement of New Australia (Souter 1983). Participants had to pay £60 to be part, which made joining beyond the financial resources of most working people (Metcalf 2010).

Lane's actions were one of the influences on the Queensland legislature that led to the *Co-operative Communities Land Settlement Bill* of 1893. Queensland was not alone in supporting such settlements, nor was it alone in trying to counteract Lane's influence. Walker (1970, p. 19) points out that New South Wales and South Australia also created legislation in 1893 brought on by the immediate circumstances of the "depression and great unemployment", as well as "to exploit natural resources more fully and to develop the wealth and population of the colonies"; but in all three cases this was tied to "the belief that there should be the opportunity for the experiment [i.e. Lane's New Australia] to be tried within Australia and that some of its best young men and women should if possible be dissuaded from emigration".

As the parliamentary debate over the Queensland Bill showed these several issues were addressed by the proposed legislation. The Secretary for Lands claimed the purpose of the Bill was to "enable people who really have a desire for country life, and wish to settle the land in communities, to do so" (QPD 1893, p.393). The eventual Act (passed in October 1893) enabled 30 or more men (women were not counted) to create a formally defined group with a name and agreed regulations and then

to apply for up to 160 acres (65 hectares) per man for the creation of a cooperative settlement under a perpetual lease on Crown land and for each man in the group to be allocated up to £20 for tools, food, seeds and the like. As in New South Wales the government's overt justification for the legislation was the need to develop and populate the undeveloped areas of the Colony. The Colonial Treasurer pontificated, "We want to get the land populated. The land of Queensland belongs to the people ... We, as a Parliament, are the trustees of those lands" (QPD 1893, p. 406). But population of undeveloped land was also seen as a counter to the need to grapple with the high unemployment of the time, the high costs of providing government rations for the unemployed and the claimed potential temptation of those on government rations to maintain their reputedly indolent lifestyle (QPD 1893, p. 66).

The government pushed the *Co-operative Communities Land Settlement Bill* mainly because it would help deal with these problems, caused by the unemployed who "now crowd around the cities and towns" (QPD 1893, p. 66), but in addition people moving to such settlements would "learn a useful occupation" (QPD 1893, p. 66), although the nature of this "occupation" was never defined. They claimed that mechanism cooperative settlements would help overcome the problems associated with earlier land settlement schemes which had been "only moderately successful" because of the "hardships and isolation to be endured by settlers who had to live apart from their fellows – away from schools and other advantages of civilisation" (QPD 1893, p. 66). Positive examples of similar cooperative settlements from New Zealand, the United States and Europe were highlighted during the debates (QPD 1893, p. 66).

Although conservative government members in Parliament spoke only of overcoming urban unemployment, populating and developing the State, and reducing the costs of government support for the unemployed, the shadow of Lane and New Australia hovered over the debate. Opposition members flagged this. Mr Hardacre, an opposition MLA, went as far as to say that, "I think I am not out of order in referring in connection with this Bill to one of the grandest men who ever left these shores, whom we may thank more than anyone else for this – that is Mr. William Lane" (QPD 1893, p. 404). He went on to say that

"The fact that so many persons going away from the colony has almost shamed our legislators to doing something to wipe out the disgrace of people being forced from these shores, like the pilgrims of old, to seek new land wherein to build up a society which will give them what they ought to be able to enjoy in our present civilisation" (QPD 1893, pp. 404-5).

Opposition speakers gleefully pointed out that the Bill provided for "socialistic settlements, State-aided settlement, compulsory arbitration, and a recognition of the obligation of the government to find work for those who want it in the form of labour colonies" (QPD 1893, p. 398), all policies espoused by those on the political Left but supposedly refuted by the government.

Thus, government initiated the legislation to support the creation of local cooperative settlements both as a way of covertly counteracting the socialist agitation exemplified by Lane's New Australia Movement as well as overtly as a way of developing unoccupied lands in the Colony. There was strong support for these actions by the newspapers of the time, despite the socialist flavor of the proposal. Such commentators seemed to ignore this socialist flavor in favour of government-supporting arguments couched in terms of enterprise, expansion and development. The editorial

comment in the weekly newspaper *The Queenslander* of 12 August, 1893, is typical, noting that land settlement was important because the poor employment prospects of the time meant that men were perpetually moving from place to place looking for employment, so many had never attempted to form homes “which would do so much to attach them to the country in which they live”. The editorial goes on to note that

“this is really one of the problems of our time, and thoughtful persons have begun to recognize the fact that until some link of attachment connects the people with the land Socialism will have a productive field and an abundant harvest; for the man who has nothing to lose, but thinks he may gain by social upheaval. Queensland just now has many hundreds of men who have no homes, no employment, no means of living...” (*The Queenslander* 1893b, p. 297).

The editorial commended the Colonial government for the proposed legislation because “there are many thousands of acres which may be made more productive than they have hitherto been if they were properly worked for agricultural or pastoral purposes”. The Bill:

“places it in the power of a number of persons to combine under more favourable conditions than have previously existed for utilizing the Crown lands of the colony; and to those who have no money it offers some sort of hope that they may by diligence and thrift ultimately establish themselves on their own homesteads” (*The Queenslander* 1893b, p. 297).

The Queenslander (1893a) also showed it was aware of the link between the *Co-operative Communities Land Settlement Bill* and Lane’s actions in leaving Queensland, stating that:

“While offering a premium for individual effort it also allows a combination of men to accomplish in the land of their adoption what the ‘New Australians’ have gone thousands of miles to attempt, and besides securing to the settlers perfect security from hostile forces guarantees them absolute freedom and a handy market” (*The Queenslander* 1893a, p. 297).

After the Act was passed some 14 communal experiments were established in Queensland including Excel and Byrnestown (See Figures 1 and 2). Metcalf (1995, p. 553) notes that these were only part of the 116 utopian communities established with support from the various Colonial governments in South Australia, Victoria, New South Wales and Queensland. The Queensland communities started with high expectations. They included settlements made up of Catholics only as well as non-religious settlements based on an egalitarian working-person ideal. But by the mid-1890s all had collapsed (Metcalf 2010). The collapse was for many reasons, but included lack of farming skills by the mainly urban settlers and the poor land they occupied. There was also a divergence between two arms of the Colonial state. Whilst the legislature had approved and supported the creation of cooperative settlements (despite their socialist underpinnings), hindering tactics were employed by unconvinced bureaucrats, tactics which included making only unproductive land available in locations far from good transport and delaying payment of the money for setting up the settlements (Metcalf 1995, 2010). This recalcitrance may have reflected support for already established farmers, who had bought their properties with their own funds and established their farms with minimal government support – this potential conflict between the new subsidized settlements and existing private farmers was identified several times in the parliamentary debate over the legislation (QPD 1893).



Figure 1: Pioneers at Excel (Source: Metcalf “Cooperative Settlements”, Queensland Historical Atlas)



Figure 2: Byrnestown School (Source: Metcalf “Cooperative Settlements”, Queensland Historical Atlas)

The ‘good life’ as expressed in these communities was concentrated on working men and their families. The settlements were cooperative and egalitarian, based on self-sufficiency gained through working the land. The ‘good life’ was supported by government policy because cooperatives were seen as a way of reducing a problem (unemployment) in a period of economic uncertainty, of helping tame the unsettled parts of the Colony and of doing this through groups of like-minded people who could support one another rather than repeating the individualistic isolation experienced through previous settlement programs. The ‘good life’ could be found in small settlements of 30 men (and their accompanying wives, daughters and partners). The initiative for these settlements came from the wider community, including specifically socialist and utopian elements, but it was implemented through the legislative and financial support of the state run at the time by a conservative Colonial government. The state’s role was that of providing a mechanism by which cooperative communities could be created and supported; but it took this action partly to counteract community agitation and unrest as well as to support the state interest in the spread of settlement across the fledgling Colony.

Gold Coast Canal Estates

The canal estates initiated on the Gold Coast in the 1950s illustrate another approach to a ‘good life’. They point to the possibility of constructing and selling a ‘good life’, where this is achieved through local initiatives that mimic desired life styles from other places.

The Gold Coast lies some 70km south of Brisbane. Until the 1920s it consisted of a string of fishing villages and small towns, but gradually it became an important family holiday destination for day trippers and vacationers from Brisbane, especially after the construction by the Queensland State government of the railway from Brisbane to Coolangatta at the southern end of the Gold Coast in 1903 (Mayere, Dedekorkut & Sipe 2010). The area of easily buildable land is a narrow strip between the sea and the inland low-lying swampy flood plains of several rivers (mainly the Nerang River). The main local authorities in the area were amalgamated in the late 1940s, and then renamed Gold Coast City in 1958: “The name change was thought to offer better marketing prospects for attracting

tourists and potential investors” (Mayere et al. 2010, p. 3). The area of developed urban land grew fueled by this tourist attraction and the related investment. The first tourist-oriented hotel was opened in 1925, with “the largest private zoo and gardens in Australia” (Jones 1986, p. 17). In the period from the 1920s to the 1950s the residential population grew slowly but the Gold Coast’s attraction as a tourist destination grew far more rapidly. Jones notes that in 1933 there were only 6,000 permanent residents but the community would often grow four-fold during holiday time and improved roads were making day trips from Brisbane more common (1986, p. 18). The rapid growth of the area as a holiday and tourist destination followed from the actions of the State government in building and maintaining a rail line and main roads, local government in implementing policies to support population growth and tourism activities, as well as the various private entrepreneurs who saw the opportunity to make substantial sums of money from their own and the state’s investments. The development of the Gold Coast reflects the support given by the state to the private land speculation market.

During this explosion of activity both local government and the State government supported private development at the cost of environmental integrity. For example, in 1937 a scheme was undertaken to dredge and pump large quantities of sand from the Nerang River bed into mangrove areas behind the beach to increase the area of land that was available for housing and other developments (Fitzgerald 1984 p. 459). The State government, under Queensland legislation, is responsible for the control and regulation of all areas below the high water mark – this would clearly include the bed of the tidal Nerang River. The State supported the private market by permitting this dredging.

By 1947 there were 12,483 residents in the Gold Coast. With the growth in population came increased sales to and by property speculators. The 1950s saw the start of the real speculative property boom: “Big capital replaced the money of well-meaning amateurs” (Jones 1986, p. 22). In fact, “land speculation became rampant after 1952 when war-time building restrictions were lifted” (Fitzgerald 1984, p. 459). Up until that time the national government had helped dampen rampant speculation through the regulated control of building materials during and immediately after World War II. The urban development at this time was seriously shaped by the tourism-based nature of the Gold Coast. One obvious influence was the desire to emulate other places that were seen as outstandingly successful tourist destinations. One such place was Florida in the United States.

This desire for emulation faced the barrier of insufficient easily buildable land:

“As rapid development was taking place along the narrow strip of sand dune immediately behind the beaches, it became clear to Gold Coast developers that further expansion needed to take place in low-lying areas adjacent to the Nerang River, subject to periodic flooding, and on the inland side of the sand strip” (Mayere et al. 2010, p. 4).

When land entrepreneurs sought models of how to use this land some of them looked to the canal estates in Florida that had been made possible by land reclamation there since the 1920s.

There are two competing claims about the direct inspiration for the origin of the Gold Coast canal estates. Sir Bruce Small, a Melbourne bicycle manufacturer who retired to the Gold Coast then became a millionaire land developer, Mayor and local icon, claimed to have visited Miami Beach, Florida, in 1958 and seen the possibilities for similar developments on the Gold Coast. But another

developer, Alfred Grant, after visits to Fort Lauderdale, Florida, and Hawaii, worked with the architect and landscape architect, Karl Langer, to build two canal estates (Miami Keys and Rio Vista) in 1957 (McConville 2010, Sinnamon 2010). However, Langer claimed the designs were based on a mixture of the fundamental principles of Radburn planning (with canals replacing the fingers of greenspace running through the original Radburn layout) and the land reclamation engineering used in Holland (Jones 1986, pp. 30-32; Mayere et al. 2010, pp. 4-5, citing Langer 1959). According to Gold Coast History (n.d. (a)) the “First canal-estate subdivisions approved by Albert Shire for Florida Gardens” were in 1956. However, Florida Gardens should really be described as “canal-estate inspired” although it was created by pumping sand from the bed of the Nerang River and was separated from other suburbs by an artificial canal (Centre for the Government of Queensland 2011a, 2011b) rather than a canal estate. It was 1957 when:

“The guru of Queensland real estate Alfred Grant, of Brisbane, brought the idea of canal estates to Queensland from Florida, but the first, Florida Gardens (sic), was developed by the Melbourne-based Savoy Corporation. It was subsequently followed by Miami Keys, Rio Vista, Moana Park and Rialto” (Gold Coast History n.d.(a)).

The early three canal estates and canal-estate-like developments (Florida Gardens, Miami Keys and Rio Vista) can be seen in Figure 3.



Figure 3: Florida Gardens, Miami Keys and Rio Vista in 2013 (Source: Google Earth).

Whatever the inspiration, the two estates of Miami Keys and Rio Vista were advertised in 1957 by Alfred Grant Estates as “Australia’s first, truly Florida Keys style, man-made waterway development” being “Exclusive freehold residential sites” with “absolute frontages on Nerang River and 72 acres of water, deep man-made Lakes and Bays” (Courier Mail 1957: See Figure 4). The advertisement from which these claims are taken notes that “Gold Coast real estate investors are reaping a rich harvest” (Courier Mail 1957). In other words, the new canal estates were offering an exclusive, water-based life style along with rich investment opportunities (Dedekorkut-Howes and Bosman 2011). As explained by Mr Gaven, the local State parliamentarian in the debate concerning the *Canals Act* of 1958,

“There has been an intense and long-sustained demand by people from the southern States and from overseas for land in the area. Many speculators, many men with vision, foresight and courage, have come from other places and purchased land that was once dairying land to reclaim it, build it up above flood level, subdivide it and sell it. They have not done it for fun but to make money ... but it is our duty, and the duty of the local authority to see that the people who purchase the land are protected and that they will not be flooded out” (QPD 1958, p. 2197).

The earliest of these estates were created by excavating the canals from originally swampy dairying land and piling the spoil on newly created lots (as well as by pumping silt from the bed of the Nerang River). Because they were on originally freehold land the canal-based properties could be sold freehold. The only connection to the State-government controlled land below high water mark was when the new canals were connected to the river and for dredging. The early subdivisions were approved by the relevant but neighbouring local authority, the Albert Shire, even though they were marketed as being on the Gold Coast. The shape of the two local authorities was an historical anomaly: the Gold Coast City Council stretched in a narrow strip northwards from the NSW border with the Albert Shire inland from it; but in the area where the canal estates were approved Albert Shire reached almost to the coastline (see Figure 3). The Gold Coast local government area at that point was only some hundreds of metres wide, as the boundary between the two had been drawn to exclude from the Gold Coast City the swampy dairying land on which the canals were now being built. Albert Shire has a history of adept approval of major projects just within its borders to encourage developers to capitalize on the population and reputation of the next-door Gold Coast City. Albert Shire continued this strategy successfully in later years (including approving Jupiters Conrad Casino which opened in 1985 and the regional shopping centre, Pacific Fair, started in 1976)(Gold Coast History (n.d.(a), (b), (c)). The Gold Coast City and Albert Shire were amalgamated by the State government into a single new Gold Coast City in 1995.

Despite the approval for the subdivisions by Albert Shire the legal status of the new canal estates was murky, as amply demonstrated in the parliamentary debate around what became the *Canals Act* of 1958. Parliamentarians on both sides of the house were concerned about who would be responsible for flood works and flood damage (because the canal land was in the floodplain of the Nerang River), who would be responsible for maintenance and repair work on the canal edges, and who would be responsible for regulating the navigational use of the canals (as “when you let the salt water in over the land the water part was under the Harbour Board, yet the bed of the canal was still freehold land” (QPD 1958, p. 2191)). Parliament was also concerned to protect the rights of

purchasers of the properties, because some of the property boundaries extended to the median line of the new canals and “the Register of Titles would have nothing to do with it and refused flatly to register any subdivisions that extended to the median line of the stream” (QPD 1958, p. 2191).

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Figure 4: Advertising Supplement Courier Mail, 23rd December, 1957 (Source: State Library of Queensland – see reference Courier Mail (1957)).

Implementing the canal proposals thus required approval from Albert Shire council, but was later supported by State government legislation. State government had regulatory control over dredging activities and changing the shape of the Nerang River itself needed State government permission. The speculative creation of the canal estates was boosted by the passing of the *Canals Act* of 1958 that removed the ambiguities and allowed the newly created water-frontages to be sold clearly as freehold (State Library of Queensland 2012).

Considerable areas of the Gold Coast, inland from the coastal sand strip, have been developed as residential canal estates in the period since the 1950s. The developments were, and are still, advertised for both their lifestyle and their investment potential. They have spread across Australia, although new canal estates were banned in Victoria in 2008 because of their environmental impacts (*The Age* 2008) and in Queensland new canal estates are almost impossible to develop because of government's change of heart about environmental protection, illustrated through the passing of the more restrictive *Coastal Protection and Management Act* 1995.

The 'good life' offered by the canal estates of the 1950s and 1960s reflected the desire to emulate other coastal tourist areas, in particular the coast of Florida in the USA. Speaking about the Gold Coast more generally, but resonating with the values underpinning the canal estates, which they call "hyper neoliberalism" Bosman and Dredge (2011, p. 2) claim the outcomes are "global identity markers that are shaped by consumption". But the emulation of tourist exemplars like Florida was in terms of forms of consumption that both places offered: a sub-tropical climate that could be enjoyed in a leisured and leisurely setting, access to water for recreation (including access for ocean-going boats from the canal estates via the Nerang River) and the attraction of exclusivity. At first there were few canal estates. The subdivisions also offered the possibility of constructing houses facing the open water rather than the road. In this latter regard they did reflect a basic design element of the Radburn scheme as noted by Langer (1959), where houses faced the internal open space system rather than the access roads (Freestone 2010, p. 194). A great deal of money was sunk into the engineering works needed to create canal estates so the price of land was high and exclusivity was almost guaranteed. Only the relatively rich could afford them. As Mr. Gaven, the local MLA, noted during the debate on the *Canals Act* in 1958 "some people have paid £3,000 already. There are some beautiful allotments" (QPD 1958, p. 2199). The estates were not built just for residents, however; they were designed to attract financial investors. The good life included return on investment and future capital gains. Achieving the land development that supported this form of the good life on canals required active support from both local and State level governments, in terms of approving a locally innovative new form of land subdivision, providing infrastructure, permitting dredging of the river bed, and providing legislative support for speculative land sales. Because the canal estates were speculative property developments, here the 'good life' could be bought and sold.

Conclusions

The two case studies cast a fascinating light on the role of a 'good life' in underpinning two forms of settlement planning at two periods in Queensland's history. It is tempting, but undoubtedly premature, to link the two -- one firmly a socialist and communal approach in the 1890s, the other firmly a capitalist and consumerist approach in the 1950s -- to the socialist to capitalist to neo-liberal trajectory of utopian thinking from the 19th century to the 21st century claimed by Baeten (2002).

This is, however, a potential trajectory that can be confirmed or refuted only through far more empirical evidence.

Nonetheless there are important lessons to be learned from setting the two side by side. First, there are lessons about the interplay of the three 'actors' in urban and planning governance (Minnery 2007), in that both involve civil society, the private sector and government. In relation to the cooperative settlements of the 1890s the roles of civil society institutions and individuals such as the burgeoning labour movement and William Lane were powerful stimulants. The private sector exhibited a rather shadowy presence, mainly through the concerns of conservative policy-makers about the potential competition between the government-supported cooperatives and private farming entrepreneurs. This competition may have exhibited itself through the indifferent or even recalcitrant implementation of the policy by civil servants, although this influence is a matter of speculation rather than empirical evidence. In relation to the canal estates of the 1950s the role of the private sector, in the shape of land developers and speculators, is dominant. Civil society plays a more passive role, illustrated mainly through the concerns of parliamentarians to ensure that the eventual purchasers of the properties are protected from harm from floods, bank erosion or inadequate property registration.

In both cases a critical role is played by government (either the Colonial/ State government or local government). Implementation of both the cooperative settlements and canal estates required supporting legislation from government as well as policy-related actions attached to this legislation.

A second lesson is that the potential vision of a 'good life' is very broad. It needs to encompass a wide range of philosophies and values, ranging from those supporting socialistic cooperative and egalitarian communities to individualistic consumerist capitalism. The two case studies also show, however, that state intervention to support such efforts to achieve a 'good' life can be for a number of both covert and overt purposes. The communitarian cooperative settlements were facilitated by a conservative government, ostensibly as a way of populating undeveloped parts of the Colony whilst combating rampant unemployment. They were also a mechanism to help counteract support for utopian and socialist emigration as exemplified by the New Australians. The Gold Coast canals were 'invented' by local land developers as a way of making speculative profits, but they were supported by a local government with a pro-development ethos and taken up by investors and residents who identified in the estates both a new form of an exclusive 'good' life and a mechanism for achieving private financial gain.

Were the two attempts at creating a better life successful? Were they approaches we can admire and emulate today? Both examples were seriously flawed but for different reasons. The cooperative settlements attempted to provide a lifestyle for which the people involved were largely unsuited. The mainly urban dwellers had little knowledge and few skills relevant to the kind of farming life they were entering. The settlements all failed. The canal estates are still there, but community attitudes have changed so that concerns about environmental degradation have largely prohibited any more being built. Although lessons were learned about the engineering requirements for such estates as later versions were designed and constructed there are unlikely to be many more in Queensland or elsewhere in Australia.

Perhaps the main lesson to be learned from this comparison is that the breadth of values underpinning ideals of a 'good life' is so great that they require a range of different forms of government intervention (or planning approaches) that will lead to a range of different outcomes. There cannot be a single version of the 'good life' even if it is supposedly folded into values aimed at protecting or enhancing the 'public good'. In this case the examples reinforce what is now the accepted wisdom in urban planning – that planning needs to recognise the values of a range of publics and to work appropriately. There is also a supplementary lesson, in that whilst active state intervention was required for the implementation of both the settlement forms in the 1890s and the 1950s, they both demonstrate the strong but quite different roles of all three actors in urban governance, the state, the private sector and civil society.

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Absolutely Positively Not the First Plan For Wellington

Unravelling popular misconceptions about the process of planning New Zealand's capital city

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There is a popular view, one which has gone largely unchallenged in both historical and scholarly narratives to date, that Captain William Mein Smith arrived in Port Nicholson in 1839 armed with a map for Wellington designed by a Mr Samuel Cobham of London who had been commissioned by the New Zealand Company to draft a plan for Surveyor General Smith. Smith was expected to overlay this design on the fringes of the chosen harbour as best he could, so the story goes, but the landscape, the weather and the meddling behaviour of Captain William Wakefield forced the poor Surveyor General to vacillate between one end of the harbour and the other in a futile attempt to execute this orderly and loftily conceived arrangement. The effort was soon abandoned and, so the myth continues, a more pragmatic albeit less symmetrical but rather tastefully rendered design was produced by Smith himself and sent to London for approval and reproduction for marketing and propaganda purposes by the New Zealand Company. In this paper I attempt to prove conclusively that such an account of events is wholly inaccurate. I argue that neither Cobham nor Smith produced the first map of "Britannia" which was the working title for the capital until November 1840. The balance of evidence suggests that Charles Heaphy, a then junior employee of the Company, was in fact the first individual to render an outline of the new city. I conclude that the functional redundancy of Cobham's Plan notwithstanding, it has a useful role to play in the history of planning theory.

Keywords: Samuel Cobham, Charles Heaphy, manuscript maps, lithographs Wellington history, propaganda.

Introduction

In spite of its seismic vulnerability Wellington, the capital city of New Zealand, enjoys a certain sense of security in having been the seat of government since the earliest days of organized European settlement. This is reflected in city branding strategies which, prior to the introduction of the current “Wellington – blown away” catchphrase, used the slogan “Absolutely Positively Wellington” for some two decades in its marketing campaigns.¹ For a city so positive about its place in the world it is surprising, then, that the actual process of its design and laying out as a major settlement is so poorly understood.

The popular view is “positively” wrong but it is one that goes largely unchallenged in academic and historical narratives. Apparently, Captain William Mein Smith arrived in Port Nicholson in 1839 armed with a map for Wellington designed by a Mr Samuel Cobham of London which he was required to overlay on the fringes of the harbour as best he could.² The landscape, the weather and the meddling behaviour of Captain William Wakefield, so the story goes, forced the poor Surveyor General to vacillate between one end of the harbour and the other in a futile attempt to execute this orderly and loftily conceived arrangement. The effort was soon abandoned following a serious flood at Smith’s preferred site and shortly thereafter Cobham’s plan was discarded, so the myth continues, and a more pragmatic albeit less symmetrical but rather tastefully rendered design was produced by Smith himself and sent to London for approval and reproduction for marketing and propaganda purposes by the New Zealand Company.

The facts, such as they exist, do not support this imagined sequence of events. The available facts suggest a more deliberative and collaborative process than the one described above. In this process Mr Cobham could not and did not have featured at all. By examining the only original piece of cartographic material available, the correspondence of the time between key figures responsible for the planning and execution of the Port Nicholson settlement and the biographical profile of Samuel Cobham I argue that neither Cobham nor Smith produced the first map of “Britannia,” the working title for Wellington until late 1840. The balance of evidence suggests that Charles Heaphy was in fact the first Company employee to render an outline of the new city. I conclude with the observation that although Cobham’s Plan is functionally redundant and although it routinely continues to be misunderstood in the history of Wellington it nevertheless deserves standing in general narratives on the evolution of planning theory.

The first “plan” of Wellington: the orthodox view

Over the past few decades a number of authors have either stated explicitly or casually inferred that when Captain William Mein Smith, Surveyor General to The New Zealand Company, arrived at Port Nicholson in January 1840 he was in possession of a pre-drawn town plan design, namely Samuel Cobham’s ‘A Proposed Plan of the City of Wellington in the first Settlement in New Zealand, founded 1839-40.’ According to the printed text at the bottom left hand corner of lithographic copies that have survived, was ‘drawn’ by Samuel Cobham of Newgate Street (London). Understandably it has come to be referred to as the ‘Cobham Plan’ and this ambitious design is usually associated with the failed attempt by Captain William Mein Smith, Surveyor General to the New Zealand Company, to establish the principal Company town of “Britannia” at Petone, or “Pito-one”, on the banks of the Hutt River during the first three months of 1840. Following a serious flood event on the Hutt River

which washed away a number of tents and belongings, this initiative sank in the mud, so to speak, when Britannia was moved from Petone to the Thorndon flat and Te Aro valley area, a decision presided over by Colonel William H. Wakefield, the New Zealand Company's Principal Agent.

The Cobham Plan was thus discarded and, as most commentators have acknowledged, it ceased to play a part in the history of New Zealand settlement by Europeans except as an object of curiosity or as proof of a pervasive and ill-conceived colonising paradigm, where reality mattered less than grand ideas and grid plans were routinely laid out in topographically inappropriate locations. However, in this process of academic discarding an error of association has been assumed and perpetuated up until the present, one which I will call a "fallacy of familiarity." This assumes that the Surveyor General was not only aware of the Cobham Plan but in possession of it from the moment he left England. This error has been committed in print or on a web resource without contest on at least fourteen occasions over the past seventy five years (Anderson, 1997: 145, Butterworth 1988: 31, Byrnes, 2001: 61, Carman 1971, De Vries 1966: 194-195, Hamer 1990: 235, Johnston 1991, Manson and Manson 1962: 100-102, McGill 1992: 24-25, McLean 2000: 23, Mulgan 1939: 94, Park 1997: 137, Patterson 1984: 30, Temple, 2002: 267, Wilson 2013).

For the purposes of illustration a few are worth discussing. Mulgan refers to the plan in a footnote as follows:

A plan for a town in the Hutt Valley was drawn in London by Samuel Soundy Cobham, who came to New Zealand in the Company's service and afterwards practised as a surveyor in Wellington. The plan, based on the misapprehension about the Hutt River, shows a river-mouth harbour with a tunnel running under the river. The town was laid out in the form of a rectangle, with forts at the corners, and generous provision for public buildings, which included a 'Covent Garden' theatre and a 'President's Palace.' (1939: 94)

Perhaps because he had not checked on Cobham's actual movements Mulgan omits to point out that Cobham did not arrive in New Zealand until several years after the founding of the settlement. Cobham appears to have emigrated as an independent settler in the 1850s (probably 1854) and he seems to have found work as a surveyor in private practice rather than as a New Zealand Company employee, the Company being all but defunct by the mid-1850s.³

This is not to say that Cobham lacked any personal connection with the New Zealand Company and its projects. He sent newspapers to the Wellington Mechanics' Institute in 1842, for example. Yet it is clear from his own pamphleteering activities in London in the early 1840s that he was not present in the ranks of the first survey teams sent from England between 1839 and 1842 and at least one of his pamphlets was an open attack on the way the Company operated.⁴ Nor is there any record of his employment with the New Zealand Company in London at this time.

A more lively commentary on Cobham's plan appeared in the early 1960s as a chapter entitled "Dream City" in the Mansons' *Curtain-Raiser to a Colony: Sidelights on the founding New Zealand*. In a style more redolent of Dickens than historical narrative they reconstruct Cobham's drafting of the plan:

In a dingy office in one of the Georgian buildings which lined Newgate Street in the City of London, Samuel Cobham, Esq., had spread a large sheet of draughtsman's paper on a drawing board by the window. Then he took his pencil and wrote across the top, "A Proposed Plan of the City of Wellington in the first Settlement in New Zealand, founded 1839-40" (Manson and Manson, 1962: 100).

The authors go on to imbue Cobham with the spirit of a mid-nineteenth century social reformer's zeal, and, to their considerable credit, and unlike most authors who have been content to treat the plan as something of a footnote in their particular colonial historiographies, they discuss the details of the plan at length, seeing in the design a utopian paradigm of the day (pp.101-2). Unfortunately, nowhere in the book are any sources of information cited directly, making it difficult to verify the Mansons' assertions.⁵ Nor do they shed any light on the date of the plan's drafting and whether or not it was part of the official surveying instructions. They do, however, make an important point about its purpose: "The New Zealand Company encouraged – possibly actually commissioned him – to make the plan, the intention being that intending settlers might consult it before setting out from England" (ibid.). In other words its primary role was to influence settlers rather than surveyors.

At a more formal level, researchers of New Zealand's surveying history have made more direct inferences about the Cobham plan and its familiarity to Smith. De Vries, for example, notes that

He [Cobham] assumed there was a navigable river very like the Thames, and beside it planned a rectangular grid town surrounded by terraces, with forts in each corner. Within this town he attempted to cram all the cultural and market facilities of London, including the Smithfield Market, Billingsgate, to Covent Garden Opera House and the Royal College of Surgeons. There is no record that Mein Smith actually intended to use this fanciful plan, nor that he ever took it seriously. (1966: 194-95)

Although De Vries gives Smith the benefit of the doubt concerning the practicality of the Cobham plan, she seems satisfied that Smith was aware of the plan, or had the item with him, at the time of his surveys. In the same vein, Patterson, in an exhaustive doctoral thesis examination of the New Zealand Company surveys in the lower half of the North Island between 1839 and 1845, views the Cobham Plan as integral to Smith's instructions:

To reinforce this vision, an elaborate 'master plan' of the town, drawn up by a Newgate draftsman under commission from the Directors, was provided. Though its compiler had been given little information beyond that the likely site would be in the lower reaches of a valley with a large river crossing its plain, his scheme faithfully incorporated all of the directors' expressed wishes. While the existence of this master plan has long been known, it has commonly been regarded as no more than a curiosity, perhaps a publicity piece, certainly not a true "blueprint". The weight of contemporary evidence suggests otherwise. (1984: 30)

In a footnote to the last statement Patterson adds the following:

The antecedents of what has become known as the 'Cobham Plan' have been independently investigated by the writer and P. L. Barton. While the supporting evidence for the contention is fragmentary, and in some respects circumstantial, both are agreed that the plan had an

important guideline function. Mr Barton will be presenting the findings in published form. (Patterson, 1984, Vol. 3: 4)

Unfortunately, it appears that in the thirty years since the above statement was made no article of this kind was published and in subsequent discussions with the author Patterson has agreed that the Cobham Plan had less influence than suggested here.⁶

On a broader level, more than once the Cobham design has been taken to represent the apogee, or nadir, depending upon one's own ideological position, of the Wakefield vision of planned settlement insofar as it epitomises the orthogonal grid plan of would-be empire-building. Park, for example, in a discussion of the ecological imperialism that characterised early the town-making practices of the New Zealand Company, singles out the Cobham plan as paradigmatic:

The quintessential expression of Wakefield's dream, of course – with its own roots in American colonial grid towns, its own echoes of Rome – is what his company's settlers briefly knew as Britannia. From its Presidential Palace and Government Offices to its Hungerford Fish Market and corner forts and cemeteries, Britannia offers an insight into the Britain of the South that Wakefield and his New Zealand company [sic] intended to create out of antipodean riverbanks – the carrying across the world of everything of England but the soil and climate... (Park, 1997: 137)

Before noting that "Britannia has slid into history as a curiosity" (ibid.), by which the author presumably means the plan drawn by Cobham, Park expresses his main concern about the consequences of such thinking on the wider landscape i.e., the colonial grid violated the unique biogeography of Aotearoa/New Zealand. While Park's thesis about ecological imperialism may have some merit, his failure to note that the plan he refers to specifically mentions Wellington and not Britannia, merely adds to the confusion surrounding the role that the Cobham plan played in the settlement of Port Nicholson.

The Wellington survey as actually carried out

In order to clarify the confusion about the Cobham Plan one has to look closely at a number of factors. Most important among these are the timing of events, the time gaps in communications between London and New Zealand, the actual instructions provided to the Surveyor General and his team and the difference between an original sketch map and lithographed items. The most perspicacious commentator on timing to date has been Anderson (1997). The design for "Britannia/Wellington" presents something of a conundrum for Anderson and he questions the use of the name "Wellington" on the Cobham Plan and he concludes that this particular artefact cannot have been in Mein Smith's possession in the early months of 1840:

Given that the name 'Britannia' was still being used by Edward Jerningham Wakefield in June 1840, its 'Wellington' title can hardly have been on the plan used by Mein Smith at the Petone foreshore six months earlier." (p.145)

Instead, Anderson he sees a possible amalgam between Cobham and Mein Smith:

Perhaps it is a tidied-up version used for advertising, or perhaps Samuel Cobham still did not know of the new restricted site at Thorndon. Whatever its provenance, there are several indications of thoroughness in town planning and civil engineering terms which suggests Mein Smith's involvement. The original may have been an ideal arrangement to be aimed for, and to be used as a measure when examining possible sites. (ibid.)

Anderson's speculation is intriguing, and his commentary is important in terms of pointing out a logical contradiction in the title of a plan for Wellington dating 1839-1840. However, Anderson is implying that Smith may have had a rough version of Cobham's concept at hand and the difficulty with that is firstly that there appears to be no official reference to such a document in the extensive New Zealand Company correspondence and secondly the lithograph is the only contemporaneous rendering that has surfaced to date. There simply is no manuscript version of the "Cobham Plan" it appears.

Smith's instructions, issued to him by the New Zealand Company Court of Directors in July 1839 shortly prior to his departure, instruct him as to what should comprise the content of the town but they defer to Smith on its form:

The Directors wish that, in forming the plan of the town, you should make ample reserves for all public purposes, such as a cemetery, a market-place, wharfage, and probable public buildings, a botanical garden, a park and extensive boulevards. It is, indeed, desirable that the whole outside of the town, inland, should be separated from the country sections by a broad belt of land which you will declare that the Company intends to be public property, on condition that no buildings be ever erected upon it.

The form of the town must necessarily be left to your own judgment and taste (Author's emphasis added). Upon this subject the Directors will only remark, that you have to provide for the future rather than the present, and that they wish the public convenience to be consulted, and the beautiful appearance of the future city to be secured, so far as the these objects can be accomplished by the original plan, - rather than the immediate profit of the Company. (Ward, 1840: 134)

Smith thus had a list of requirements, rather than a fully illustrated town plan, from which to work. Indeed, specific design and mapping skills presumably comprised the attributes that the Directors considered would justify the £600 *per annum* salary for Smith and the additional salaries of his assistants, averaging £200 each, all of whom could reasonably have been expected to have had adequate drafting and cartographic abilities. In this light the inclusion of a plan from a non-salaried or non-appointed individual simply does not make sense.

Others have detailed the troublesome events that followed (Burns 1989, Patterson 1990, Temple 2002). The Principal Agent, Colonel William Wakefield, and his team arrived in Port Nicholson in August 1839 after a remarkably swift passage. They had left London in haste to try to avoid government sanctions. Smith's passage, by stark contrast, took some 175 days and his team arrived only in December of that year. The first waves of Company settlers arrived less than three weeks after Smith reached New Zealand. When Smith arrived he selected a location at the northern end of the harbour (Petone). This conflicted with Wakefield's preference for the southern end of the

harbour (Thorndon). Both had their own priorities. Wakefield was preoccupied with port and landing facilities while Smith was concerned with township and rural surveys.

During the first few months of 1840 this impasse produced rival European settlements at Port Nicholson. One grouping was located at Te Aro and Thorndon at the southern end of the harbour. The other grouping was on the lower reaches of the Hutt River, with "Aglionby" (Ward, 1975: 46) a little upstream, the more substantial "Britannia" close to the river outlet and "Cornish Row" straggling along the Petone beach. Where an individual or family settled often depended upon which vessel they had been aboard, suggesting a kind of parochialism, derived either from bonds formed during the voyage from England or Scotland, or by virtue of affiliation with a particular "home" county.

The impasse was broken by a damaging flood which struck the lower reaches of the Hutt River during March 2-4, 1840 after some ten days of rainfall in the catchment. Smith had argued strongly for settlers to be levied and money set aside for draining and flood protection work at this site but there were no such sums available. Consequently, on April 6, 1840, spurred on by settler lobbying, Wakefield wrote in a despatch to London that stated "I cannot but decide, with however much regret, to fix the City on a safer and more available site" (quoted in Millar 1972: 32). He also pointed out that the Company's earlier intelligence had been inadequate in respect to the "impractical plans for the new town drawn up in London, in an erroneous conception of this part of the Country" (Ibid.). It is crucially important to recognise here that Wakefield refers to "plans for the new town" in the plural rather than to a single plan. This lends weight to the notion that both he and Smith were both issued with written instructions rather than any single master plan or blueprint.

The transfer of principal status and activity from Petone to Thorndon was not, however, instantaneous. The rather fanciful name of "Britannia", which had first been applied to the Petone site by popular approval, continued to be used there, but was at the same time applied, rather confusingly, to the new villages at Te Aro/Thorndon. This is amply demonstrated in Louis Ward's (1975) compendium history of Wellington, first published in 1928, which is based on quotations from early correspondence and newspaper reports. The name "Britannia" is used by people situated in a variety of locations (pp. 39-70).

Smith's work, under these circumstances, was understandably more challenging than it might otherwise have been and several authors have documented or commented upon his trials, not least of which was William Wakefield's constant meddling (Patterson 1984, 1990, Wakefield 1987: 149, Ward 1975: 55-58). Land selection was meant to take place at the start of July, 1840 but, amongst other things, an error on the main selection map led to delays and the first round was not completed until mid-August. It is critically important to remember at this point that any maps or plans would have to have been rendered in hand-sketched or traced form. A map or maps could not have been lithographically produced at this early point. The means for lithographic production, in contrast to a conventional monotype printing press, which was shipped with the first settlers in 1839, was to arrive over the coming months i.e., much later than August 1840 (Ellis and Ellis 1978: 87-88).

The convoluted and difficult circumstances surrounding the siting and opening up for purchase of a main town site may go some way to explaining the apparent absence of surviving authentic official survey maps from Port Nicholson during July and August 1840. In principle, there should have been

several draft maps, including working drafts and officially signed-off copies, presumably for the town or city of Britannia, since virtually everyone at Port Nicholson would have been under the apprehension that this was going to be the name of the capital. At a conservative estimate between five and ten manuscript versions would have been generated, some for local daily use and others for dispatch to England to the Directors of the New Zealand Company and to officers of the Crown such as the Colonial Secretary.

The “City of Britannia” manuscript map

At the present time only one item has come to light locally that may qualify for the status of an official manuscript map. It has rarely been viewed outside of the confines of archival storage although it was digitised in the late 2000s.⁷ According to curatorial and archives staff at the Museum of New Zealand Te Papa Tongarewa it appears to have come into the Dominion Museum in 1933 as part of the Horace Fildes Collection and it was kept in the Museum’s History Collection for several decades (Fitzgerald pers. comm., Twist pers. comm. 2005) The item in question is the “Plan of the city of Britannia in Lambton Harbour, Port Nicholson, New Zealand, the Principal Settlement of the New Zealand Company” (See Figure 1: Plan of the City of Britannia in Lambton Harbour, Port Nicholson, New Zealand, the Principal Settlement of the New Zealand Company).



Figure 1: Plan of the City of Britannia in Lambton Harbour, Port Nicholson, New Zealand, the Principal Settlement of the New Zealand Company (Image courtesy of Museum of New Zealand, Te Papa Tongarewa, Wellington. CA000433/001/0001).

The condition of the map is fragile and the water colours have faded, making any close forensic examination quite difficult. However, a simplified black and white line drawing copy or tracing appears to have been made in the early 20th Century which captures almost all of the information. The first point to note is that the title in the top left hand corner includes the word “city.” This is at odds with the most well recognised “official” map of Wellington where the word “town” is used: the Smith and Elder lithograph (discussed and illustrated below). A key, or legend, of public buildings and amenities, listed from A to P, is included and appears upside down at lower centre right. A table of the names of land purchasers and their lot selections is shown at right centre. Material appears to have been added and subtracted over a period of time. One of the annotations notes that purchases by a settler named Natrass are marked in red. Company and Church Reserves are marked in pink and yellow respectively. Pa sites, stream courses and topographical are noted.

Despite the age and condition of the map it is clear that a number of individual calligraphic styles are present. It is possible that this was only one of a number of selection maps but the additions and annotations suggest equally that it was a main map. This is reinforced by the fact that the main calligraphic style appears to belong to Charles Heaphy and in the bottom left hand corner a partial signature can be detected which museum staff have looked at closely and have attributed to Heaphy (Fitzgerald, Twist 2005). Heaphy was not a surveyor but rather a draughtsmen/artist who was part of the team that accompanied Wakefield on the Principal Agent’s voyage to New Zealand and he seems to have made himself indispensable in many forms at an early point. Smith made extensive use of him. Interestingly, and in contrast to the more well-known depictions in early survey maps such as those reproduced by Smith and Elder, the layout shows Lambton Harbour appearing on the right. Most others show it on the left. The only other map that follows this orientation is New Zealand Surveyor General Felton Mathew’s later map of October 1841 which appeared in lithographic form in the British Parliamentary Papers of 1842. Since the New Zealand Company would have had to forward copies of their initial maps to the Government for approval it is possible that a copy of the Britannia map was sent to Mathew and used by him for reference and then subsequently lost or destroyed.

The official Wellington map

Perhaps due to its fragile nature, rather artless rendering and its oblique entry into national cartographic collections the Britannia map has remained in complete obscurity. Most have looked to a cartographic item entitled “Plan of the Town of Wellington, Port Nicholson, the First and Principal Settlement of the New Zealand Company, 14th August 1840” with the elegantly written signature “W. M. Smith, Captain, Royal Artillery, Surveyor General” (See Figure 2: Lithographic map entitled “Plan of the Town of Wellington, Port Nicholson, the First and Principal Settlement of the New Zealand Company”).

Very conveniently, the date 14th August, 1840 on the lithograph tallies entirely with written records. Yet the above map is in fact a counterfeit, historically speaking. Unless Captain William Mein Smith was somehow clairvoyant it would have been impossible for him to label this map “Wellington” on the 14th of August 1840. The New Zealand Company Board of Directors in London did not officially assign the name Wellington to the principal town at Port Nicholson until May 1840, in a belated gesture of appreciation to the Duke of Wellington, no fan of the New Zealand Company at that point, but a statesman who had earlier helped the Company’s cause (Burns, 1989: 147). News of this

change did not reach Port Nicholson until November 14, 1840, when the emigrant vessel the *Martha Ridgway* arrived and brought the latest news from home (Wakefield, 1908: 297). To mark this change in nomenclature the *New Zealand Gazette and Wellington Spectator* (hitherto the *Britannia Spectator*) printed the following editorial statement on November 28 explaining its modified name:

We appear for the second time written a few months under a modified title but trust our friends will not consider it typical of our character. When we first issued our journal, the name and the site of the town were alike uncertain, we therefore abstained from using a special designation. The time arrived when the site of the town was surveyed and the name declared, and we adopted the one and rescinded the other at our earliest convenience” (Ward, 1975: 73).



Figure 2: Lithographic map entitled “Plan of the Town of Wellington, Port Nicholson, the First and Principal Settlement of the New Zealand Company” (Image courtesy of the National Library of New Zealand reference: MapColl 832.4799gbbd 1840 316-8).

Furthermore, the August 14, 1840 Wellington lithograph shows the town section numbers with the ballot order-of-choice numbers held by settlers for all 1,100 sections. At August 14, 1840 not all town sections had been selected (the initial ballot for 990 sections in London in late July 1839 had been fully subscribed – See Burns, 1989: 106-7). Added to this, the “official” map shows the streets

as named. According to at least one source, however, the naming of streets did not take place until October 15, 1840 (Reed, 1968: 53).

How, then, did such a contradictory item come into existence? One explanation is that one of Smith's manuscript maps of Britannia arrived in London at some point in the latter half of 1840 or perhaps early 1841, at which point it was "corrected" by a New Zealand Company draftsman, or by a printer working for the Company's favoured printing establishment, Smith, Elder & Company, in preparation for release to the public in England. A manuscript map or bundle of maps was almost certainly forwarded to the Company in London by Smith or Wakefield, perhaps sent as early as August 1840. If sent around this time, and arriving in London in early December, may have been prepared for lithographic reproduction with the substitution of the name "Wellington" for "Britannia". In this case Smith would have had nothing to do with the laundering of the information that appeared on the lithographs carrying his signature.

Alternatively, Captain Smith may have waited until early 1841 to send a similarly "improved" i.e., backdated, manuscript map to London that was then set up for lithographic reproduction. Either way, surveyors in New Zealand could not control the map reduction process by lithographers in London. The latter would have been taking their orders from New Zealand Company Directors who had a propagandist agenda. It was in any case common practice to "improve" the information on maps and make them conform with historical events where it was deemed appropriate.

Despite some remaining ambiguities about the two plans shown above I believe that at this point it is possible to say that both are connected insofar as they belonged to the New Zealand Company and they evolved during the process of actual survey. The same cannot be said of the plan by Samuel Cobham. As noted earlier, he was not on the company payroll, so to speak, in London in 1839-1840 and he did not arrive in New Zealand until the 1850s. As others have observed, his plan was a "dream city" (Manson and Manson 1962: 130-33) that spoke more of utopian ideals than of pragmatism or commercial instructions, but it does not mean that it lacks value and in the context of planning history.

The Cobham Plan and its function

Samuel Cobham's "A Proposed Plan of the City of Wellington in the first Settlement in New Zealand, founded 1839-40" is a marked departure from the maps described above (See Figure 3: Lithographic map entitled "A Proposed Plan of the City of Wellington in the first Settlement in New Zealand, founded 1839-40").

Apart from the obvious lack of topographical sophistication - the river has merely been pasted onto the grid pattern - it is plain and yet remarkably dense with features. It is worth recalling the New Zealand Company instructions to Captain Smith:

The Directors wish that, in forming the plan of the town, you should make ample reserves for all public purposes, such as a cemetery, a market-place, wharfage, and probable public buildings, a botanical garden, a park and extensive boulevards. It is, indeed, desirable that the whole outside of the town, inland, should be separated from the country sections by a broad

belt of land which you will declare that the Company intends to be public property, on condition that no buildings be ever erected upon it. (Ward 1840: 134)

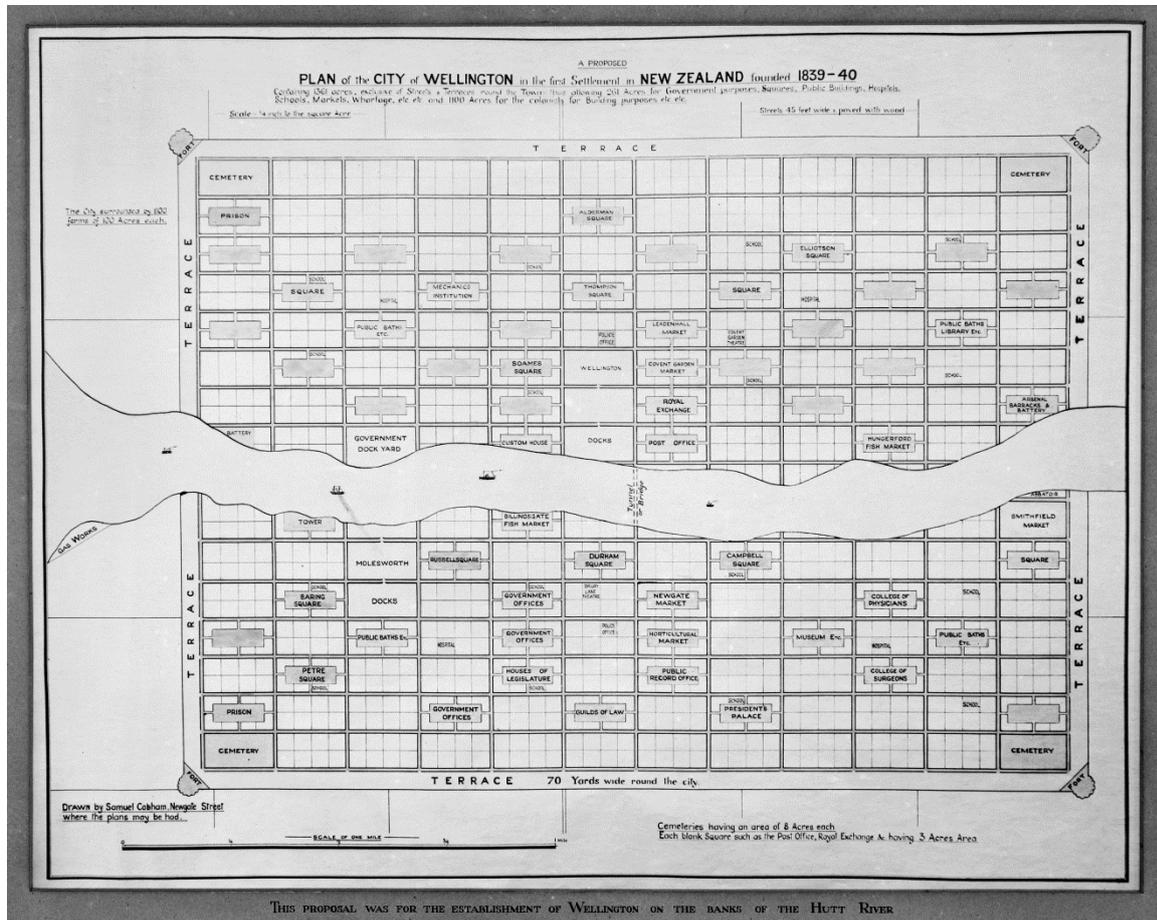


Figure Three Lithographic map entitled “A Proposed Plan of the City of Wellington in the first Settlement in New Zealand, founded 1839-40”. Image courtesy of the National Library of New Zealand reference: MapColl-832.4796a/1839/Acc.15648.

There is a standard list of reserves and buildings on Heaphy’s Britannia Plan. On the Smith lithograph there are none. Such minimalism contrasts with the grand vision of a civic society set out here by Cobham. Of a total of 1361 acres for the city itself some 284 acres, a little over 20%, are given over to public or civic uses. This would surely have outraged the Directors of the New Zealand Company who were peddling minimal government interference in their projects. Cobham specifies forts at each corner of the city, barracks and an arsenal, features not specified by the New Zealand Company. He may have been aware of disputes with Maori when some of Wakefield’s despatches were published in London in the *New Zealand Journal*. Forts would probably have helped reassure prospective settlers that their lives and property were protected, but the New Zealand Company was not interested in raising armies or garrisoning its settlements.

Apart from the four “Terraces” ringing the city no streets are named. The named squares are as follows: Petre, Baring, Russell, Soames, Thompson, Durham, Alderman, Campbell, and Elliotson. This seems a rather half-hearted and random nod to the New Zealand Company and with some twenty-two of Cobham’s squares left unnamed, one wonders at his actual connection with the Company. He seems more preoccupied with his own view of the utopian city and, considering the facilities and institutions envisaged by Cobham, the list is impressive to say the least, for what was going to be a relatively modest Antipodean colony. I have tabulated the elements by type in order of area below (See Table 1: Public Institutions and other amenities contained in the Cobham Plan) to show Cobham’s priorities and pre-occupations.

Table 1: Public Institutions and other amenities contained in the Cobham Plan.

Type of institution or amenity (NB. ▼ indicates town acre)	Number	Total acreage
Unnamed squares (possibly parks)	22	66
Commercial dockyards	5	40
Cemeteries	4	32
Public markets	6	26
Named squares	8	24
Public baths and library	4	12
Schools ▼	16	10
Government Offices	3	9
Government dockyard	1	8
Mechanics Institutions	2	6
Prisons	2	6
Medical Colleges	2	6
Hospitals ▼	4	4
Arsenal, barracks and battery	2	4
Post Office	1	3
Custom House	1	3
Public Record Office	1	3
Royal Exchange	1	3
Houses of Legislature	1	3
Courts of Law	1	3
Tower	1	3
President’s Palace	1	3
Museum	1	3
Police Offices ▼	2	2
Theatres ▼	2	2
Forts	4	unclear
Total	97	284

The plan seems to speak very much about Cobham's daily walks around the neighbourhood of Newgate - Charles Dickens lived in the same neighbourhood at this time - and nearby parts of the City of London. It betrays his enthusiasm for fish and fresh produce. It reflects his world-view, which seems a hybrid of utopianism and Hobbesian paranoia i.e., public baths and libraries for the enjoyment and education of all, combined with a very heavy bureaucracy and a panopticon-like fortified and enclosed city environment. This is hardly the light-handed laissez-faire vision of Edward Gibbon Wakefield and his followers. It is, in my view, a fantasy of the comforts of the city, minus its dis-amenities, as seen by a well-intentioned middle-aged urbanite of the early Victorian era.

It must also be remembered that in terms of Cobham's reference to "Wellington" the decision regarding the naming of Wellington was made by the Directors in May 1840, so the earliest that Cobham could have drafted the plan bearing this name was May 1840; the "1839-40" of the title is thus a fiction. If Cobham executed the plan at this point it then it would explain the misapprehension about a large navigable river. Cobham would have based it on the first intelligence received from Colonel William Wakefield. Wakefield's surveys had been only cursory but they mentioned the Hutt River, and the first reports arrived in London in March 1840. In any event, Cobham's Wellington plan could not have reached NZ before November 1840 as it took that long for the return despatches to arrive as noted earlier.

Furthermore, it is important to note here that no manuscript version of the Cobham plan has been located to date. There are no drafts in Cobham's hand, and the copies to be found in New Zealand are either photocopies or re-drawings of a lithograph struck by 'W. Lake, lith. 50, Old Bailey, London' the only version of which is kept in the Mitchell Library, a branch of the State Library of New South Wales. This particular copy was apparently acquired by Sir William Dixson who bequeathed the item to the State Library of New South Wales in 1952 (Evans 2005).

There is also the question of Cobham's inspiration for the form or geometry of the plan. One needs to look no further, perhaps unsurprisingly, than London. In this instance it is a London never built. In 1666, after the Great Fire, a number of designs for rebuilding the city were generated by way of a competition. Entrants included Sir Christopher Wren and Sir John Evelyn. Less well known is the entry submitted by Richard Newcourt who used a very geometric design based on rectangular units and "squares" within the larger rectangles with a church at the centre of each square. Cobham's plan bears an uncanny resemblance to the Newcourt plan except that Cobham has created individualised sections and he has erased the religious content in favour of more earthly institutions. Since the Newcourt plan survived intact and remained in London not far from where Cobham resided at the Guildhall Library (where it remains today) it is quite possible that Cobham had access to this earlier reimagining of London.

Conclusion

I have argued elsewhere that the processes by which city and town maps were created in a number of New Zealand and Australian settlements meant that junior survey staff often ended up by default as designers of towns and I have also proposed that our writings of planning history and historical geography ought to assume multiple rather than singular attribution for city founding (Montgomery and McCarthy 2004, Montgomery 2006a, 2006b, 2008). The fact that Charles Heaphy, an important figure in New Zealand history from the 1840s onwards, but someone who, as of 1840, was still trying

to get his foot in the door of salaried employment with the New Zealand Company, should be handed the job of drawing up the first plan for Britannia/Wellington thus comes as no surprise. It may be a rather lowly piece of cartographic execution but the “Plan of the City of Britannia in Lambton Harbour, Port Nicholson, New Zealand, the Principal Settlement of the New Zealand Company” is nonetheless as important as the Cobham Plan.

Regarding the latter, it is my view that Cobham’s plan never really left the confines of his own eccentric musings. He may have circulated it at his own expense as an alternative to the official plans already under way in the early 1840s. Cobham’s plan may have filled a gap in the flow of cartographic intelligence returning from Port Nicholson during 1840, since despatches tended to arrive fitfully in bundles rather in monthly instalments. It would certainly have done the New Zealand Company no harm. Any publicity was good publicity and a slightly overblown vision of the New Zealand Company’s principal city would have been grist to the mill in terms of its propaganda value.

If it is true that the Cobham Plan was always a fantasy, or a Wellington of the mind that neither Captain Smith, William Wakefield or Charles Heaphy laid eyes on as they tried to create a capital on the other side of the world this should not reduce its standing as an important record of early-Victorian thinking about the European colonisation of New Zealand. Indeed, the idealisation of society embodied in Cobham’s construction puts it in the company of Ebenezer Howard, Robert Pemberton and others and it that sense it deserves greater recognition as a serious urban design concept.

¹This is a play on the slogan “Absolutely Positively Wellington” which was coined during a city marketing campaign of the early 1990s and which is still in use. See <http://www.wellingtonnz.com/about-us/absolutely-positively-wellington>. Accessed 9 August 2013.

² The introductory webpage for the conference at which this paper was presented is a case in point: As the second Wakefield private colonisation experiment in Australasia, a pre-planned grid city was patched into a paucity of flat land and arrayed across steep inclines at the edge of *Te Whanganui-a-Tara* (the great harbour of Tara). <http://www.victoria.ac.nz/fad/research/uhph2014> [accessed 4 August 2013]

³ For example, a manuscript map of surveyed sections in the Hutt Valley area which carries Cobham’s signature and which dates from c. 1856 is kept in the Map collection of the Alexander Turnbull Library (See MapColl-832.479gbbd/1856?/Acc. 17028).

⁴ Amongst Cobham’s self-published outputs are the *The “Charter”*, a broadsheet printed by William Lake in 1842, *Improper conduct of joint-stock companies and of the New Zealand Company*, another broadsheet from 1844, and *The income tax, the property tax and free trade: peace, retrenchment and Captain Warner’s awful engines of war*, a 24-page booklet printed by Lake in 1848.

⁵ The Mansons thank the staffs of the Alexander Turnbull Library, the Wellington Public Library and the New Zealand National Archives Office on their Acknowledgements page.

⁶ Phillip Barton (1925-2010) was Map Librarian at the Alexander Turnbull Library in Wellington during the 1970s and 1980s. I corresponded with Mr Barton briefly in the early 2000s and with Brad Patterson in the hope of confirming their suspicions but the evidence could not be found and Barton concluded that there was less to Cobham’s involvement than he had once believed.

⁷ See <http://collections.tepapa.govt.nz/objectdetails.aspx?irn=319051&term=britannia> [accessed 5 September 2013]

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Bringing Natural Hazard and Disaster Management Planning Into Mainstream Urban and Regional Planning

A difficult journey

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In local history accounts of the founding of settlements and the establishment of towns, cities and regions there is a tendency for the physical environment to retreat as an actor or active force over time. It is as if the establishment of a city must lead ultimately to some kind of plateau or stable state in terms of threats from natural hazards. Environmental risks remain but they are thought of, and planned for, in terms of hostile intrusions that must be fought with temporary or permanent defences and they become subsumed into narratives of overcoming hence the historic and on-going use of the phrase “civil defence.” Also, disaster planning tends to fare badly in the context of day-to-day planning. Few politicians and citizens want to know about events that may displace “normal” planning altogether since normal planning is time-consuming, expensive and contentious enough without further complications over what might happen. Because of these marginalising tendencies, planning practices, the preparation of key urban planning documents and by corollary planning histories tend to bury natural disasters and disaster management as quickly as possible. In this paper I argue that despite some significant policy advances since 2002 these tendencies still compromise disaster management responsiveness and community resilience. This is the case even after the Canterbury earthquakes of 2010-2011 and a raft of new legislative amendments.

Keywords: urban planning; disaster planning; civil defence; marginality; Canterbury earthquakes

Introduction

In local history accounts of the founding of settlements and the establishment of towns, cities and regions there is a tendency for the physical environment to retreat as an actor or active force over time. It is as if the establishment of a city must lead ultimately to some kind of plateau or stable state in terms of threats from natural hazards. Environmental risks remain but they are thought of, and planned for, in terms of hostile intrusions that must be fought with temporary or permanent defences and they become subsumed into narratives of overcoming hence the historic and on-going use of the phrase “civil defence.” Also, disaster planning tends to fare badly in the context of day-to-day planning. Few politicians and citizens want to know about events that may displace “normal” planning altogether since normal planning is time-consuming, expensive and contentious enough without further complications over what might happen. Because of these marginalising tendencies, planning practices, the preparation of key urban planning documents and by corollary planning histories tend to bury natural disasters and disaster management as quickly as possible. In this paper I argue that despite some significant policy advances since 2002 these tendencies still compromise disaster management responsiveness and community resilience. This is the case even after the Canterbury earthquakes of 2010-2011 and a raft of new legislative amendments.

Hazard-blindness in settlement histories

Although environment and nature feature strongly in the histories of towns and cities, particularly those in Australasia and other parts of the “New World”, these have traditionally operated within paradigms borrowed from human geography, cultural geography and various social, economic and political theories, including Marxism and post-structuralism. Admittedly, urban history and planning history do not fit easily into particular disciplines or fields of knowledge and indeed this may be seen as a virtue rather than a shortcoming. Historical geography, human geography, urban geography, urban sociology, economic history, human ecology and environmental history all feed usefully into our understandings of how cities and urban settlements have evolved. Yet even post-colonial counter-narratives of settlement, which try to assert new cultural or new environmental influences as points of difference when considering the “how” and “why” of urbanisation and the planning practices that evolved therein, have tended to remain anchored within humanist discourses that deal principally with the surface features of new environments, typically confrontations between European settlers and new peoples, plants and animals.

While these new histories have done much to show up the often futile attempts at enforcing what Crosby (1986) refers to as “ecological imperialism” and the follies of attempting to make “neo-Europes” in the Antipodes the question of the wisdom of founding cities per se goes relatively unchallenged. And while Carter’s *Road to Botany Bay* (1987), for example, broke new ground in “spatial history” in revealing how people thought about the land they were attempting to discipline nature, nature as primary actor in urban history has rarely penetrated more polemical stories of lands half-won. Disasters and catastrophes, whether “natural” or human-induced, tend to be seen as obstacles to “progressivist” views of city-building rather than reasons to rethink settlement altogether.

In terms of the writing of more scholarly planning histories in New Zealand and Australia it must be acknowledged that the field itself is relatively young. This is particularly so since the emergence of

planning as a profession is usually traced only to the beginning of the twentieth century. Thus planning history and urban history can perhaps be excused for not engaging with or confronting the full force of some of the underlying environmental conditions that operate within Australia and New Zealand.

By contrast, others, including environmental historians, have seen fit to focus on such conditions directly. For example, Australia is a continent defined by fire regimes and cycles of severe water deficit. European settlers had almost no experience of persistent “droughtscapes” or “firescapes” as we might term them. This may explain why they managed to situate the largest urban populations within what Pyne (1992) has labelled a “fire flume.” Similarly, New Zealand is in essence an active tectonic laboratory and while early New Zealand surveyors such as Charles Torlesse often carted copies of Lyell’s *Geology* around with them as an ersatz new testament (Maling 1958) they and those who followed them as settlers knew nothing of living on seismically active landscapes. Earthquakes were something of a novelty. Nor did the planners and settlers of Australasia have great familiarity with living in a cyclonic circulatory system prior to arriving in the Southern Hemisphere but, as Pelling (2007: 25) illustrates by way of a “World hazard zones and urban centres” map, Northern Europe, for all its floods and the human carnage caused by relentless warfare over many millennia seems rather dull in terms of natural environmental turbulence while New Zealand seems like a cornucopia of hazard conditions. In light of this it is interesting that a comprehensive and scholarly work on environmental history in New Zealand published in 2002, contained no chapters or sections on natural hazards (Pawson and Brooking 2002).

In other words, while our colonial planning ancestors have thrust us into a strange and volatile set of circumstances our evolving planning history narratives still tend to hinge on questions about influences, designs and utopian ideas from Europe and North America and I myself have been a contributor in this regard (Montgomery 2006, 2008). It is as if the only hazards that mattered in the past in our conventional centre-to-periphery narratives were grounded in Malthusian thinking i.e., “What to do with surplus peoples?”, or they were geo-politically preoccupied i.e., Europe was inherently war-prone and the Antipodes appeared inherently peaceable so that, plus an abundance of natural resources, made these far-flung places very attractive for new settlements. Planning thus became a matter of doing a better job of providing housing, amenity and essential services compared to practices in the old country.

Through the past century we have of course learned much more about nature, natural hazards and the limits of human abilities to “tame” the natural world. This knowledge has developed by way of both disasters and catastrophes and the unhurried good habits i.e., theorising and testing, of normal science. Yet interestingly, many of the catastrophes and such highly scientific and empirically robust information seem to have had little influence on our planning institutions, practices and core planning documents. Part of the problem lies with the historical, and to some extent continuing, notion of “civil defence” as a separate and special type of planning.

“Civil defence” versus natural hazard and disaster planning

In the United Kingdom the origin of “civil defence” is often connected with concerns over possible aerial bombardment in the aftermath of World War I. The Air Raid Precautions (ARP) subcommittee was set up in 1924 in the Imperial Office and an ARP department established in the Home Office in

1935. That set the tone for later developments: staffing, planning and resourcing drew mainly from military defence sources. New Zealand more or less followed suit. Following the Murchison earthquake in 1929 and the Hawke's Bay earthquake in 1931 New Zealand established the Public Safety Conservation Act in 1932 but the prime motivation for this was fear of civil unrest resulting from the Depression (Ministry of Internal Affairs 1990 p.3). The Emergency Precautions Committee of 1936 and the Emergency Precautions Scheme of 1938, housed within the Department of Internal Affairs, came next and these were instituted because of priority fears about earthquakes, air-raids and poison-gas attacks. The prime preoccupation then switched rapidly to enemy attack for obvious reasons and the nascent agency tended to shift between the Ministry of Defence and the Department of Internal Affairs over the next decade depending upon perceived military threat. The change of name to the Ministry of Civil Defence in 1943 reflected reduced anxiety about imminent enemy invasion. However, the basic philosophy was that trained local civilian volunteers would provide the main defence and the training was military-based. Membership tended to ebb and flow depending on the action in other theatres of war.

In 1953 arrangements were substantially overhauled and I quote a commentary about this change at length:

This renewed interest appears to have been bought about by a perceived danger of nuclear attack. In both Britain and in the United States such perceptions had led to civil defence legislation, and in 1953 New Zealand followed suit. Although the Local Authorities Emergency Powers Act did contain provisions designed to deal with natural disasters, the nuclear threat was its primary concern.

Under the Act, local authorities were given powers 'at any time (whether during a period of emergency or otherwise)' to set up committees or emergency posts, and to arrange for the rescue of the injured, the removal of debris and the satisfaction of accommodation and welfare needs. Apart from loans which might be provided by the Local Authorities Loans Board, there was to be no financial assistance from the central government.

The legislation contained other weaknesses. There was no requirement for local authorities to set up civil defence organisations, unless during an emergency the Minister of Internal Affairs issued written instructions. Further, there was no legal provision for the requisitioning of essential supplies, there were no sanctions to enforce compliance with local authority directives, and no mention was made of compensation for death or injury suffered while carrying out emergency work. (Ministry of Civil Defence, 1990: 5)

At the same time the Government reserved the right to have its own overriding national plan when required so in 1954 a Government Action in a Major Emergency (GAME) plan was added. I have quoted at length above and added this note because it reflects a fundamental condition that has changed little over the past sixty years: delegation of responsibility to local authorities with insufficient resourcing, ill-defined liability protection, lack of standardisation for local body compliance and the threat of central government intervention at short notice. That an official and putatively general purpose *Civil Defence Handbook*, published by the Government in 1968, could still be entirely about defence against armed foreign attack illustrates the slow pace of development.

There have of course been legislative overhauls, notably in 1959 when the Ministry of Civil Defence was established and in 1983 when a new Civil Defence Act was passed which added regional councils and other agencies as participating and authorised organisations such as the Fire Service and New Zealand Police and which sought to reorient planning away from Cold War thinking only. In 1999 a new Ministry of Civil Defence and Emergency Management (MCDEM) was created and in 2002 the Civil Defence and Emergency Management Act (CDEMA) was passed. This saw the establishment of mandatory regional Group Plans for the sixteen local government regions in the country, and the lessons provided by a number of disasters such as the Inangahua earthquake and the *Wahine* storm both of which occurred in 1968, and the Abbotsford Slip of 1979 produced their own amendments to regulation and practice. Yet despite such refinements the Canterbury earthquakes of 2010-2011 brought some of the issues of fifty years before back to the fore.

The Canterbury Earthquakes 2010-2011

The first magnitude 7.1 earthquake, on September 4, 2010 was alarming and damaging but in some respects straightforward. There were no fatalities and despite widespread liquefaction in the suburbs which irreparably damaged a number of houses and damage to the central city which shook several of the older buildings to the point of no return it was possible for a Local State of Emergency only to be imposed and this lasted just a few days. New legislation was drafted to assist with recovery and a Minister appointed but the process of recovery and reconstruction was to be left in the hands of the respective city and district councils. The mood was upbeat:

Christchurch City Council Media Release 16 September 2010: The state of emergency has been lifted from the Christchurch City Council Area.

“We are now moving from a state of emergency to a state of urgency,” says Christchurch Mayor Bob Parker. “We will be operating under the new powers brought in under the Canterbury Earthquake Response and Recovery Bill, but transferring from a civil defence situation and back closer to business as usual.”

“This doesn’t change the fact that many people are still facing great difficulties, and resolving these issues will continue to be a focus as we rebuild our region. As mayors we have jointly dedicated ourselves to finding as many lasting solutions as possible.” (Christchurch City Council 2010)

Even so, there were problems with Civil Defence arrangements. Some suburbs were left without Area Co-ordinators and Welfare Centres as staff, many of them keyholders, were mistakenly redirected to less damaged locations. Communications between agencies were poor.

The 6.3 magnitude aftershock which struck on February 22, 2011 made the previous event seem almost insignificant. 185 people perished in collapsed buildings or from falling masonry or rocks. Hundreds of central city buildings were so badly damaged that urgent make-safe or demolition work had to be carried out. Thousands of suburban homes were written off thanks to liquefaction and lateral spreading. The official emergency response was clearly overwhelmed. The pre-determined Civil Defence headquarters were uninhabitable. There was confusion about whether local Civil Defence arrangements stayed in place when things escalated to National Emergency level. There

was hostility and rivalry between Canterbury Regional Council Civil Defence personnel and Christchurch City Council Civil Defence staff which forced the National Controller to fly down from Wellington to intervene against standard protocol. There were problems over who had authority to requisition supplies, resources and facilities. Damaged buildings that were not necessarily threats to life were summarily pulled down on the orders of people who lacked the proper or authority. Damaged buildings that were threats to life but which had been signed off as safe to occupy after September 2010 by sometimes inexperienced and inappropriately briefed officials led to catastrophic consequences in the major aftershock of February 22nd 2011. There were chronic shortages of suitably qualified building and structural engineers.

A comprehensive review of the official national emergency response period (22 February to 30 April 2011) was conducted in 2012 which elaborated on the points above (McLean et al, 2012). The review produced a list of 108 recommendations which the Government responded to later in the year with a *Corrective Action Plan* (Minister of Civil Defence 2012). The Government accepted some, but not all, of these recommendations, notably rejecting key recommendations that “territorial local authorities no longer have power to control the response to emergencies, but that they still retain the power to declare them” and that the Ministry of Civil Defence and Emergency Management be moved from the Department of Internal Affairs to the Department of Prime Minister and Cabinet (McLean et al p.202).

There was an understandable reluctance to take such radical steps at this time. The Canterbury Earthquakes Royal Commission, established in March 2011 to examine issues relating to the built environment in the central business district, including the Canterbury Television Building, the Pyne Gould Corporation Building and others and to make recommendations regarding building codes and other matters, had just released its final reports (Canterbury Earthquakes Royal Commission 2012). A Coronial Inquest into the 185 deaths was still in process and several internal and external reviews of key agencies were producing their own findings (Ministry of Civil Defence and Emergency Management 2012, New Zealand Fire Service 2011, Pilling 2012).

Furthermore, central Government was already busier than it would have preferred. A new Crown entity, the Canterbury Earthquake Recovery Authority (CERA) had been created in 2011 and CERA had become involved in central city recovery and created another new entity, the Central Christchurch Development Unit (CCDU), which was tasked with producing a Christchurch Central Recovery Plan (CERA 2012). This was in spite of the fact that not long before the Christchurch City Council had produced its own Central City Plan after an extensive public consultation exercise known as “Share an Idea” (Christchurch City Council 2011). Many saw the CERA/CCDU Plan as a political move to force major “anchor projects” and more business-friendly redevelopment on the city than the citizens, Mayor, Councillors and staff had envisaged or desired. CERA also set about producing a Canterbury Earthquake Recovery Strategy in 2011-2012 (CERA 2012) and began work on a Land Use Recovery Plan in the same year (CERA 2012a).

More controversially the Government was immersed in complex land zoning decisions and buy-out negotiations with more than 5000 individual residential property owners. This involved the “red-zoning” for an indefinite period of substantial parts of the eastern suburbs of the city as land too prone to liquefaction and lateral spreading to permit residential housing and red-zoning of areas of the southern hill suburbs as too dangerous for occupation due to on-going rockfall risk. Central

Government has insisted, and continues to insist, that when the technology becomes available to remediate the land most of it will be returned to residential housing. But the move has begged the question as to whether this in fact retrospective natural hazard land-use planning or “planned retreat” by another name.

At the community level and, as I have described elsewhere, another problem with the Civil Defence response was the interface with so-called spontaneous volunteers (Montgomery 2013). Sector Posts that were supposed to open did not. Designated Welfare Centres were opened, only to be arbitrarily closed again and then re-opened after protests from other agencies. Impromptu welfare centres or tent cities were created at schools and church halls in hard-hit locations without due recognition or assistance from Civil Defence for several days. Since many of these spontaneous self-help initiatives were run without trained Civil Defence volunteers, and, conversely a number of trained volunteers found themselves by-passed or not activated by the Regional Civil Defence Group, it became clear that the residual command and control philosophy of the organisation that had survived since the 1930s was too inflexible to deal with the reality of sporadic and uneven but otherwise widespread and overwhelming events. And rather than energise Civil Defence and Emergency Management in the region the earthquakes seem to have caused a slow-down in the review of the Group Plan which was due for review by 2010 and has increased rather than decreased its pre-existing opacity to the public.¹

Recent advances in natural hazard and disaster management planning

Despite the controversy, delays and political and institutional fall-out that almost invariably follow catastrophic events such as those described above some concrete actions can be expected. Building codes and building regulations usually change to reflect natural hazards and risks and it has been typical in New Zealand and elsewhere for key building safety changes to come about directly after disasters such as storms, floods, fires, landslides and earthquakes. This was evident in the wake of earlier earthquakes in San Francisco in 1906 and Napier in 1931. In recent times the 1989 Loma Prieta, 1994 Northridge and 1995 Kobe earthquakes have led to regulatory changes, albeit with considerable delay in the case of strengthening requirements for so-called “soft story” buildings in San Francisco which came into force only in 2013 (Los Angeles Times, 2013). The lessons from such events have on occasions been written up in within dedicated urban and regional planning discourses (Olshansky 2002, Olshansky et al. 2005). The catastrophic bushfires in Victoria in 2009 led to Royal Commission investigations and reports which produced no less than twenty-five planning, building and land-use recommendations (recommendation nos. 37-62), most of them aimed at local authorities (2009 Victoria Bushfires Royal Commission 2010; 31-36). And although there is still much debate about what practical lessons have been learned in the wake of Hurricane Katrina in New Orleans in 2005 (Olshansky and Johnson 2010) there has been a swift, comprehensive and ambitious response to the effects of Hurricane Sandy on a number of states on the United States East Coast in 2012 in terms of proposed new government housing regulations (Hurricane Sandy Taskforce, 2013)

In terms of fundamental changes to core planning legislation, or mainstreaming what has often been marginal to planning, the process rarely moves rapidly. To return briefly to the New Zealand historical context it will be recalled that the Local Authorities Emergency Powers Act was passed in 1953. This was the year in which the first Town and Country Planning Act was passed following review of the Town Planning Act of 1926. There was no mention of natural hazards in the new

statute. A later review and overhaul which led to the Town and Country Planning Act 1977 introduced some modest references to natural hazard planning. For example, under Section 8 (a) of the Act District Schemes had to avoid or mitigate the effects of “earthquake, geothermal and volcanic activity, flooding, erosion, landslip, subsidence, silting, and wind” while Regional Schemes under 4 (c) required the following from regional planning authorities:

“General identification of areas to be excluded from future urban development, including land of high productive capability, land subject to hazards such as flooding and earth movement, land with high aesthetic or recreational value, and land to separate and to enhance the appearance and setting of cities and towns” (Town and Country Planning Act 1977)

It should be noted that at this time most major land and resource developments in New Zealand were still being carried out by central government which meant that there was not as great a degree of discretion and responsibility as the wording suggests.

A much more radical and decentralising overhaul of planning legislation was carried out in the late 1980s resulting in the Resource Management Act (RMA) of 1991. While the Act introduced new concepts and principles such as sustainability, stewardship, amenity values, intrinsic values of ecosystems and recognised customary activities it did not identify natural hazard management as a priority and it was not included under “Matters of National Importance” in Section 6, nor were natural hazards referred to in Section 7 “Other Matters.” There were express clauses in the RMA, notably Section 30 and Section 31, that referred to planning for natural hazards and some tentative steps were taken via newly-instituted Regional Policy Statements that could include natural hazard clauses (Canterbury Regional Council 1992) but the interfaces with normal planning processes were typically minimal and often uneven as others have shown (Becker and Johnston 2002).

Nevertheless, from the early 2000s, and perhaps buoyed by the new CDEM Act, a flurry of research and policy guidance around natural hazards planning took place in New Zealand, including the creation of the Joint Centre for Disaster Research, established in 2006, and the Natural Hazards Research Platform in 2009 led by the Institute of Geological and Nuclear Sciences (GNS).² A steady flow of physical science, social science and policy-linked reports emerged from these sources including some that specifically addressed planning legislation and policies (Becker and Johnston 2000; Becker et al. 2008; Glavovic et al. 2010) and community response resilience (Becker et al. 2011). Other publications emerged, ranging from wide-ranging symposium proceedings (Norman 2004) and popular natural history books (Te Ara Encyclopedia of New Zealand 2007) to investigations on fault line setbacks near Wellington by the Parliamentary Commissioner for the Environment (Parliamentary Commissioner for the Environment 2001) and regional hazard histories (Johnston and Pearce 2007).

The Government produced its own National Civil Defence Emergency Management Strategy 2003-2006 (MCDEM 2004), a follow-up version in 2007 (MCDEM 2008), a National Civil Defence Plan (MCDEM 2005) and a “Hazardscape” report (ODESC 2007). In terms of collective scholarship regarding disaster planning *Disaster Resilience: an integrated approach* (Paton and Johnston 2006) seems like a high water mark for advice to central and local government in New Zealand and elsewhere. No doubt some of the impetus came from the Boxing Day Tsunami in the Indian Ocean in 2004 and Hurricane Katrina in 2005.

Responses from the Planning Profession

With such activity one might expect that urban and regional planners themselves would have lost no time in coming to grips with natural hazards. However, uptake appears to have been slow both here and in Australia. King (2006: 289-290) observes that as of 2005 the Planning Institute of Australia had little to say about the role of planners in natural hazard mitigation and emergency management. The more comprehensive overviews of Australian planning history in recent years contain little if any reference to natural hazards (Freestone 2010) and the 1997 Australian Town and Country Planning Association's "Charter for Planning," which contains a long list of principles, duties and obligations, makes no reference to hazard mitigation (Freestone 2009: 363-367). Very recently has the Australian situation appears to have changed. The Planning Institute of Australia adopted a new policy in 2013 entitled "Planning Matters: Shaping the World Today for Tomorrow." One of the core activities is quoted as follows: "Planning helps identify hazards and reduce risks; it also identifies and protects" (Planning Institute of Australia 2013).

The New Zealand Planning Institute (NZPI) has yet to embrace this view. Neither the NZPI Code of Ethics nor its 2013-2016 Strategic Plan makes any mention of natural hazards or reducing risks.³ The *New Zealand Planning Quarterly* is the principal outlet for planning ideas in the profession and academia and in such a small country it is expecting too much to demand a periodical on emergency management or disaster and trauma studies such as those to be found in Australia. *Planning Quarterly* has a patchy record on natural hazards. It ran special sections on disasters and hazards in March 1998, natural hazards in September 2005 and "planning for natural hazards" in September 2008 plus it has included occasional articles across various years but the authors of such articles tend to come from the same pool i.e., the (Crown Research) Institute of Geological and Nuclear Sciences (GNS) or the Joint Centre for Disaster Research which is partnered with GNS than the ordinary planning fraternity.

Signs of change in core New Zealand planning documents

In October 2011 the Government convened a Technical Advisory Group to report on Resource Management Act Principles and natural hazards in particular. This produced the following section in a subsequent report (NB. Although bullet points are used in the official report the items are numbered here for the purpose of discussion):

Natural hazards:

1. A provision requiring decision-makers to recognise and provide for issues around natural hazard risks should be incorporated in s.6 of the RMA – the wording of the provision to be, "managing the significant risks associated with natural hazards."
2. Retain the RMA definition of natural hazards. Further work should be undertaken on alignment of the definition across all relevant legislation, in particular to take account of the differing "return periods" for natural hazards.

3. Amend provisions specifying matters to be considered in preparing RPS and plans to specifically refer to CDEM Group management plans as a matter which must be considered.
4. Regional councils should have the lead function of managing all the effects of natural hazards. Territorial authorities are to retain their current function in regard to natural hazards.
5. There should be one combined regional and district natural hazards plan.
6. This plan should be required to be operative within three years of enactment of the empowering legislation.
7. Require local authorities to make information about natural hazards available to all other local authorities within their region. This requirement should be drafted to expressly override any constraints arising from other legislation on information sharing, including the Privacy Act 1993 and the Local Government Official Information and Meetings Act 1987.
8. Section 106 be amended to expressly include liquefaction and lateral spreading, along with any other consequences of the events included in the definition of “natural hazard” in s.2.
9. Section 106 be amended to reflect the risk associated with any natural hazard, rather than the likelihood of the event.
10. Section 106 be amended so that the consent authority must refuse consent if there will be a significant increase in the risk associated with any natural hazard.
11. That the potential to extend the scope of s.106 to include land use consents issued by regional councils be investigated.
12. That the Government promulgate a NPS [National Policy Statement] or NES [National Environmental Standards] on the management of natural hazards. (Ministry for the Environment 2012: 13)

In turn this led to a more formalised reform package, announced in August 2013, which has sought to embed some of the recommendations above. For example, with reference to point 1 above, natural hazards has been added as a new clause in Section 6. “Matters of National Importance” (Ministry for the Environment 2013). Regarding points 5 and 6, which would seem to mark a substantive change to natural hazards planning compared to the past, there is no mention in the proposed reforms of combined regional and district natural hazards plan. Similarly, with regard to point 12 there has been nothing specific set out in the reform package about a NPS or NES about natural hazards, merely generic proposals to streamline the creation of such policy instruments.

There have, however, been some immediate responses at the regional and local level, particularly with regard to points 4 and 7. For example, the Canterbury Regional Council has revised and recently

released its Regional Policy Statement. There are several references to natural hazards across a number of issues and a separate Natural Hazards Chapter (11) which includes a new policy on earthquake hazards, Policy 11.3.3 – Earthquake hazards which states:

New subdivision, use and development of land on or close to an active earthquake fault trace, or in areas susceptible to liquefaction and lateral spreading, shall be managed in order to avoid or mitigate the adverse effects of fault rupture, liquefaction and lateral spreading. (Canterbury Regional Council 2013: 116)

This new section has, of course, been crafted in light of the Canterbury earthquakes but it also sets out in detail new working relationships and obligations between the regional council and territorial local authorities over earthquake hazards signalling a determination to take a co-operative approach with the regional council acting as a key information source for local authorities for hazard identification, land-use and subdivision policies and rule-setting and it is expected that local authorities will feed back any critical new information to the regional council on fault rupture, lateral spreading and liquefaction. For its part when Christchurch City Council, the largest territorial authority in the Canterbury region, announced in August 2013 the start of its District Plan review which is slated to take a fast-tracked three-year period and a new structure to the Plan is anticipated that divides the Plan into two sections, Recovery and Non-recovery (Christchurch City Council 2013). Natural Hazards will apparently form a separate Chapter in the Recovery Section.

Yet much of the “devil”, so to speak, lies within core regulatory sections and clauses of RMA such as Section 106 referred to above under points 9, 10 and 11. Local and regional authorities will be anxious to if that section is indeed strengthened to allow them to refuse resource consents on the grounds of risk from natural hazards when the reform package is passed into law in 2014. In that sense it may be easier politically for Government to commit only to a NPS on Natural Hazards, especially in an election year, as to date such “statements” have tended to function more at the aspirational than operational level.

Conclusion: From historic marginality to future centrality?

The initiatives and changes outlined in the section above are encouraging signs that natural hazard planning is moving from the margins to the mainstream in New Zealand planning. Whether this would have happened without the Canterbury Earthquakes is perhaps a moot point. The report *Natural Hazards 2012*, compiled by a number of experts via from New Zealand research institutions via the GNS Natural Hazards Platform, provides a useful summary of how the Canterbury earthquakes, especially the findings of the Canterbury Earthquakes Royal Commission, are helping to reshape policy and standards across institutions and mechanisms such as the Ministry of Building, Innovation and Employment, the Building Code and the Building System Improvement Programme (Pinal et al. 2012: 6-7). Even more recently, the National Institute of Water and Atmospheric Research (NIWA) published a report commissioned by the West Coast Regional Council on offshore marine earthquake hazards which shows a substantially-increased risk of seismic and tsunami risk for the upper half of the West Coast which is already extremely vulnerable to the high-risk Alpine Fault that runs through much of the South Island (NIWA 2013).

Presumably, this and other research currently under way will assist in shaping land-use policies in the future in regions and cities around the country but it will not translate immediately into hazard mitigation in land-use planning. It is also important to remember that there is a tendency for people and institutions to forget risks once enough time has passed. Confusion about who controls what is another impediment. Despite the progress described above in New Zealand about planning for natural hazards, civil defence and emergency management remains awkwardly disposed across both central government and regional councils and territorial authorities. Similarly, local communities find it hard to find the appropriate interfaces with civil defence as an entity or “storefront”.

The Ministry of Civil Defence and Emergency Management is a small unit of central government nested within the Department of Internal Affairs. Regional Civil Defence Groups are comprised of the Regional Council and the Territorial Local Authorities within a region which in the case of Canterbury means at least ten organisations that have some role in emergency management. Yet the publicity and public awareness campaigns and information tend to come from central government. Furthermore, many of the functions and roles of emergency management within regional and local authorities are piggy-backed on conventional day-to-day roles. This creates potential conflicts in terms of priorities. Immediate “peace-time” planning needs tend to displace disaster planning and taxpayers and ratepayers often seem apathetic when asked to pay for and participate in emergency practice scenarios.

Interestingly, an announcement was made in November 2013 by Government that the Ministry is to be moved from the Department of Internal Affairs to the Office of the Prime Minister and Cabinet in 2014 in line with the aforementioned key recommendation, initially rejected, from McLean et al. (2012). While this is an indication that Government now takes civil defence more seriously it has yet to follow the other key recommendation: to remove the control of civil defence emergencies from local government. So, the current opacity around civil defence organisation and community engagement at the local operational or day-to-day level in Canterbury, for example, seems destined to stay that way for the time being. Civil defence will still have to ride on the back of day-to-day council functions.

Added to that, the reality of natural disaster events is such that no amount of formal planning activity nor any sophisticated command and control structures will be able to fully cope with what unfolds. Much of the response burden will fall on the capacities of local communities and spontaneous and trained volunteers. The National Research Council (2012: 39) argues that “Disaster management is a holistic function that cannot be successful if it does not engage the full fabric of the community.” The authors quote William Waugh, an emergency management expert, as follows:

We have a long history of volunteerism in emergency management in the United States and should always expect that volunteers will be a significant segment of our disaster response operations. Most fire departments today are still volunteer organisations. Most search and rescue is done by neighbours, family members and friends. Faith-based and secular community groups increasingly have their own disaster relief organisations and the capabilities of those organisations are increasing rapidly. The point is that we have a system in place for dealing with large and small disasters that is heavily reliant upon local resources and local capacities. (Waugh 2007 cited in National Research Council 2012: 40)

With that in mind it is clear that more needs to be one integrate hazard planning into “business as usual” urban and regional planning and to raise hazard awareness in public contexts. Urban historians and planning historians can assist in this process by giving greater emphasis in their writing to natural hazards, disasters and environmental risks and their roles in city and regional histories. At least then the record of wise or imprudent planning and land-use choices will be better collected and may help to support difficult but sensible planning decisions, such as planned retreat, in the future.

¹ The website in particular seems to have been struck by paralysis there being no media releases available at the time of writing this paper: <http://www.cdemcanterbury.govt.nz/media-releases/> [accessed 5 September 2013]. The CDEM Canterbury Facebook page functions principally to post alerts or warnings <https://www.facebook.com/CanterburyEM> [accessed 5 September 2013]

² For Joint Centre for Disaster Research see: http://www.massey.ac.nz/massey/learning/departments/school-of-psychology/research/disaster-research/disaster-research_home.cfm [accessed 5 September 2013]. For Natural Hazards Research Platform see <http://www.naturalhazards.org.nz/> [accessed 6 September 2013].

³ See http://www.planning.org.nz/Category?Action=View&Category_id=375 [accessed 3 September 2013] and http://www.planning.org.nz/Folder?Action=View%20File&Folder_id=262&File=2013-2016-Strategic-Plan.pdf [accessed 3 September 2013].

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Political Path Dependence in Public Transport in Auckland

An historical analysis

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In June 2013, the Prime Minister of New Zealand, John Key, for the first time showed support for the proposed Auckland city rail link with the caveat that he wants to delay the project until 2020, suggesting that only by then will there be enough patronage to justify it. He has not committed central government to funding the project. Research shows that similar announcements were made by another National Prime Minister in 1967 and 1969. This paper provides an historical overview of public transport planning and policy in Auckland to identify the institutional challenges that can explain central-local relationships in rapid rail project. The concept of political path dependence is employed as a theoretical framework to investigate the history of small events and circumstances against which rapid rail projects have been conceived, argued over and advanced by local government, but failed to proceed due to institutional, funding and political biases against rapid rail from central government. Public transport decision-making is thus understood as having become locked-in to political decision making concerning the nature of the problem and its solution, eventually creating political path dependence. The research concludes that current barriers to public transport in Auckland can be understood by analysing the history of central and local relationships in wider social and political environment.

Keywords: Path dependence, Auckland rapid rail project, central-local relationships

Introduction

In June 2013, the Prime Minister of the National-led government of New Zealand, John Key, for the first time showed support for a city rail loop (CRL) – more than two billion dollars for a 3.5 km underground rail project necessary for Auckland’s public transport system. However, he wants to delay the project until 2020 suggesting that only by then will there be enough patronage to justify it. He has not committed central government funding for the project. Although Auckland Mayor Len Brown and the majority of people in Auckland are delighted by the government announcement, research shows that similar announcements were made by National Prime Minister, Keith Holyoake, in August 1967 and October 1969.

This paper provides an historical overview of public transport planning and policy in Auckland in general and the 1960s rapid rail project in particular to identify whether political path dependence can be detected in transport planning in Auckland. Path dependence explains how a particular solution to a policy issue becomes selected over time by probing the history, small events, coincidences and circumstances in an institutional context (Arthur 1988; North 1990; Pierson 2004). Political path dependence can be described as historical relationships between central and local governments. Political path dependence hypothesises that power dependencies within the state apparatus or constitutional structures have left local government with little or no choice but to adopt policies/projects which favour vertical alignment with central government policy decisions. Therefore, the paper elucidates the political-institutional context by considering how political and institutional power and finance have influenced public transport decision-making in Auckland. This paper investigates, in particular, why and on what grounds Auckland public transport projects are resisted or supported by central government.

This paper first explores public transport history in Auckland before World War II, followed by in-depth analysis of rapid transit project in Auckland. The reasons why rapid rail project has not proceeded are discussed, concluding that political path dependence is an effective tool in explaining historical and therefore, current responses to CRL in Auckland.

Public transport in Auckland – Historical overview

Public transport in Auckland before WWII

Initially, the main aim of public transport in Auckland was to open up areas for immigration and settlement by adopting new technologies (Bloomfield 1975; Dahms 1980). Accordingly, rail and tram systems were developed and became symbols of municipal pride, superiority, economic growth and progress, quickly becoming the backbone of the city (Watson 1996). Early days, the rail network was publically provided and operated, while the tram system, horse bus and ferry services were privately operated, informal and fragmentary (Stewart 1973; Watson 1996; Harris 2005)

After passing the 1872 Tramway Act, Auckland City Council (ACC) became the regulator of the tram network and placed strict terms and conditions on frequency, hours of operation, and fares. The first passenger tram service opened in 1884, quickly becoming popular due to being fast, smooth and relatively cheap, resulting in overcrowding (see Fig. 1), disorderly behaviour, and the first ‘peak hour’ (Bush 1971; Stewart 1973). Tram overcrowding was addressed by bus services, ultimately creating

tram versus bus competition (ibid). However, most passengers preferred the smoothness of the tram and therefore, the media focused on peak hour problems.



Figure 1: Newspaper cartoon on 'five o'clock rush'. Source: Stewart 1973, p.60. Figure originally from Auckland Weekly News, 1910.

Public transport caused outward but compact suburban expansion along tramway corridors (See Figure 2 and 3). Figure 3 from the 1880s shows shops and houses built along tramway corridors and wide footpaths. The figure also shows horse-buses operating along the tram corridors where they effectively competed for passengers with tram services.

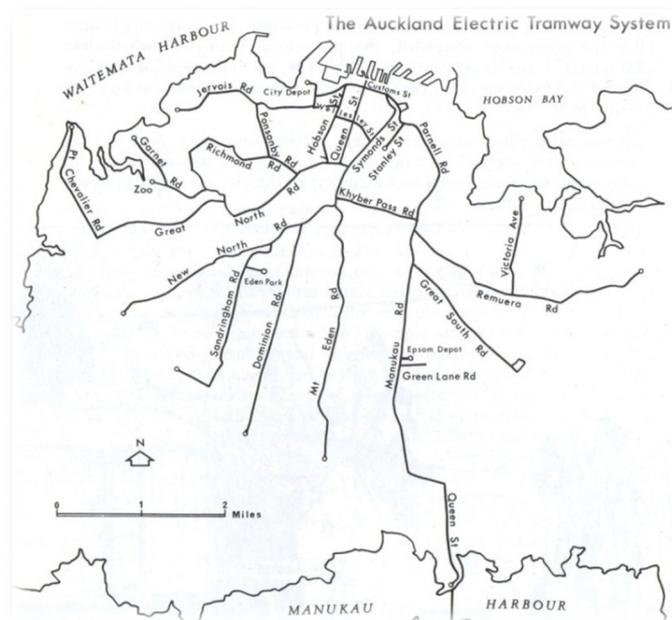


Figure 2: The Auckland tramway network. Source: Bush 1971, p.240. Original source unknown.



Figure 3: Queen Street to Customs Street in the 1880's. Source: Stewart 1973, p.31. Figure originally from pictorial collections of the Auckland Museum Institute.

Auckland's tram network was electrified in 1902 improving the service and further encouraging outward urban expansion, ultimately increasing adjacent land values (Bloomfield 1975; Dahms 1980).

However, privately operated tram and rail services struggled due to low fares, bus competition and city council requirements to improve roading along the tram lines (Bloomfield 1975; Dahms 1980). Therefore, ACC purchased the tram company in 1919 (Bush 1971) and made a profit until the early 1950s. Moreover, the Motor Omnibus Traffic Act 1926 and 1928 Auckland Transport Board Act allowed freer movement of publicly owned trams by compelling buses to move to different streets. These acts aimed to reduce wasteful competition, maintain minimum safety levels, and provide timetabling and fare guidelines (McDonald 1974). However, these acts also introduced subsidies for private bus operators (*ibid*).

Public transport in Auckland after WWII

By the 1950s, Auckland's public transport network (rail, tram and buses) was predominately run by the public sector. Public transport patronage averaged over 100,000,000 passenger trips per annum, comparable to many other world cities (Lee 2010). Beside a total monopoly on tram and rail services, in 1954 public buses comprised 60 per cent of services (McDonald 1974). Furthermore, New Zealand Rail provided their own bus fleet to act as feeder services to and from the rail network (*ibid*).

The Ministry of Works 1946 Rail Plan to expand and electrify the rail network was abandoned in 1954 (Lee 2010), coinciding with the introduction of the Auckland Regional Planning Authority's (ARPA) 1955 first Master Transportation Plan for Auckland, which changed the city's transport focus from public transport to private vehicle travel. This plan recommended inner ring road construction around the CBD, fed by express urban motorways, and the building of extensive inner cities parking facilities. Through the recommendation to abandon rail upgrades until population growth justified it, this plan almost exclusively favoured private over public transport (Harris 2005; Mees & Dodson 2007), despite public transport use exceeding previous levels (See Figure 4). These decisions

coincided with withdrawal of the popular, well patronised electric tram network. Following this change in transport planning direction, patronage levels per capita dropped, car ownership increased and local authority bus networks profits decreased, mainly due to fare increases, which further decreased patronage (Stewart 1973; Mees and Dodson 2007).

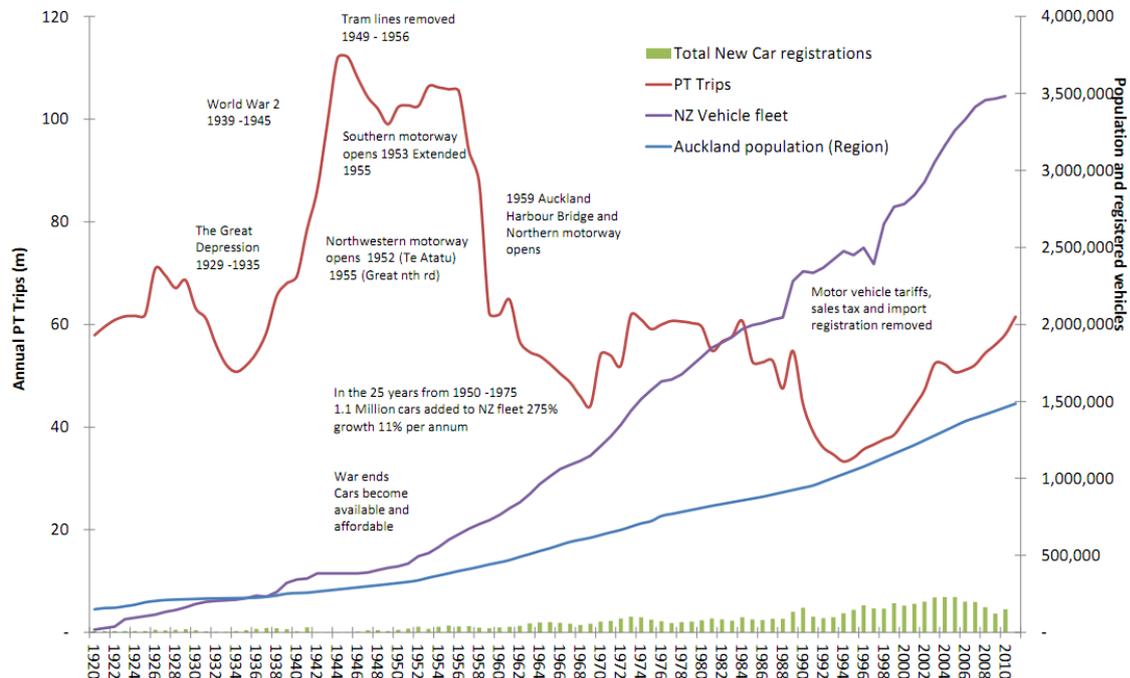


Figure 4: Public transport use in Auckland (1925 – 2011). Source: Auckland Transport website.

This change in transport direction also coincided with Auckland decentralisation, with land-use patterns becoming segmented and dispersed (Mees and Dodson 2007). Public transport did not adapt this dispersal and continued to serve the traditional ‘suburb to city’ commuter movements despite businesses becoming scattered across the city and people no longer travelling to the CBD. As a result, public transport became ineffective and patronage declined further (see Figure 4). Unsurprisingly, by the 1970s private vehicles use exceeded that of public transport, with in 1970 there being 1,500,000 car trips compared to 200,000 bus trips (William 1975).

Auckland’s second attempt to electrify and expand the rail network was made by the Auckland Regional Authority’s (ARA) 1965 Regional Transit Plan (De Leuw 1965) and 1967 Regional Master Plan (ARA 1967). Rapid rail was proposed in these plans in conjunction with coordinated bus services. However, the motorway network proposed in the 1965 Comprehensive Transportation Plan superseded the rapid rail project. The Mayor of Auckland City Council, Sir Dove-Myer Robinson believed rapid rail was the only way to reverse the extreme decline in public transport usage experienced since the 1950s (Edgar 2012). He worked with the National and Labour governments to get them to commit to rapid rail. Increasing petrol prices due to the worldwide ‘oil crisis’ and rubber tyre shortages in NZ, which made private vehicle travel expensive, favoured Robinson’s arguments (Dravitzki & Lester 2007). However, the National government dropped this project favouring the

1976 Comprehensive Transportation Plan which promoted motorways over public transport development.

Auckland Rapid Rail / City Rail Loop Project – 1960-70s

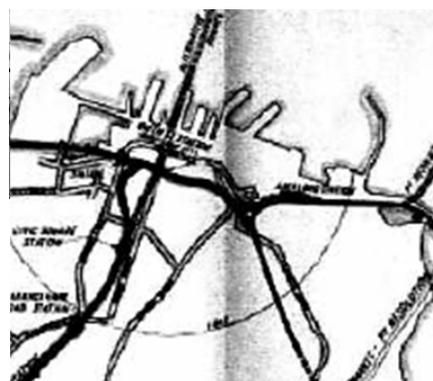
Background

Half of the Auckland City Rail Loop (CRL) was completed in 1929, and right-of-way for the unbuilt section was identified (Harris 2005). In 1946, the Public Works Department of the Labour government prepared a 10 year plan for Auckland rail development including the completion of the CRL. In 1950, the Halcrow Thomas report recommended an electrified rail service with an extension under Queen Street from the Central Railway Station (see Figure 5). In 1964, American consultant, De Leuw Cather & Company started preparing the Auckland Transit Plan for ARA. The first option considered was a well-coordinated bus-based transit system similar to existing services but eliminating duplication, and managed by a single agency. The second option shown in Figure 5, was a coordinated bus and rapid rail system, achieved by upgrading and electrifying existing suburban rail, with an underground extension to the whole CBD, with two new stations at the Civic Centre and Queen/Customs Street (De Leuw 1965). New track was proposed from South and West Auckland to the CBD and from the North Shore, via an underground harbour tunnel. New rail lines were also planned for the eastern suburbs and the airport. Existing bus services would feed the rail service. Based on their evaluation and overseas experience, the consultant recommended coordinating the bus and rapid rail system (ibid). ARA's transport and planning divisions supported these recommendations. In April 1966, ARA and the Mayor of Auckland lobbied the Prime Minister for support and funding.

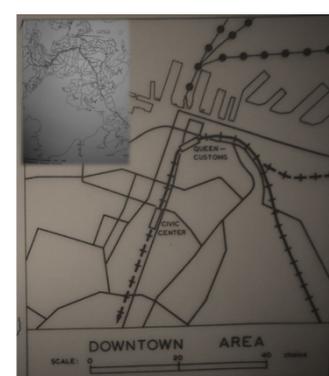
Figure 5: Auckland City Rail Loop Proposals:



Adapted from the Auckland 1946 Ministry of Work Plan



Adapted from the Halcrow Plan for Auckland Rail 1950



Adapted from the De Leuw 1965

Vertical relationship - Central-government response on the Auckland rapid rail project

On May 1966, the National government appointed a committee to organise an independent analysis of the options, evaluate the financial implications, and make recommendations. The committee accepted the complexity of estimating patronage for either system but believed the estimate that the coordinated bus rapid rail system would attract 25 per cent of patronage in the rail corridors, to be 'optimistic'. The committee found that rapid rail did not require new buses as the existing buses could provide the feeder services, although it did require purchase of land near some stations. It was accepted that a co-ordinated bus rapid rail system might not provide congestion relief in the short term but:

'in 15 to 20 years' time the co-ordinated bus rapid rail system would provide the only feasible method of moving large numbers of passengers to and from work at peak hours in a congested city.'¹

The committee raised concerns that overseas experience of rapid rail systems might not be useful in the NZ context, particularly as it was difficult to anticipate exact land development trends in the CBD and wider region, which ultimately provide patronage to rapid rail.

Professor Colin Buchanan's assessment favouring a bus based system due to its flexibility, and lower operating costs and liabilities as compared with rail was considered². Buchanan's report cast doubt on a rail link extension to the CBD on economic grounds based on uncertain future development in the CBD and wider region, low population densities in Auckland and bus system flexibility.

Overall, the committee recommended buses in the short term and rapid rail in the long term, closely linked with the development plan of the Auckland region. Moreover, it suggested that public transport should be directly operated by ARA (or contractors), who should plan for the necessary financial responsibility of public transport operation. ARA expected government to make a decision on Auckland's rapid rail before the November 1966 general election³.

National won this election but Cabinet decided to defer the committee decision for 12 months and asked the committee to re-examine: the need for subsidies, method of financing, date of commencement, precise rail route, construction timetable and establishment of the National Urban Transport Fund which imposed an additional levy on fuel and created a vehicle mileage tax. It was argued that the US Federal Department of Housing and Urban Development under the Mass Transportation Act 1964 provided funds to the Chicago Transit Plan, and this model could be applied in NZ.

The Cabinet meeting of 1 August 1967 adopted recommendations for a bus rapid rail system in Auckland to commence in the 1980s, announced by Prime Minister, Keith Holyoake on 11 August 1967⁴ as:

'the Government has approved recommendations on transport plans for the Greater Auckland area based on a co-ordinated bus and rapid rail system ... it is essential that the Regional Authority and other local authorities should work out a co-ordinated development for the whole Auckland area, into which the mass transport scheme can be fitted. The Government

will co-operate fully in this planning and investigation. The successful introduction of the scheme will depend upon the combined efforts of all interested parties'

The NZ Herald headline read 'Rail-Bus Scheme wins approval' (12 August 1967).

ARA Chairman, H. D. Lambie and former Chairman D. M. Robinson did not agree with the start date and argued that existing traffic congestion would almost certainly force a start at least five years and perhaps eight years earlier. Lambie argued that 'a new approach to the financing of urban transport was needed as a first step' and hoped that the private sector would invest in urban redevelopment in the CBD as, 'the area was of major importance to the whole region'⁵, and that the transit system and its underground extension would shape the CBD and the economy of Auckland.

Horizontal relationship – Auckland City Council response on the Auckland rapid rail project

As early as March 1966, ACC engineers raised concerns about the analysis and recommendations of the De Leuw Cather reports (See Figure 6). They found the consultant report contain a statement of conclusions and does not provide basic technical information and that bus alternatives were rejected with too little explanation. They raised questions about the cost of the rapid rail system, estimated patronage, its suitability for Auckland's size, and claims that it would relieve traffic congestion and attract car users. They asked the consultants and ARA to provide details of: the modal split, peak and off-peak travel time maps, inter-zonal transit movement, and park-and-ride passenger expected. They also noted that the rail system relied heavily on feeder buses, and thus on public acceptance of mode change or transfer to complete the journey. For these reasons, the proposal needed a careful and extensive examination.



Figure 6: ACC perspectives on the Auckland rapid rail project. Source: NZ Herald, 21 September 1967.

In 1967, ACC prepared its own report on the transport proposals. The planners favoured an all bus system, their main concern being the cost of the rapid rail system to be shared across all the Auckland councils. ACC feared that the council might have to increase rates by 25-30 percent to meet its share of the cost, an annual loss being 'out of the question' and 'irresponsible for any local authority'⁶. It was assumed that 'it was very unlikely that ratepayers in areas of the city such as the North Shore, St Heliers and Mt Roskill, who would not receive benefit from the rail system, would agree to bear share of the large costs'. Moreover, the low density urban form and small population was also a concern for ACC referring to American consultant Wilbur Smith and Associates report which argued that rapid rail is suitable for cities with populations of two million and over, as compared with Auckland's then population of 0.75 million.

However, ARA did not accept the ACC arguments saying that 'in the long term an all bus transport system for Auckland would be more costly, would lead to fragmentation and be less effective than a coordinated bus and rapid rail system'⁷. The ARA Chairman stated that 'urban transport is too costly and too important an item in our economy to be dealt with piecemeal or to be left to a number of separate, uncoordinated decisions'. He described overall investment in rapid rail as 'extremely small' compared to the overall economy.

Horizontal relationship – Bus Operators response on the Auckland transport and rapid rail project

In the mid to late 1960s, Auckland bus services saw a sharp loss in patronage; in response companies increased fares, reduced Sunday services, and reduced concession ticketing with ratepayers covering the losses. ARA argued that central government should subsidise bus fares for children, students and disable people from National Roads Board funds⁸.

The private bus operators and the Omnibus Proprietors Association (OPA), supported by research conducted by the Institute of Economic Research, raised their financial positions, in a letter to Minister of Transport⁹. The OPA Chairman stated that 'very few companies are earning even a reasonable profit and many are operating at a loss' and that buses cannot only operate on the basis of 'public interest'. The financial situation had been aggravated by wage increases, bus schedule leaving drivers idle for several hours each day, congestion induced increases in operating and maintenance costs, low patronage, suburban development and commercial activity decline in the CBD. The situation was magnified by spending 'more and more on magnificent highways [and parking buildings and facilities] right into the heart of the cities' which facilitate private cars. 'Every million spent to assist the private car owner is another nail in the coffin of public passenger transport.' Moreover, the financial situation did not allow companies to replace vehicles leading to the unsatisfactory state of many operating in Auckland.

The point was made that 'operators do not want a subsidy' but relief from indirect taxation such as fuel (petrol and diesel) taxes, heavy traffic licences on buses, and exemption from duties on imported vehicles and parts as well as access to government agency loan finance on reasonable conditions to replace and modernise buses, and a national campaign to give publicity and support to public transport. Overall, the bus operators adopted a 'wait and see' policy toward rapid rail and lobbied to improve their financial conditions.

Collaborative relationships between central and local governments on the Auckland rapid rail project

In February 1968 the National government set up a working party tasked with ascertaining the most desirable route for a rapid transit system, and evaluating four alternative transport systems: 1) an average standard minimum all-bus system 2) a modern attractive all-bus system 3) rapid rail using the existing track and 4) rapid rail using new track exclusive to urban transport. Cost-benefit analysis was carried out on 1) the four alternative systems with construction and operating costs being the deciding factors 2) their costs and benefits to roading expenditure and land values and 3) intangible benefits or costs. It was accepted that 'a fully integrated bus system could fulfil the needs at the present time' but that future planning should include restrictions on motor vehicles in the CBD and exclusive bus lanes. It was expected that future technological advances might help in achieving these objectives and could even make the expenditure on rapid transit unnecessary or undesirable.

In the light of the 1965 de Leuw Cather report, the working party considered the proposed north-south route, discussed extension to Papakura in the early 1980s, and considered the need for a line to the North Shore. It was thought to facilitate interchange of passengers between North Shore buses and the rapid transit system, but that the inner city route should not preclude future extension to the North Shore and a future harbour crossing after 1986. The working party advised that 'the single line loop proposed in the inner city is cheaper than ... double line up Queen Street'. They also thought tunnelling for the rail loop to be an economical option.

The committee found the existing railway track imposed limitations on the operation of rapid transit due to: existing freight services, and stability and safety issues due to the higher speeds and weight of modern vehicles. A separate and exclusive track was therefore deemed desirable despite requiring considerable engineering work, including grade-separated road crossings. Initially rapid transit was to serve 25 stations (both existing and new). New stations were to be: on sites with proximity to trip generation; have car access and parking facilities, bus terminal facilities, pedestrian access, and be at least one mile from other stations. All stations will be fully automated including ticket purchasing, and trains were to have one driver. Park-and-ride facilities were proposed for outer stations by acquiring 105 acres of land at cost of \$1.5M. It was estimated that park-and-ride facilities would reduce peak-time car use of 16,000 and save road construction and parking building costs of \$30M. It was considered that overhead electrification would be aesthetically harmful.

ACC proposed the levying of a 3 cent petrol tax over the whole country to in the short term upgrade Auckland city transport (public transport)¹⁰. In the medium to long term, they suggested using two thirds of the petrol taxes in Auckland with one third being used to upgrade transport systems in other cities. They stated that 'there is no alternative to rapid rail', and that the public would prefer this use of funds over road schemes. Central government was inclined towards the 3 cent petrol tax increase, but only if restricted to the Auckland region. ARA claimed that the region 'paid more than a fair share of Roads Board tax in relation to works in Auckland' and that this argument also applied to general taxation. Central government also argued that in the absence of reliable estimates of patronage it would be likely that suburban trains in Auckland would need subsidisation. Because since 1954 no subsidies had been provided to railway from general taxation to support suburban operation, Auckland authorities would need to find their own ways of funding rail losses.

On June 1969, Cabinet approved the 'establishment of a Steering Committee to direct the second stage investigations of the report of the working party on Rapid Transit in Auckland.' The Steering Committee set up a technical sub-committee to investigate for instance track gauge, possible line extensions, cost benefit analyses, and town planning implications.

On 26 August 1969, ARA requested the Ministers of Works, Finance and Transport to try to start construction in late 1970, so rapid rail could start by 1975. Their arguments were based on keeping cost escalation to a minimum and reducing the adverse effects of the continuing decline in patronage on the existing public transport system.

On 29 August 1969, the Minister of Finance prepared a Cabinet paper in which he agreed that if the rail component of the rapid rail system was to be owned by the Government and operated by the Railway Department, 'it is reasonable that the Government should provide the capital and construct the facilities' for ARA. However, the Government would charge ARA full operating costs, plus overheads and management fees, depreciation and interest on all capital. It was also proposed that 'financing, both capital and operating, be kept at "arms length" from normal railway operations.'

In September 1969, Cabinet agreed 'it is reasonable that the government should provide capital and construct facilities' for the Auckland Rapid Rail Transit (Letter CM 69/36/18 from the Prime Minister Office). The Cabinet meeting on October 1969¹¹ agreed that:

The construction of Rapid rail in Auckland will be funded by the central Government and operated by the Railway department for ARA. The Railway Department operates the rapid rail separately ... and on the basis of contract price which includes, operating cost (including train operating staff wages, cost of relief services and cost of space for parking), overheads, management fees, depreciation cost, interest on capital investment as per the normal railway practices. ARA would determine fares, timetables and frequencies and would receive revenue from fares, advertising and shops. Moreover, the authority will provide parking facilities for the system. It was made clear that subsidies would be decided later.

However, Cabinet agreed that construction would not start until the cost-benefit study was completed and the Carter Committee of Inquiry recommended financial assistance/subsidies for public transport operation. Cabinet showed its willingness to move swiftly to reduce cost escalation by making legislative changes, if required, but it was anticipated that construction would not be completed until 1977.

D. M. Robinson, Chairman of the Rapid Transit Committee, did not accept the financing part of the transit scheme agreed by Cabinet decisions, because of central government's unwillingness to provide subsidies for transit operation, referring to it as 'disappointing', 'status quo' and 'wrong in principle'. He did accept that the 15 local bodies would benefit from the project, but in the absence of central government commitment, these local bodies would have needed to increase their rates by 15.8 percent, which is

'obviously unacceptable ... It is not reasonable to expect that local authorities, not on the railway route, and which will not receive a direct benefit from the railway part of the transit

scheme, will willingly agree to pay a share of the annual costs – at least not without strenuous opposition¹².

He went on that it is even more difficult for local bodies to find extra funds without any new source of income and that this would cause a ‘crushing burden’ on ratepayers. He argued that the railway department was subsidising existing suburban rail services in Auckland and that they would benefit from savings on this due to the rapid rail project. He stated that ‘the financing of the railway part of the rapid scheme is the most important problem facing Auckland [on which] the whole future planning and development of Auckland depends’.

Discussion – Why did the rapid rail project fail to proceed?

The historical overview clearly shows that the total number of people using public transport in Auckland was highest between 1946 and 1958. However, the opening of north-western motorway (1952), southern motorway (1953) and the Auckland Harbour Bridge (1959) and the adoption of motorway based 1955 Transportation Plan and 1965 Comprehensive Transportation Plan set priorities for Auckland transport. Elsewhere, Imran and Matthews (2010) have called this period a ‘critical juncture’ in history when the range of transport options was narrowed in favour of road transport. During this critical juncture, popular tram lines were removed and the rapid rail project was resisted by delaying tactics from central government. Ultimately, loss of patronage removed support for any investment in public transport in Auckland. Review of public transport planning and the rapid transit project provides a fascinating example of the tensions between vertical and horizontal relationships at a particular time. Despite the unquestionable benefits rapid rail can bring to Auckland, there have been institutional, planning, funding and political factors that offer possible explanations for the central-local government relationships. The primary purpose of this section is to discuss these factors that are even now largely present in the current CRL proposal.

a) Institutional factors: Institutional factors refer to the organisations that are responsible for or can influence public transport planning or decisions in Auckland. History shows that public transport planning was undertaken by a range of governmental departments at the local (ACC and other councils), regional (ARA) and central government (Ministries of Works, Transport, Treasury and NZ Railway) levels. Moreover, a range of bus operators and the OPA were responsible for the operation of public transport services. These multiple organisations had their own priorities/agendas and created conflict/doubts about rapid rail, failing to look at the public transport system from an holistic perspective. For example, ACC opposed ARA on rapid rail, preferring a bus-based solution. The private bus operators had their own concerns about subsidies and tax exemptions and did not support rapid rail. Therefore, at a horizontal level, there were several conflicting and fragmented voices which provided the vertical level (central government) with an excuse to impose several conditions on the project which made it impossible to proceed not only in the 1960s, but now in 2013 as well. However, such conditions were not placed on local government when building motorways in the 1950s or currently on roads of national significance (RONs) projects. This shows that local government in New Zealand is dependent on political, legal/regulatory and financial resources from central government. When central government provides a clear and focused directive (such as the National Roads Act 1953 and the GPS 2012), then the regional and district level councils are required to respond due to their hierarchal relationship.

b) Planning factors: The Planning factors refer to land use and public transport service planning which both affect rapid rail project.

Motorway building in the 1950s and 1960s generated dispersed urban development patterns and increased car ownership by almost 11 percent per annum for the next twenty years (Mees & Dodson 2007). The decision to remove the popular tram network further cemented-in a low density urban form, which became the main argument against rapid rail in Auckland in general and the CBD in particular. The rapid rail was proposed when trams were popular and public transport patronage at its highest, but not advanced until patronage had dropped significantly, and with the aim of stopping/reducing the pace of urban sprawl and car usage. However, with central government inclined to follow overseas technical opinion on 'predict and provide' motorway building solutions rather than the 'predict and prevent' approach, they chose not to provide funding for rapid rail (Gunder 2002). Eventually, this led to more urban sprawl making rapid rail even harder to achieve.

1960s public transport service planning did not adapt to low density urban development patterns, continuing to service traditional 'suburb to city' commuter movements despite travel needs being scattered throughout the city (Badcock 1970; William 1975; Fitzsimons 1981). Rapid rail proposal clearly shows that there is a need to coordinate or integrate rail, bus and ferry services to serve the urban development pattern. Rail services were competing with the bus services that should have been feeding rapid rail. This situation has not changed over the following fifty years, and in some cases has become worse due to the Transport Services Licencing Act 1989 and the Land Transport Management Act 2002 (Ashmore & Mellor 2010; Gibson 2010). Currently, the Auckland public transport network provides dense and complex services where different modes and operators compete with each other (Stone *et al.* 2012). This situation makes the rapid rail project of the 1960s appear visionary.

c) Funding factors: Funding is the most important factor that shows real commitment to a specific project. In the 1950s, National Road Board funds were allocated by central government to finance Auckland's motorways. This practice has continued to the present day with the establishment of Transit NZ in 1989, Transfund in 1995 and the NZTA funding model in 2008. This kind of commitment has been seriously lacking in case for rapid rail in Auckland. Historical review shows that establishing a National Urban Transport Fund and enacting legislation similar to the US Mass Transportation Act to secure rail routes and fund construction of rapid rail projects in Auckland and other NZ cities was discussed, but not advanced. Moreover, there was a fear that such projects would exponentially increase property taxes/rates generating muted support from some local councils. Conversely, local government in Auckland has easy access to central government funding for road based development and full support for motorway projects (for example, the National Road Board funds and RONS funds). This funding structure was very powerful in the conflict between ACC and ARA solutions, and central government exploited these differences to avoid funding rapid rail. In short, all discussions on rapid rail in Auckland in the 1960s and CRL in 2013 hinge on funding issues: contributions from different organisation and finding innovative funding methods to build rail-based public transport system.

d) Political factors: Politics (or political beliefs) is another important factor that influences rapid rail decisions and campaigns in Auckland. The rapid rail was used during local and national election campaigns in the 1960s and 1970s, and also in Len Brown's mayoral campaign in 2010. Sir Dove-

Myer Robison, the Mayor of ACC and the Chairman of ARA Rapid Transit Committee was very committed to rapid transit, earning the rapid rail in Auckland the nickname 'Robbie's Rapid Rail Scheme' during a local government election campaign. This historical review clearly shows that rapid rail was supported by the National government of Keith Holyoake in the late 1960s and later the Labour government of the early to mid 1970s, overriding opposing political ideologies. However, this project later suffered from being linked with left-wing ideologies. Both governments failed to provide funding for this project and subsequent free-market ideology saw privatisation of public transport services. Regional councils' lack of ability to exert influence on public transport planning meant that this project was not able to proceed (Ashmore & Mellor 2010; Gibson 2010). A more recent political example was the 2010 mayoral campaign for the new Auckland Council. In this campaign, successful mayoral candidate Len Brown championed public transport improvements. Plans to improve public transport include implementing integrated ticketing, electric trains and the construction of a CBD rail link (Auckland Council 2012).

In summary, institutional, planning, funding and political biases against rapid rail explain central-local power relations in Auckland. These biases interrelate and, overlap making them hard to distinguish. However, the power of central government to control financial resources is critical to their power relationship with local government in Auckland. History clearly shows that rapid rail was objected to on the basis of technological selection (buses versus rail), physical location (CBD), patterns of urbanisation (low density land uses) and funding arrangements in the governance of Auckland. Consequently, public transport planning becomes locked-in to political decision making concerning the nature of the problem and its solution, eventually creating political path dependence.

Conclusion

This paper provides an historical overview of public transport planning and policy in Auckland to explain central-local relationships in rapid rail project. The concept of political path dependence has been used as a theoretical framework to investigate the history of, small events and circumstances against which rapid rail has been conceived, argued over and advanced by local government, and accepted, twisted and resisted by central government. This research concludes that current barriers to public transport can be understood by analysing the history of central-local relationships, local politics, and its relationship with wider political, social and corporate policy communities.

Historically, public transport in Auckland has been operated by public and private authorities and companies. Throughout, competition has existed between buses and trams, buses and rail, municipal buses and private buses, and between private bus companies, all undermining the public transport network and eventually leading to a loss of patronage. There are some examples of co-ordination, such as between rail and railway owned feeder buses and private ferry services. This started the creation of a connected and integrated public transport network which would be advanced by a rapid rail project.

During and immediately after the critical juncture, a repositioning of the central-local relationship in Auckland can be observed, especially with regard to rapid rail, for which central government developed its own myths, arguments and preferences based upon institutional, planning, funding and political biases which became stable overtime. There was a visible lack of co-ordination among

the horizontal actors which was manipulated by central government. Interestingly, there has been ongoing co-ordination between local and central government on Auckland's motorway projects, but such co-ordination was lacking for rapid rail. Lack of funding by central government limits the ability of local government to identify and develop public transport projects. As a result, local government in Auckland has little or no choice to develop strong relationships with central government and adopt policies and projects which favour vertical alignment in a wider political-institutional context.

There are interesting similarities between the response of the current National-led government to Auckland's CRL project and the events of the late 1960s. This response reflects stability; a symptom of path dependence which does not allow change over time. The main implicit assumption underlying central government responses is that patronage increases are required before investment in rapid transit. However, such evidence was not required for motorway spending either in the 1960s or in 2013. The analysis and discussion confirms political path dependence, which suggests that the present response of central government politicians is a reflection of prior events and therefore understanding those events can help to explain the current situation. There is of course a role for central government in future public transport development in Auckland, but how this role could be used following the creation of the Auckland Council to break path dependencies and develop a new and sustainable path needs further research.

Acknowledgement: We would like to acknowledge the financial support of the Royal Society of New Zealand, Marsden Fast-Start Project No MAU1208 which helped the authors to conduct this research.

¹ Confidential draft of the urban transportation proposals for the Auckland Metropolitan Region

² See the Assessment of the City Transit Proposals by Professor E. Buchanan & Partners, July 1966

³ NZ Herald, 29 Sept 1966

⁴ Press release from the Prime Minister's office

⁵ NZ Herald, 12 August 1967

⁶ NZ Herald, 21 September 1967

⁷ NZ Herald, 22 September 1967

⁸ NZ Herald, 20 and 21 September 1966

⁹ Chairman Omnibus Proprietors' Association Letter dated 21st February 1967

¹⁰ File T60/4/1

¹¹ Letter No. CM 69/41/50 and Appendix I

¹² NZ Herald, 20 October 1969

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Comparing Neglect Rates in Historic Cities

Agricultural preservation as potential remedy

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The effects of city decentralization and counter-urbanization of the American landscape have resulted in simultaneous negative impacts on both historic structures and agricultural landscapes. Rapid conversion of farmland has helped to facilitate the relocation of both populations and commercial activities in communities across the United States, leaving inner cities replete with functionless, unused, and unmaintained heritage structures. As civic core areas have become shells of their former selves, many once-vital structures have been removed while others have been abandoned and left to decay—a process known as demolition by neglect. While historic preservation efforts have attempted to salvage these historic structures, these efforts have initially focused on the preservation of each buildings individually, based on its historical value and architectural merit, not taking into account its role in a constantly changing contextual landscape. Attempts to counteract this process and the negative effects of fringe developments through land preservation have also gained momentum since the 1970s. In response to growing concerns about the climbing rate of neglected historic structures, this research considers the factors that affect ways to measure and sustain the viability of these structures while also protecting their historical integrity. Using multiple case study comparisons based on indicators obtained from viability and historic integrity models, this study compares the rates of demolition by neglect of two urban historic colonial towns in Bucks County, PA to determine whether the preservation of peripheral agricultural lands has aided in decreasing the rate of this neglect. The results indicate that, based on results using a multi-case pattern matching method, as amount of preserved farmland increases, the rate of demolition by neglect decreases.

Keywords: demolition by neglect, agricultural preservation, historic preservation, urbanization

Demolition by Neglect

Introduction

Rethinking spatial planning of historic preservation for more proactive forms of heritage management has been an iterative process since the nascence of historic preservation in the United States. The approach of American preservationists differs from European heritage management by remaining primarily locally regulated, while European cities, especially in the United Kingdom and the Netherlands, practice an area-based approach when managing the historic built environment (Doratli, 2005). This paper seeks to understand if regional based approaches to regulating heritage structures in the United States directly affect demolition by neglect (DBN) or if they are simply indirect influences. Theories which posit that growth management and historic preservation are intrinsically linked suggest that the connections between the two are not fully understood and that state and local authorities alone do not sufficiently meet the needs of conservation of the built heritage (Listokin, 1997; Pickerill and Pickard, 2007). This research expands on these theories by comparing amounts of neglect in historic boroughs with differing amount of peripheral preserves farmlands to expose a correlation between an increase in agricultural preserves and a decrease in DBN. The paper compares the historic origin and heritage fabric of two historic urban boroughs in Bucks County, Pennsylvania, a leading region for sprawling development, historic preservation, and agricultural preservation in the United States. The county utilized peripheral agricultural management practices in an effort to limit the impact of sprawl on its historic fabric.

Demolition by Neglect

Too often, historic preservation is presented as a matter of technocratic planning and small scale architectural details, but it involves much wider considerations. Mediation of the historic built environment considers not only the structure itself, but also its. The impact that American centrifugal development has had on inner-city, historic structures—while both vitality (people) and viability (function) have fled to the peripheries of American cities—has been dire, leaving many historic structures to rot as vacant, unused shells of their former selves. As cities expand across countless parcels of the American landscape, they leave in their wakes—especially in historic centers—vacant lands, derelict lands, and building stock no longer suitable for their original purposes (Trieb, 2006). This expansion often accelerates the removal of heritage structures that have deteriorated due to a lack of use, a process known as demolition by neglect (DBN).

DBN can be defined as the destruction of a heritage landscape or area through abandonment or lack of maintenance (Leatherbarrow & Mostafavi, 1993). It has become an epidemic within historic areas and a challenging issue for state and local authorities. This process is a recognized heritage planning issue globally, and as of 2007, the number of demolition applications being submitted was on the rise (Wallace & Franchetti, 2007). The term DBN gained popularity in the early to mid-1990s and was coined to raise awareness of the loss of historic structures. Unfortunately, little to no research was conducted on the topic, and until recently, the term existed largely as an afterthought in preservation while the phenomenon continues to plague historic structures. The recent economic recession only exacerbated this condition as adaptive reuse projects were stopped mid-development or preservation programs grappled with significant reductions in funding. In 1994, the United States Preservation Commission Identification Project Report listed neglect as the most difficult situation

for local commissions to solve, with only 25 percent of respondents reporting they had the authority to protect designated structures from DBN (Goldwyn, 1995). Contemporarily, historic preservationists attempt to counteract DBN by placing restrictions on individual structures that disallow their removal. This strategy can sometimes only delay a structure's inevitable demise (Jigysau, 2002).

DBN can contradict the traditional philosophy of historic preservation in America (Cook, 1996), the salient reason that oftentimes not enough is done to prevent this condition. For example, preservation policy places strong value on factors considered intangible, such as architectural merit and societal importance. Preservation philosophy demands that property owners recognize and accept this value. Value depends on interpretation, and the value preservationists place on a structure is not always the same as the value a property owner may hold on that structure. Simply put, economic value can more easily be measure based supply and demand factors for a specific building, while aesthetic value is often much more difficult to quantify. Most American historic structures are regulated on a unit-by-unit basis—even those within historic districts—and are assessed primarily according to their ability to look as they did at a particular historic point. According to Jigysau (2002), historic structures have two fundamental dimensions: the first deals with aspects of historic integrity, but the second deals with their relationships to the living environment in which they exist. It is important to examine both the historic structure itself and its dynamic regional context to understand the process of DBN fully. Listokin, et al. (1998) argue that historic preservation should function as both a community development and large-scale revitalization tool. Although historic preservation at this scale can lead to gentrification and displacement of low-income households (Smith, 1999), the idea of examining the context of preserved built environments is an initial step in a positive direction regarding prevention of neglect.

Research Design and Methods

Research Strategy

Using a historical-interpretive (Groat & Wang 2002) sequential, mixed-method (Creswell, 2009) approach, this exploratory research (Singleton & Straits, 1999) examines the correlation of peripheral agricultural preservation and DBN in historic colonial boroughs. The research design consists of a three-tiered process combining multiple types of data to understand the information by means of triangulation (Tashakkori & Teddlie, 1998). The research assesses differences in the historic growth of Doylestown, PA and Bristol, PA, surveys the conditions of structures within each borough, then compares the results across cases. This cross-case comparison correlates towns with differing levels of peripheral preserved farmlands and assesses the ability of these towns to retain their historic structures through the prevention of DBN. The independent variable is the amount of preserved agricultural land surrounding each study site. Peripheral farmland preservation is a joint effort by non-governmental organizations and local governments to set aside and protect examples of a region's farmland for the use, education, and enjoyment of future generations. Often a part of regional planning and national historic preservation, these farmlands are preserved on the periphery of urbanizing areas in an effort to contain and sustain civic growth. The dependent variable is the rate of DBN within each urban colonial town.

Data Collection and Sampling

Jigysau (2002) identifies both historic integrity and viability as dimensions that should be examined with regard to DBN. There are, however, no agreed-upon variables to use in studying this process. To alleviate this quandary, Newman’s model (pending) of measuring neglect was utilized which combines existing data gathering models of historic integrity (Berg, 1998; Birnbaum, 1994, 2007; Birnbaum & Hughes, 2005, Dick, 2000; Carr, 2005) and those that use structural viability (Ravenscroft, 2000; New Castle City Council, 2005; Cooke, 2005) into five explanatory variables. The explanatory variables utilized in the model are time frame of construction (the time frame in which the structure was erected), architectural modification (whether or not the structure has been altered), land use change (the consistency of building function), physical condition (the quality of the condition or appearance of each structure), and assessed value (the fair market value of each structure sampled). Each variable is divided into three categories which are used as measures (See Figure 1).

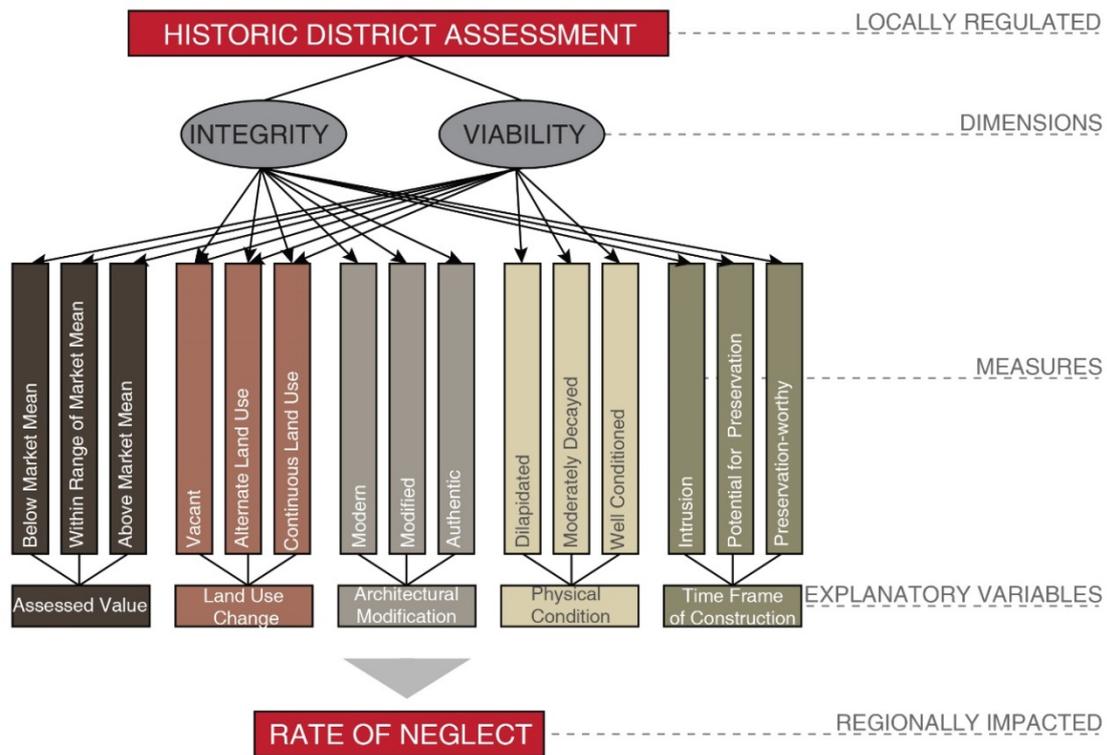


Figure 1: Newman’s Conceptual Model for Measuring Neglect.

Figure-ground morphology assessments (based on information obtained from the Sanborn Fire Insurance maps and aerial photographs) were overlaid to identify the areas likely to have high concentrations of historic structures. The areas where the maps from all years overlap were outlined and served as the sampling frames, a method known as non-independent spatial sampling (Montello & Sutton, 2006) based on a clustered probability sampling approach is used. Bias is reduced by using

large sample areas of 8 to 12 blocks and a type of clustered sampling known as multi-stage area sampling (Montello & Sutton, 2006). Each cluster is further divided into sub-clusters which are randomly selected, and the units within these clusters are sampled. Existing blocks within the towns serve as features that break the continuous space into groups. Point locations (buildings) were then sampled within these areas.

To carry out the data analysis phase, Yin's (2009) method of multi-case pattern matching is used. This method compares an empirically based interpreted pattern to an existing or predicted one that is congruent with the specified hypothesis. Because no prior studies provide a suitable pattern for comparison, the results must be compared with predicted patterns. This analytic pattern matching strategy employed is called "non-equivalent dependent variables" (Yin, 2009). This is used because the variables used come from other research designs. The term "non-equivalent" means that predictions rise or fall due to the numerical amount of components present or absent in the dependent variable.

Study Area

The specific unit of analysis is each individual historic colonial borough (Doylestown, PA and Bristol, PA). The units of analysis are both located in Bucks County, Pennsylvania. Bucks County Pennsylvania is replete with heritage landscapes, and the state has adopted the practice of agricultural preservation to aid in conserving the historic distinctiveness that characterizes its townships and boroughs. Agriculture is both the leading industry and a deeply held symbol of heritage in the region (Bourke, Jacob, & Luloff, 1996). These two characteristics have made Pennsylvania the nation's leader in agricultural preservation in terms of amount of monetary resources devoted to farmland preservation. Bucks County, PA is under deep suburban developmental pressures. Once a destination in its own right, the county is currently absorbing the exurban developments of both New York City and Philadelphia. Located 45 minutes north of Philadelphia and 1.5 hours from New York City, rural Bucks County is absorbing much of the exurban development of the neighboring two metropolises. The county lost 70% of its farmland between 1950 and 1997, a drop in acreage from over 260,000 to less than 84,000 (U.S. Department of Agriculture 2005). The region is also ranked number two on a list of the nation's 20 most threatened agricultural lands (Olson & Lyson, 1999).

Although many other causal mechanisms contribute to DBN (such as local leadership, ownership attitude, neglect by policy, land use management strategies, political leadership, internal economic needs, grassroots support, economic condition of the towns, external funding, and reinvention of civic image, etc...) this research is searching for a correlation, not causation. Thus, controlling for these other variables, to the extent possible, is done through site selection. Studying units of analysis within the same political boundary (Bucks County) with similar sizes, populations, and ages helps to control for other intervening variables (See Table 1). Each unit of analysis practices similar methods of agricultural preservation. Doylestown, PA and Bristol, PA, the two sites under investigation, are both located within this environmentally threatened county. To calculate the amount of preserved farmland surrounding each borough, central place theory (King 1984) was used to define a hinterland boundary of the area which highly impacts towns of this particular size and population. Each borough is listed on the National Register of Historic Places (National Trust for Historic Preservation, 2008). Moreover, each town practices similar strategies of agricultural preservation,

including purchase of development rights. Doylestown also utilizes agricultural security areas, a form of agricultural zoning.

Research Question/Hypothesis

This paper seeks to understand if regional based approaches to regulating heritage structures in the United States directly affect demolition by neglect or if they simply have an indirect influence. In essence, has the preservation of peripheral agricultural lands directly aided in decreasing the rate of demolition by neglect? If this is true, primary causes of DBN such as function relocation and deferred maintenance should also decrease as amount of agricultural preservation increases. This paper hypothesizes that preserving peripheral agricultural lands as a land use management scheme aids in decreasing the rate of DBN of historic structures within town centers and that as amount of peripheral preserved farmland increases, there is a lower frequency of neglect in historic structures.

Scales of Analysis

The comparison contains three levels of analysis: a micro scale evaluating each case according to the measures, a macro analysis evaluating each case according to the explanatory variables, and a cross-case analysis that compares overall neglect rates of each case. These three scales helped to identify the correlation as well as identify specific variables which had the highest impact on neglect. The micro analysis assessed each case by measures using a nominal scale (1's and 0's) and the macro analysis of the explanatory variables utilized an ordinal scale (1's, 2's, and 3's). Each measure was placed on a gradient where a score of "1" indicated high neglect, "2" indicated moderate neglect, and "3" indicated low neglect. Each case was then tested against predicted patterns for each scale of measurement using totals scores as a means of assessment. Higher scores indicated lower neglect in occurrence. The rate of neglect was calculated by taking the ratio of the total score from the macro analysis (actual condition) divided by the total of all points possible (assuming no neglect in occurrence). The result from this calculation was subtracted from 100% to determine an overall neglect rate.

Doylestown and Bristol: Historical Comparisons

Doylestown

Before it obtained the title of Doylestown, the small urban borough had only a few small log homes scattered amidst heavily forested lands. The town's origin dates back to the mid1700's (Duess, 2007). Doylestown began as a tavern strategically located at the intersection of two streets connecting Philadelphia to the northern cities of Pennsylvania, allowing the hamlet to blossom into a popular urban townscape. William Doyle, the founder, moved from Philadelphia to the Chippewa Township in 1727 and purchased 50 acres of property to give birth to the borough (McNealy, 2001). As Bucks County's political boundaries were reshaped into the clumsy trapezoidal shape it holds today, and the county seat was moved from Newtown to the more centrally located Doylestown in 1813, although the borough was not officially incorporated until 1838. By 1931, the advent of the automobile and improved highway service had put the last trolley line out of business and early compact streetcar suburbs began their transformation into automobile suburbs. As in many small towns, the postwar decades also brought a new competitor to the downtown business district: the

shopping mall. By the 1960s, the toll could be seen in Doylestown by the numerous vacant buildings and dilapidated storefronts in the center of town.

The Bucks County Redevelopment Authority responded with a federal urban renewal scheme that called for the demolition of 27 historic buildings. The local business community objected to such wholesale clearance and responded with its own plan, called Operation '64—The Doylestown Plan for Self-Help Downtown Renewal. This private initiative was successful in saving Doylestown's old buildings and historic character, while improving business at the same time. In an effort to protect and enhance one the historic character of the community, the borough established a Historic and Architectural Review Board (HARB) in 1972.

By the 1980s, the borough began to see an increase in the demand for the convenient in-town living that Doylestown offers. This resurgence spurred a new market for both infill housing and commercial space that continues today. One result has been increased investment by way of infill, rehabilitation, and adaptive reuse along some of the borough's thoroughfares. By the end of the 1980s, the downtown business district was again showing the impact of massive new competition from the latest wave of suburban shopping centers, as well as the recession that hit hardest in the northeastern states. In response, Doylestown borough's city council established a volunteer group to formulate plans for the downtown area made up of civic-minded representatives from business organizations, government, and the residential communities. This effort resulted in streetscape improvements, including cast-iron street lamps and brick pavers, facade improvements and other beautification efforts, and the establishment of a Main Street Manager Program.

After the existing Bucks County Courthouse was built in Doylestown in 1960, residential expansion within the town began to increase. Much has changed in the last five decades as the county population has mushroomed. Currently, the town's economy is largely tourism-based, creating a need to preserve its historic structures. The downtown has rebuilt itself largely by turning to an out-of-town audience based on heritage tourism. As the Philadelphia metropolitan area expanded from southern into central Bucks County, the fields and farms of the communities around Doylestown quickly began to sprout housing developments. This development brought thousands of people to the area, and the town was well positioned to capitalize on its proximity to the growing metropolitan population.

Since the 1990s, the population within the borough has decreased by around 500 persons, or 5.5% (U.S. Census, 2009). The large increase in population in the early 1990s has been reversed, and the current population is about the same as in the 1970s, when agricultural preservation programs began in the county. This decline in population may have caused a dramatic rise in the rate of demolition by neglect of historical structures within the town. However, the current median income level of Doylestown is \$58,689, about \$8,000 higher than the state itself (U.S. Census Bureau, 2009). The high amount of income may help to counteract this population loss as current inhabitants of existing structures have more money to spend on maintenance and upkeep. Since 1970 the borough has added more than 1,000 housing units. However, its population has remained fairly stable due to a decrease in the number of persons per household. This demographic shift parallels national trends toward smaller household size due to an aging population, more single-person households, later age of marriage, higher rates of divorce, and other factors.

Bristol

More than three centuries have passed since the first European settlers occupied the 262 acres along the Delaware River now known as Bristol borough. Many original homes are still standing as part of the three centuries of architecture reflected in its residences and public building. Founded in 1681, Bristol is Bucks County's largest borough and oldest town. From its earliest days, Bristol was a center of milling and industry. First settled as Buckingham in 1681, Bristol was used as a port and dock, at that time the county's only seaport. It was an aristocratic town, and eventually became one of the first spas in America. It was actually named by William Penn after the name of his English birthplace (McNealy, 2001). Never actually settling on one primary source of revenue, the town utilized the Delaware River to create multiple venues for fiscal income. Due to its location along the Delaware River, the town had ready access to water with which to pamper elite settlers and the high-income population. Although shipbuilding was its first primary industry, the building of the Delaware Canal and the Pennsylvania Railroad, the borough eventually became the home of many factories. A street was built to connect the river town to Philadelphia, and Bristol became the first county seat in 1700; by 1720 the town was officially incorporated. The mill town would eventually lose its central location as the county's boundaries expanded, and the county seat was moved to Newtown and eventually to Doylestown.

Currently, Bristol is a riverfront community with significant tourism but a greater dependence on manufacturing. Bristol's population has fallen dramatically and continuously since the 1970s. In fact, since 1990, the borough has seen a decrease in population of 4.8%, or nearly 500 persons (U.S. Census, 2009). Comparatively speaking, Doylestown has lost more of its inner-city population, but both boroughs have had significant losses.

Historic Preservation Policies and Programs

Pennsylvania's local government structure gives townships and boroughs (local governments), not counties, the authority to regulate historic preservation ordinances and policies. It is important to compare the different strategies employed by each local government. The state has enabled townships to zone for historic districts under Pennsylvania Act 167. Using this state law, townships and boroughs can designate historic districts, appoint an advisory Historical Architectural Review Board (HARB), and then regulate, within the limits of local law, changes to the exteriors of buildings.

As noted, the entire cities of Doylestown and Bristol are both listed on the National Register of Historic Places, which gives their locally zoned historic districts national and state benefits. Although being listed on the National Register places no restrictions on private property, state recognition of historic districts allows for a larger scope of protection of historic structures. A listing on the National Register of Historic Places constitutes federal governmental acknowledgment of a historic district which can also make the location eligible for federal financial incentives and qualifies a structure or geographic location for similar state-level benefits, such as qualification for tax incentives. In addition, the property can gain a greater level of protection under state law (National Register of Historic Places, 2010).

Local historic districts usually enjoy the greatest level of protection under law from any threats that may compromise their historic integrity. This is because many land-use decisions are made at the

local level. The county government provides advice to local governments, but does not have legal authority. Policies employed by both Doylestown and Bristol's local governments include historic district zoning, tax incentives for preserving a historic structure, design guidelines for new developments within the historic district, and transfer of development rights for the owners of preserved structures. These policies are implemented to ensure that new construction is compatible with the character of a historic district and that existing historic structures are preserved, rehabilitated, renovated, adaptively reused, or restored. It has been proven that using multiple policies simultaneously aids in increasing historic integrity (Collins, Waters, & Dotson, 1991). Doylestown and Bristol appear to be utilizing similar combinations of existing internal strategies in place to retain historic character.

In addition to these policies, each case under investigation also utilizes the Main Street Program as a framework to retain the town's traditional layout and historic character. Main Street is a comprehensive, community-based revitalization approach, developed by the National Trust for Historic Preservation in 1980. Pennsylvania's Main Street program is one piece of the overall community and economic development plan of the state's Department of Community and Economic Development (DCED). The five-year program encourages revitalization by leveraging private dollars and requiring ongoing, local support, as evidenced by the establishment of an organization and documented financial commitment from the community. The program is based on a four-tiered process: design, promotion, organization, and economic restructuring (National Trust for Historic Preservation, 2008).

There are three key differences which the initial evaluation has surfaced (See Table 1). First, and seemingly the most important, is that Doylestown utilizes Heritage tourism as its primary means of revenue. While Bristol generates some level of income from heritage tourism, it does not generate their highest fiscal contribution. This indicates that Doylestown probably puts more money into maintaining their existing historic structure than the other two localities to help increase its primary source of revenue. Secondly, Bristol has a smaller median income. This indicates that the owner of the structures residing within Doylestown should have more money to spend on keeping their structures maintained than in Bristol. However, Doylestown, housing totals have actually decreased since 1970. This suggests that function relocation may not be highly impacted by the practice of farmland preservation.

Comparing Neglect in Historic Boroughs

Survey Results

Within the sample frame, enough samples were taken from each case to produce a 90% confidence level and a 10% confidence interval. Doylestown had 202 total structures within the sample frame, and 65 structures were randomly selected in clusters of seven within each block to achieve a 90 percent confidence level (See Figure 2). Bristol had a population of 126 qualifying structures and required 55 samples to achieve the desired limits (See Figure 3). Results were then adjusted to compare across cases as though an equal number of samples had been taken from each case. Analysis revealed a 73% mean pattern matching rate with building condition having a 100% matched pattern rate and the other four explanatory variables scoring 67%. Although a positive correlation was revealed when compared to predicted patterns, as the amount of preserved farmland

increased, the ability to retain historic structures increased. On a Micro scale, Doylestown had a large number of older buildings still in existence and also had the lowest amount of buildings built between 1971 and the present.

Table 1: Comparison of Historic Preservation Policies.

<i>Doylestown</i>		<i>Bristol</i>	
Current Population	8227	Current Population	9923
Current Size	2.2m2	Current Size	1.9 m2
Date Founded	1745	Date Founded	1720
Preserved Farms	46	Preserved Farms	1
Total Acreage	3323.38	Total Acreage	99.9
Preservation Strategy	ASA/PDR	Preservation Strategy	PDR
National Register Listing	Yes	National Register Listing	Pending
Transportational Origin	Intersection (Hwy202-Hwy611)	Transportational Origin	Waterway (Delaware River)
Dominant Culture	English/Scottish-Irish	Dominant Culture	English
Commercial Origin	Alcohol	Commercial Origin	Spa
Typology	Courthouse Town	Typology	Mill Town
Historical Connections	Philadelphia-Milford	Historical Connections	Philadelphia-Bristol
Town Size at Origin	Hamlet	Town Size at Origin	Hamlet
Historic/Present Economies	Civic to Tourism	Historic/Present Economies	Resort to Manufacturing
Defined Area of Historic Character	District	Defined Area of Historic Character	District
Recognition Level of District	National-State-Local	Recognition Level of District	National-State-Local
Historic Pres. Policies	HD Zoning Tax Incentives Design Guidelines TDR's	Historic Pres. Policies	HD Zoning Tax Incentives Design Guidelines TDR's
HP Promotional Programs	Operation '64 Main St Program	HP Promotional Programs	Main St Program
Pop. Change since 1990	-5.5%	Pop. Change since 1990	-4.8%
Housing Total since 1990	-100	Housing Change since 1990	+100

Doylestown had fewer 1941 to 1970 built buildings than Bristol as well as more modern structures. This result could be due to the differences in preservation policies on the local level. Also, amount of preserved farmland increased, the ability to retain continuous land uses over time could not be positively correlated. Land use remained fairly consistent through time in Bristol, more so than in Doylestown, which increases the integrity of its historic structures. Doylestown did have more buildings with alternate uses and a lower vacancy rate than Bristol (See Figures 4 and 5). These patterns suggest that the amount of agricultural preservation may not be directly correlated with keeping a land use consistent within a structure, but the amount of buildings with at least some useful function increases.

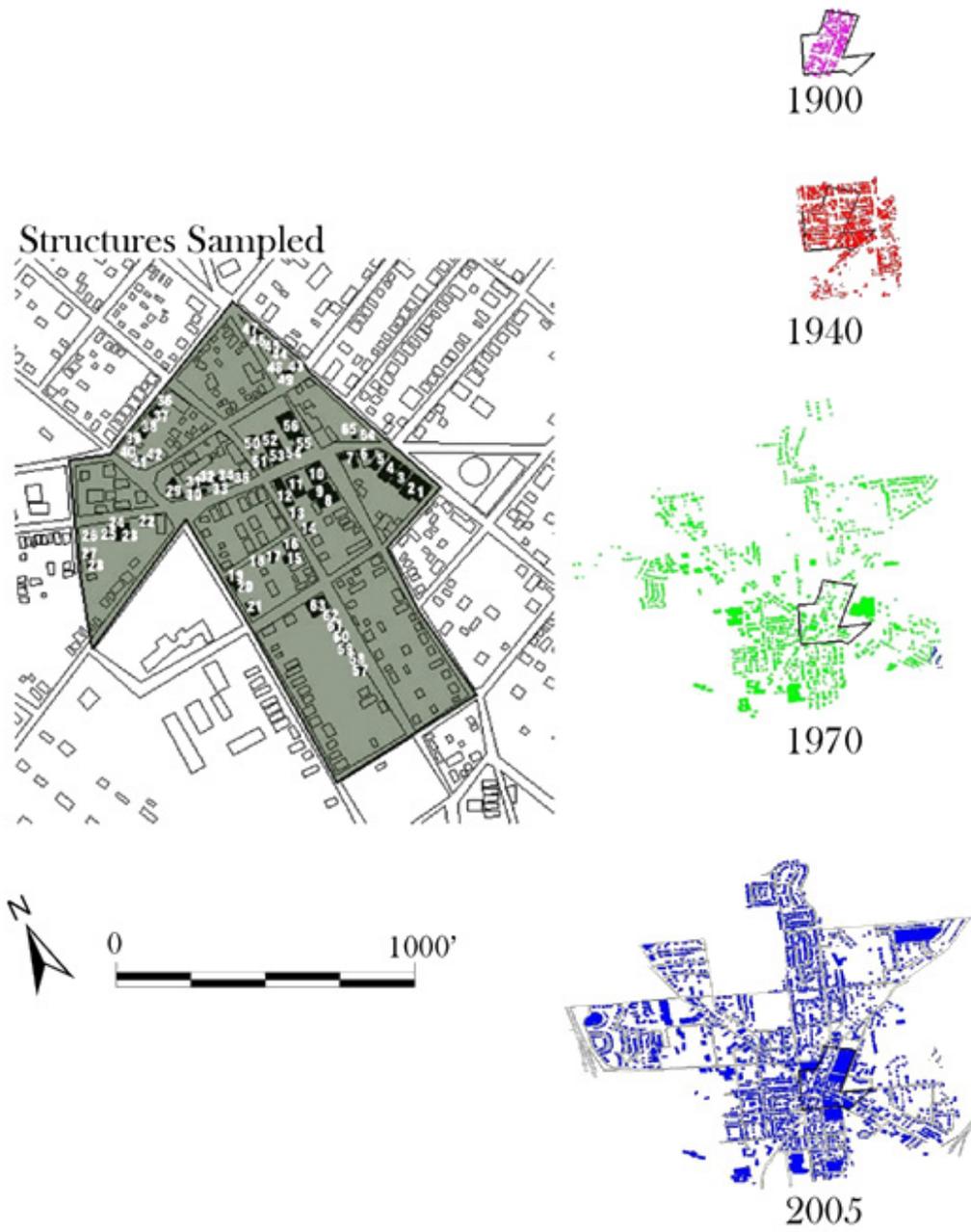


Figure 2: Doylestown Sample Frame/Historic Layover and Location of Samples Structures.

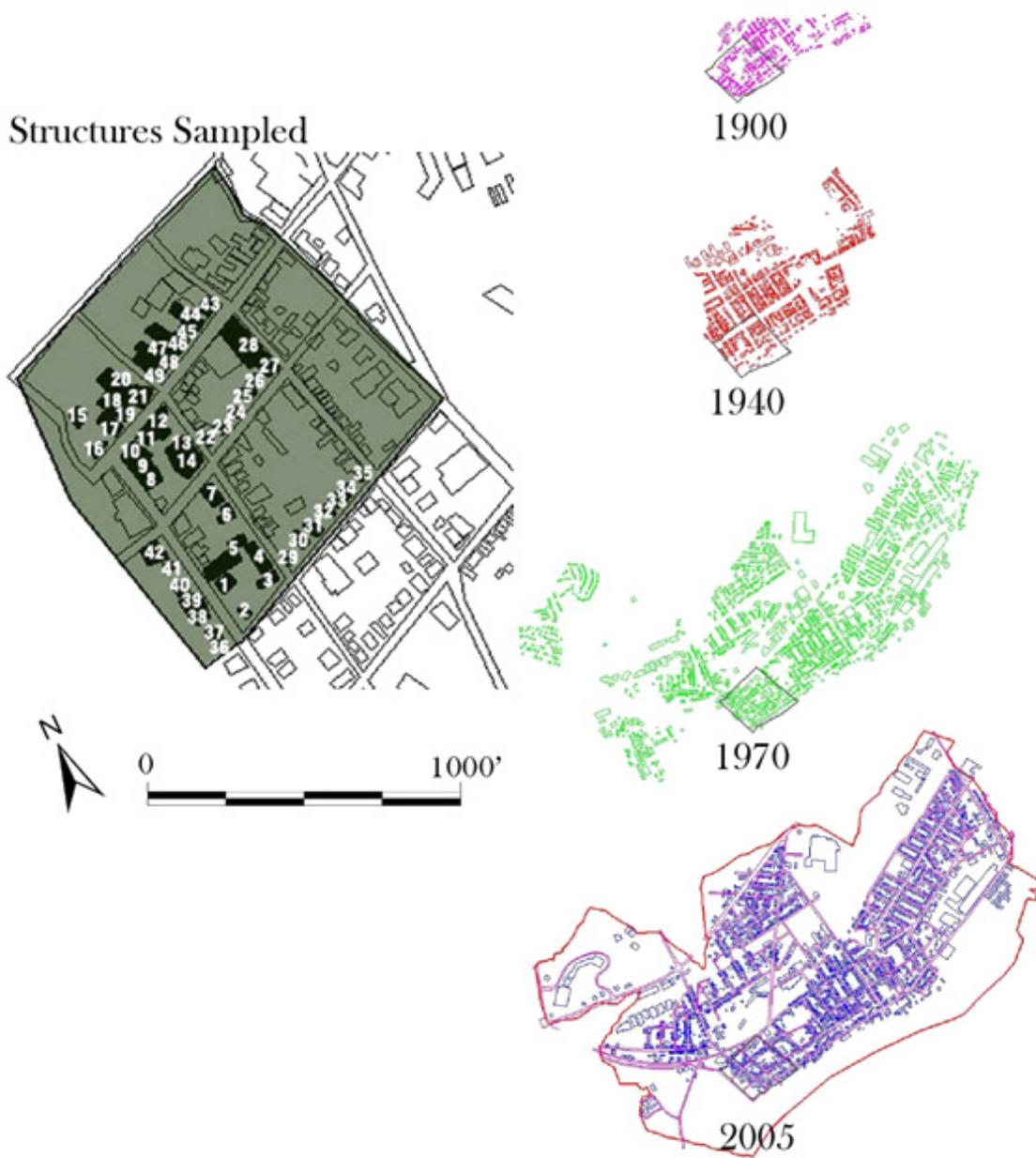


Figure 3: Bristol Sample Frame/Historic Layover and Location of Sample Structures.

Pattern Matching: Micro Scale
Case by Case Comparison

- A - Time Frame of Construction
- B - Land Use Change
- C - Architectural Modification
- D - Building Condition
- E - Assessed Value

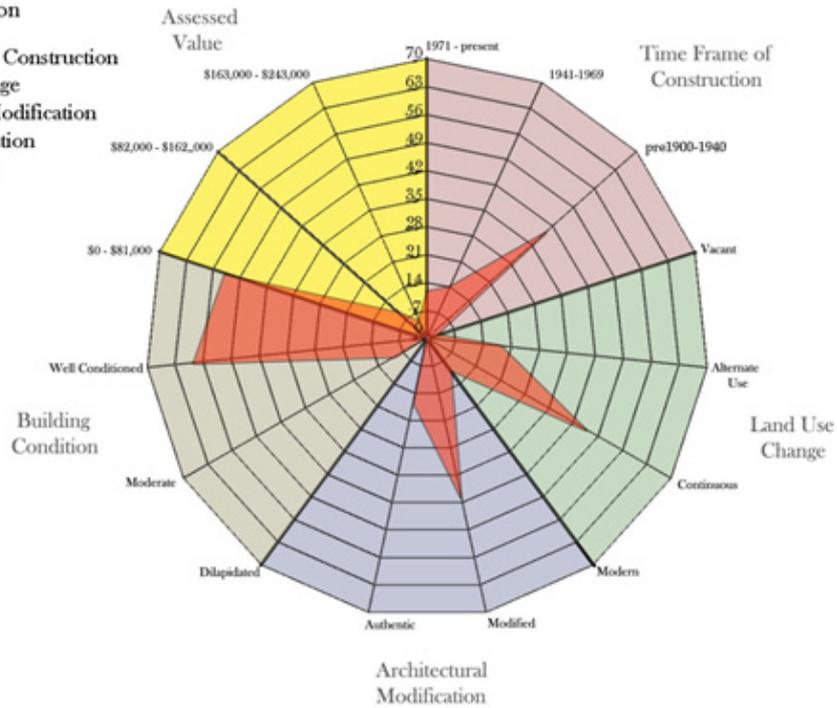


Figure 4: Doylestown Micro Scale Scores.

Pattern Matching: Micro Scale
Case by Case Comparison

- A - Time Frame of Construction
- B - Land Use Change
- C - Architectural Modification
- D - Building Condition
- E - Assessed Value

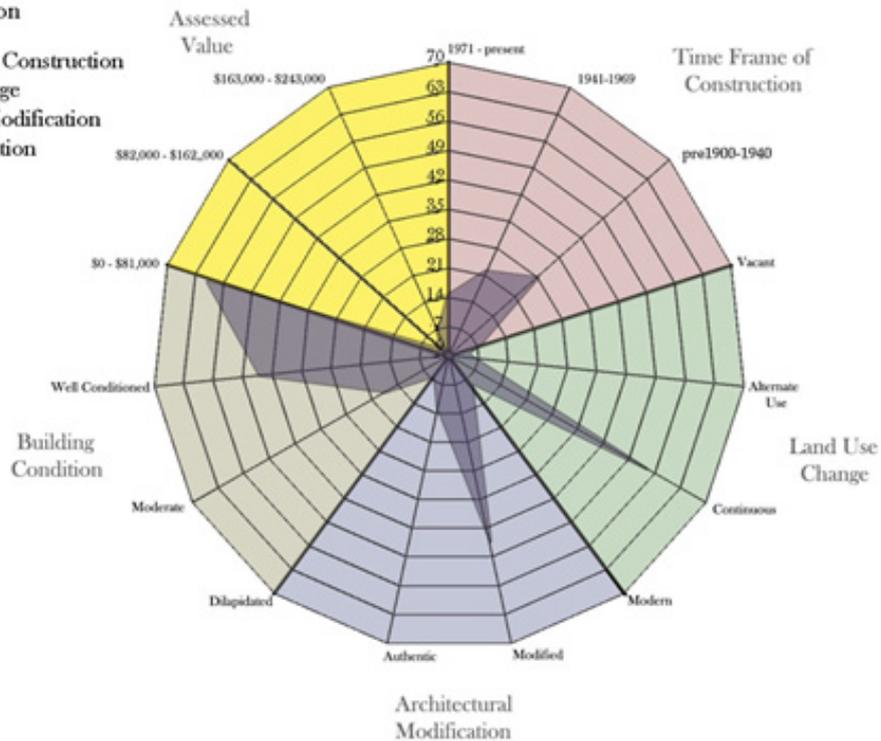


Figure 5: Bristol Micro-scale Totals.

Architectural modification results showed that as the amount of peripheral preserved farmland increased, the number of modern structures decreased while the number of authentic structures increased. However, the total number of modified structures actually decreased, suggesting that renovation activity may also increase as farmland preservation increases. The condition of these buildings proved to show the strongest correlation with the increase in amount of preserved farmland, as all three predicted patterns proved to be accurate. In particular, the number of well-conditioned buildings increased significantly as the amount of preserved farmland increased. Also, although both cases had a low number of dilapidated structures, the total decreased as the amount of preserved farmland increased. Moderate structure totals were fairly close when comparing, although the predictions proved accurate (See Table 3 for matched pattern rates).

On a macro scale, the correlation between the increase in amount of preserved farmland and the decrease in the rate of DBN had an overall 100% matched pattern rate. Building condition, again, proved to have the highest differences in totals, making it the explanatory variable with the strongest positive correlation on both scales, followed by time frame of construction, assessed value, land use change, then building condition. The cross case analysis also showed a positive correlation with a 100% matched pattern rate. Doylestown had the highest average number of points per structure (15 being the highest achievable) with 11.23, while Bristol had only a core of 10.57. This result means that a given building in Doylestown is likely to be experiencing less neglect than a structure in Bristol. The cross-case analysis also showed that the case with the highest amount of preserved farmland actually had the lowest amount of "1" measures (which indicate higher neglect in occurrence according to the utilized scale). Inversely, the percentage of "3" measures, which indicate the prevention of neglect, followed this same pattern. The percentages of "2" measures accepted in each case were extremely close in both cases, indicating that the process of neglect is present within each case under investigation. Finally, the overall rate of neglect was lowest for Doylestown with 25% of its structures being severely neglected compared to 30% for Bristol (See Table 4).

Research Question Assessment

Does the preservation of peripheral agricultural have a direct impact on the rate of demolition by neglect? The initial hypothesis upon which this study was founded was that preserving peripheral agricultural lands aids in decreasing the amount of DBN of historic structures. Based on the aforementioned results, the hypothesis should not be rejected, because all three scales of measurement showed a positive correlation. Findings indicate that there may be an indirect decrease in the process of DBN when the preservation of peripheral agricultural lands. However, this premise may only be sustained when farmland preservation is used in combination with multiple local preservation policies for a locality and cannot be fully projected to differing areas or cities without historic districts. The case studies support the proposition that historic preservation strategies should consider a wider context (other than simply the building and immediate precinct) that includes land-use planning in order to better protect buildings and areas of historic value.

Table 3: Mean Matched Pattern Rate Outputs.

Scale of Measurement/Variable	Doylestown (T score) minus Bristol (T score)
MICRO SCALE	74% - MPR
(A) Time Frame of Construction	67%
Preservation Worthy	-2.06
Potential for Preservation	-8.352
Intrusion	11.448
(B) Land Use Change	67%
Vacant	-6.336
Alternate Land Use	13.776
Continuous Land Use	-6.36
(C) Architectural Modification	67%
Modern	-0.552
Modified	-2.952
Authentic	3.48
(D) Physical Condition	100%
Dilapidated	-6
Moderately Decayed	-6.312
Well Conditioned	15.792
(E) Assessed Value	67%
Below Market Mean	-7.356
Within Range of Market Mean	9.12
Above Market Mean	-0.54
MACRO SCALE	100% - MPR
(A) Time Frame of Construction	14.434
(B) Land Use Change	5.736
(C) Architectural Modification	1.1991
(D) Building Condition	23.784
(E) Assessed Value	10.224
CROSS CASE ANALYSIS	100% - MPR
Average Points per Structure	0.66
% of 1 Variables	-7%
% of 2 Variables	1%
% of 3 Variables	6%
Rate of Neglect	5%
MEAN MATCHED PATTERN RATE (MPR)	91% - MPR

Table 4: Cross-Case Comparison Results.

Cross Case Analysis	Doylestown	Bristol
Avg. Pts per Structure	11.23	10.57
% of 1 Variables	24%	31%
% of 2 Variables	28%	27%
% of 3 Variables	48%	42%
Rate of Neglect	25%	30%

This result suggests that, although the preservation of peripheral agricultural lands may not decrease the rate of DBN by itself, it can be applied effectively in combination with other internal preservation strategies and have a direct effect on the rate of neglect. This is an extremely important observation for current preservationists, in that it appears that, on the surface, external land use management practices could help to decrease the loss of historic structures by keeping them active. In confirming that external strategies are an option to be employed to help shield historic structures from DBN, the study suggests that the paradigmatic shift in heritage landscape studies, which is shifting to a broader, systems based approach should be further explored. A systems based approach used wider regional scaled management practices which couple with a multitude of polices in an effort to regulate the historic built environment. It addresses both the structure and its setting simultaneously through multiple operations rather than narrow singular approaches.

Results also indicated that as preserved farmland increased, function relocation also slightly decreased but, due to other causal factors, the results were somewhat inconclusive. Findings from the micro scale analysis showed that the case with the highest amount of preserved farmland had a slightly lower vacancy rate but a lower rate of land use continuity. However, Bristol also had more buildings which had altered their land use through time. On the surface, this suggests that function relocation may be decreased as there is an increase in preserved farmland function retainment was stabilized but the land use was not always consistently the same. However, housing statistics refuted this finding; in fact, housing statistics were the reverse of predicted patterns. Doylestown has lost an estimated 100 units of housing since 1990, while Bristol had a 100-unit increase. These findings suggest that there may need to be more investigation of which particular uses remain consistent as there appears to be a stronger correlation with commercial, industrial, or civic uses than with residential uses, as housing statistics diverge from other findings.

Findings also suggest that there is a decrease in deferred maintenance as amount of preserved farmland increases. The strongest correlation between amount of preserved farmland and any explanatory variable was the relationship with physical condition which had a 100% matched pattern rate on both the micro and macro scales, followed by time frame of construction. Doylestown had a larger amount of more buildings constructed between the pre1900-1940 time frame than did Bristol. These results suggest that, as the amount of preserved farmland increases, not only structures are in better condition, but historic structures, more importantly, tend to resist the process of decay. If there had been more modern structures in Doylestown, one might have suspected that the newer

buildings were swaying the results of the assessment, but this was not the case. However, it could not be proven that these buildings were necessarily worth more on the fair market. On average, Doylestown did have a mean \$56,000 assessed value per structure compared to nearly \$34,000 for Bristol. There was also an 83% mean matched pattern rate for the assessed value variable. Conversely, Bristol did have a larger total of structures above the market mean than did Doylestown. We can then assume that, as amount of preserved farmland increased, both the building condition and its economic worth are improved to some degree, but there may be another elastic variable which impacts results. It may be due to the fact that, because many of Bristol's structures are on the riverfront, their assessed values were affected by an additional intervening variable.

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“It’s Easier to be Yourself in the City”

The regional city, the metropolis, and youth experience

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Residents of the regional city of Swan Hill, Victoria have long held an ambivalent attitude to their state capital, Melbourne. Reviewing present-day Swan Hill and particularly the cultural life of its youth — the demographic section of the population which primarily is seen to constitute the town's “future” — this paper examines young people’s responses to Melbourne, their access to it, their use of it, as well as their lives in their regional home town.

This analysis of the links between the experiences of youth and regional and metropolitan places is positioned in the context of successive urban and social planning schemes for Swan Hill since the Second World War. These aimed to create a unique local culture and to emphasise the attractions of a regional city to all residents — with a focus on community identity and “rural values” — in preference to the a large scale, cosmopolitan conurbation like Melbourne.

Introduction

The issues surrounding country town population retention in Australia are well-known. People, and particularly young people, are drawn to cities not merely for excitement (as some more scathing critics might suggest) but also for employment stability and access to education, health, cultural and other services. With just over thirty per cent of the Australian population now living in regional areas, the depopulation of the countryside has been the source of angst for Australian reformers,

commentators, politicians and laypeople for over a century. Graeme Davison and Marc Brody (2005) write of the importance of the “economic and social vitality of rural life” as it existed in colonial Australia, although even then the Australian colonies were distinguished from Britain by the high proportion of urban-dwellers within the population. However, historically the necessity of creating an attractive and rewarding rural society has been undeniable for a nation whose economy has been driven by primary industries such as agriculture, pastoralism and mining.

This paper discusses the interrelated issues of population decrease and cultural decline in Australian country towns. It begins with a discussion of the concept of such decline, including policy and less formal measures to mitigate against it. The paper then examines these issues as they have an impact on one place – the regional city of Swan Hill. Contextualising Swan Hill historically in its engagement during the postwar years with the decentralization movement and the contribution of a local theatre group to its cultural sustainability, we then move to a discussion of how young people experience the culture of Swan Hill in the 21st century. A recent fieldwork study has interviewed young people in Swan Hill to gather data on how they view their own town in regard to its leisure and cultural opportunities and how this compares with their experience of the city of Melbourne. We argue that the need for proactive measures to foster and provide cultural activities as well as for provision of leisure facilities in regional Australian towns like Swan Hill lies with both local government and local residents.

In today’s Australia it might be assumed that rural and regional towns are fighting a losing battle with the attractions – social and cultural and economic – of the greater conurbations of Australia, most particularly the state capital cities. Between 2007-12 for instance, areas with the largest population growth include perimeter suburbs of major cities such as Wyndham and Whittlesea (Melbourne) and Wanneroo and Stirling (Perth), while areas registering largest *and* fastest declines over the same period include Broken Hill and the West Coast of Tasmania, with the Swan Hill region registering second highest in both categories (-3.4%). (ABS 2012)

The drift to the city might be expected to be most pertinent of all for rural youth, particularly those who wish to undertake post-secondary education and training at universities and technical colleges (the presence of tertiary campuses, especially from the Technical and Further Education sector, in many larger regional towns notwithstanding) or participate in a wide range of employment opportunities.

The Rural City (previously, Borough) of Swan Hill (Figure 1), an urban centre officially distinct from a surrounding shire of the same name since 1939 (Scholes, 1989 p.xi; Anon 1942a) has attempted in various ways since the end of the Second World War to reposition and remake itself as a regional service centre and as a tourist destination for those coming from further afield, particularly from Melbourne.

Established in the 1830s and originally a river port for the bustling trade along the Murray River (a function quickly lost after the opening of the railway line in 1890), colonial Swan Hill was a town of regional importance in the 19th century, and until the creation of Mildura in the 1890s was the only regional centre of substance in northwestern Victoria. The 1920s and 1930s saw the fostering of soldier-settler development and irrigation projects in the region which altered the environment and economic nature of Swan Hill’s hinterland.

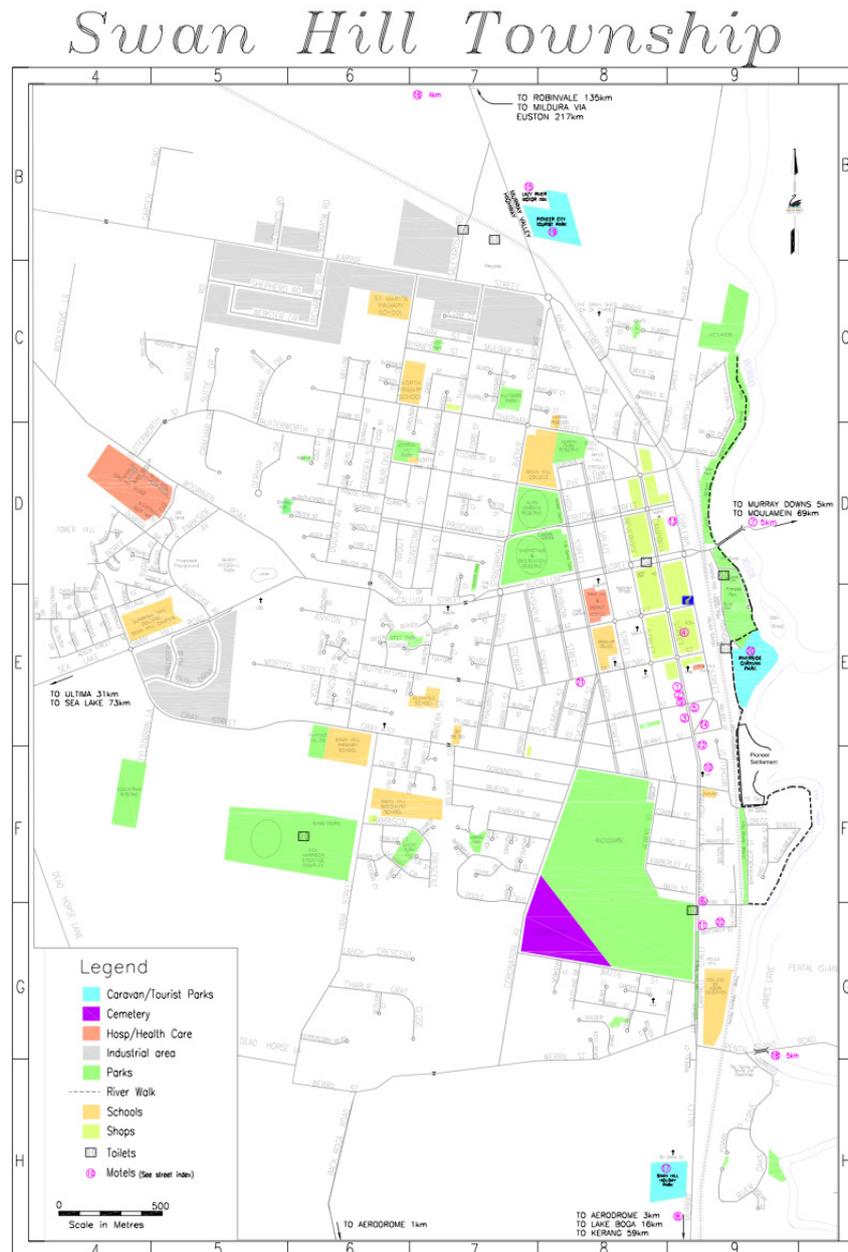


Figure 1 Swan Hill township. Swan Hill Rural City 2013

Mildura, 200 km to Swan Hill's north west and also on the Murray, now has three times the population of Swan Hill – approximately 30 000 compared to Swan Hill's population of just under 10 000. Swan Hill has never come close to the size of the town of Bendigo, which is more than eight times larger at 82 000 people, and which is located slightly closer than Mildura to Swan Hill. It is approximately twice again as far from Swan Hill to Melbourne, a journey that is achieved today with a four-hour drive or a four-and-a-half hour rail or coach trip. Swan Hill does not have an airport. Unlike some Murray River towns, it does not have a cross-border "partner" settlement in New South Wales. Swan Hill also does not have a major state highway running through it, although there is controversy within the town over a new cross-river roadway.

Small towns lacking in social or spatial “connectedness” are not inherently poor or drab towns. Indeed, Swan Hill – as will be seen below – provides a number of opportunities for community and specifically youth involvement, entertainment, and activity. Yet in August 2012, an ABC-TV current affairs report on the state government’s failure to provide mental health resources to Swan Hill found that the town youth were experiencing low secondary school completion, high teen pregnancy and youth self-harm seven times the state average (Caldwell). Swan Hill has become, according to this report, a place of despair for many, particularly its young people.

Tolstoy’s observation about every unhappy family might perhaps be expanded to describe every unhappy *town*. Certain elements to Swan Hill – its riverside park, its frequent markets and festivals, its art gallery and pioneer village (of which more below) do indeed make it unique in its own way. However, many of the more unusual elements of the town, rather than contributing to its unhappiness, are potential contributors to its own solutions. In this paper, we investigate, firstly, some of the aspects of Swan Hill’s cultural progress in the postwar era which was a particularly important moment in development as plans for the town drew upon the contemporary economic ideas about decentralisation. The discussion then shifts to Swan Hill in the present day, notably the experience of the area’s youth both of social and cultural life in Swan Hill and their attitudes to and experience of the “big smoke” of Melbourne.

Cultural life in Swan Hill since the Second World War

Many progressive and imaginative Australian thinkers of the mid-twentieth century imagined an Australia with redrawn state boundaries and redistributed population. Such reworkings often took the form of expanded regional centres, remade state boundaries, the relocation of industry and the creation of systematized nodes of delivery for government services, community activity and other facets of what was at that time seen by many politicians particularly within the labour movement as core to a practical manifestation of democracy.

Key planner and planning advocate Frank Heath’s preparation of a plan for an eightfold-expanded Swan Hill in 1941, sponsored by the newly configured Borough’s municipal council, marks the first step in a reimagining of Swan Hill as a metropolitan entity (Nichols and Darian Smith 2010). Though little came of this plan, suggestions for facilities and what might now be called decentralized “nodes” made by the Victorian Decentralisation League (Anon 1942b) were aligned to the policies of the state government. These included the establishment of offices in towns throughout Victoria “as another step towards decentralisation” just prior to the end of the Second World War (Anon 1945). These measures were evidence of an interest in breaking the hold of the metropolis of Melbourne on the state and enhancing quality of life for those in the country. The cry was taken up by commentators such as the real estate agent L. H. Luscombe, writing as Veritas, who championed the “decentralisation” of power and authority across Australia as expressing “the very essence of true democracy” (1945, p. 133).

A few years later, a related “decentralisation” plan for regional Australia was flagged by commentators. “Decentralisation of Australian culture – such as it is – lies very near and dear to the hearts of art and education enthusiasts these days,” wrote John Hurd in the Melbourne newspaper the *Argus* in September, 1950. Hurd was discussing the National Theatre Movement’s Annual Branch Festival at which the Swan Hill Branch was to perform Joan Temple’s play *Charles and Mary*, in a

competition for the best dramatic performance held against two suburban and one other regional branches. A dramatization of the life of Charles and Mary Lamb, authors of the children's *Tales from Shakespeare*, the play flagged the strong interest of the Swan Hill drama group in Shakespeare's works. Though the drama group's existence and success is in large part due to one charismatic founder and convenor – the playwright and director Marjorie Mcleod – the active sponsorship and support of local government was also clearly a factor in the rise of this amateur theatre organization, which formed a major social and cultural component of Swan Hill life into the 1960s. An organization such as this provided a range of important elements to the town: it enhanced social life, allowed Swan Hill to define itself as a hub of cultured activity that was to be celebrated within Victoria, the nation and within the British Commonwealth. For close to two decades, the Swan Hill drama group put the town "on the map" as the location of a particularly popular and enthusiastic Shakespeare festival.

The decline of Swan Hill's annual Shakespeare festival (which was seen in participants' minds to follow the arrival of television in Australia in 1956, then the departure of Mcleod in 1966) coincided with the rise of two other cultural gatherings. The Italian community of Swan Hill has held a (largely food-oriented) Festa since the 1950s, as a celebration of the impact on non-British migration on the region. By the 1960s, the erection of the Swan Hill Pioneer Settlement was also an important aspect of the reconfiguring of the town and recognition of its settler history. The centrepiece of the Pioneer Settlement was the Paddle Steamer *Gem*; in 1966, the second floor of this craft was given over to the Swan Hill Art Gallery, which later obtained its own purpose-built premises nearby. These sites now form the Swan Hill "culture precinct" which, in the narrative presented by the Swan Hill Region tourist "Discovery Drive," segues into a gourmand's delight whereby "Swan Hill prides itself with offering visitors and locals an extensive and culturally diverse dining experience" (Swan Hill Discovery Drive c. 2012)

There are at least two ways a place such as Swan Hill can define itself as cultural: in the culture it enjoys amongst its own people and the culture it displays to the outside world; both help to define the town and are calculated to attract visitors.

One might see these intersected, and redefined, by the divide between "high" and "low" culture. The Shakespeare festival, and the Swan Hill National Theatre generally, gained Swan Hill some prominence as a cultural "place" in mid-century, though participants interviewed were quick to assert that involvement in the Shakespeare festival was open to all comers. Similarly, and originally intended as a second string to Swan Hill's cultural bow, the Pioneer Settlement is an important early example of 20th century Australia's revisiting of its early European heritage. Both institutions have encouraged (indeed, depended on) the involvement of the local citizens in voluntary capacity.

In addition, Swan Hill retains a strong theatre culture which might surprise visitors and which is primarily focused on reflecting Swan Hill's experience back to its residents. Events such as the Fairfax Festival and productions staged by SHYTE (Swan Hill Youth Theatre Ensemble; the acronym is a self-denigrating one chosen by teenagers who formed the group "to provide an alternative to the sports culture which pervades this region and provide an alternative form of recreation and skill development to the young people of Swan Hill" (Swan Hill Performing Arts 2013) are key to an ongoing youth and local theatre culture in Swan Hill. Additionally, of course, there are sporting and other cultural events in the area on a frequent basis. However, as will be seen below, access made

available particularly through social media gives rural Australian youth some pause to reflect on the failings of their everyday social experience as much as it connects them to the wider world.

Culture and entertainment in the 21st century: what does Swan Hill offer youth?

In their study of transport options for rural Australian youth, Currie et al (2005) outline this issue for late-teens youth succinctly:

As young people grow they seek a greater level of personal participation in the activities of life. As young people get older their needs become more wide ranging and the activities they take part in become more diverse and cover a wider geographical area (6).

Such activities may include “serious partying, clubbing, dating” over 16 and “pubbing... more dating and marriage” as well as a “whole range of activities/interests/entertainments” over 18 (6).

In 2010, a focus group survey was undertaken on a small sample of Swan Hill Secondary College students aged 15-17. Part of a larger survey of teenagers in regional and peri-urban locations and their attitudes to city use, the findings excerpted here demonstrate issues specific to Swan Hill. Students were asked to discuss their experience in semi-structured interviews.

Of the 18 teenagers interviewed in our survey, the general opinion was that while pre-teen childhood experiences are enhanced in a country town, teenagers and young adults had little incentive to stay. They expressed frustration at the lack of opportunities available to them as well as diminished or peripheral access to contemporary popular culture such as current films, theatre, and concerts and the like.

Participants explained that country towns were good places to “settle” while being a young adult in a city would be ideal (for all participants but one). Generally, most spoke of moving to places like Mildura or Bendigo rather than Melbourne with all but one participant wanting to leave Swan Hill, thus:

Female: I would always wanna settle down in a country town, I wouldn't want to live in the city with kids or anything, but for uni would be good

F: Just not Swan Hill

Just not Swan Hill?

[laughter]

F: Yeah [laughter] I'm not coming back here...Mildura or something, Mildura would be okay

Why not here would you say?

F: 'Cause it's too boring

Male: 'Cause it's a s***hole

F: There's no opportunities here

F: There's nothing to do here, you can't even go to the movies

Staying in Swan Hill was described by some students as being the outcome of a lack of other options, as the result of laziness, or as a boring and safe option. Others described it as a decision based on employment opportunities, calling Swan Hill a “tradie's town”, suggesting that if that was not the future young people desired then they would have no choice but to go elsewhere. For a couple of

participants this was seen to be a “sheep-like” path that reinforced the lack of diversity (and thus opportunities available) in Swan Hill.

M: I think half of those people who stay around only stay around because Swan Hill’s really a tradies town, most of the people that live here are builders or handymen or stuff like that...

F: Or hairdressers...

M: ...yeah, any trade...

F: That’s just comfortable

F: They just leave school, do a trade or become a hairdresser

When contrasting their home town with the metropolis, participants described spatial claustrophobia in Melbourne (crowds, lots of people) and social claustrophobia in Swan Hill. They valued the physical space in Swan Hill...waving their arms around to indicate space to move. However, it is plain that their preference was for the social possibilities of the conurbation: “You go to a party in Swan Hill and you already know everyone,” says one informant. “But if you go to a movie in Melbourne you could end up talking to someone and meeting and stuff like that.”

F: It’s easier to be yourself in the city

M: You can walk down the street and not see someone you know...

F: Yeah, it’s good

M: ...like, I walk down the street of Swan Hill and you’ll say hi to about 50 people...it’s ridiculous.

Does Swan Hill need a cinema?

Social spaces for young people were, indeed, a consistent issue for the youth of the town. Council’s “young people’s areas” – there are many, as outlined in Swan Hill Rural City’s cultural planning policy – were the subject of derision.

A “folk memory” exists among the local youth of Swan Hill’s Oasis Twin (formerly the Regent) cinema, which closed in 2006 and has since been demolished (Burnside 2013). The site, in Campbell Street, is now an Aldi supermarket:

F: The Council knocked down our cinema, now there’s an Aldi

M: Yeah, they knocked down our cinema

F: Now there’s like nothing to do

F: Now we have Aldi...

M: And a Bottle shop

M: ...We have about 8 bottle shops in Swan Hill now

F: Cause that’s all we do – drink – cause we’ve got nothing else to do

[laughter]

M: We’ve got bottle-os on every corner and we’ve got hairdressers on every corner

M: So you get your haircut and then you go out and get drunk

So is there a cinema around here anymore?

F: No, Bendigo’s the closest

F: They show like...

F: Yeah, they put movies on at the park

F: And they've done a few drive-ins at Swan Hill, and stuff like that

M: But no one goes.



Figures 2 and 3: Images from the Facebook page *Swan Hill Memes*, 2012.

The dichotomy of the cinema as a meeting place for Swan Hill youth is an ongoing issue (the lack of a cinema, according to one commentator on “Swan Hill Memes” (figures 2 & 3), renders it a “fukn sad pathetic s***hole”). The complaint is recognized by the city’s burghers who also believe that the central issue is not so much the presence or absence of a cinema per se but the role a cinema could play as a place for young people to meet *new* people away from parental supervision or the eyes of other Swan Hill locals. Of course, there is genuinely little expectation of meeting “new people” in a town where almost all people are familiar; the attraction, therefore, of Bendigo and Melbourne is apparent. It should also be noted that the blaming of the city council for the demolition of the cinema is barely justified (the sale of the land was a commercial decision between private parties); the Swan Hill town hall can be used as a cinema, and periodically serves as one, although it is not part of a cinema circuit. In late 2013, Twilight Cinemas announced its intention to open a three-screen “boutique” cinema in an existing retail building in central Swan Hill (Anon 2013; Burnside 2013).

For the teenage Swan Hill informants, the most valid option for group entertainment within the town is to “Walk around and drink” or “Go to parties, that’s all we have.” For many rural youth the internet – and its capacity to expose all users instantly to the latest news on global cultural developments – actually reaffirms their isolation, rather than assuaging it. For one informant, the internet is “my best friend, sadly”. For others, Facebook (in particular) is a way to assert oneself ostensibly in a global forum, though primarily to one’s own local friends. Unusually, perhaps, and counterintuitively, most of the various Facebook groups that derided towns like Swan Hill (“I survived Swan Hill”) late in the last decade are no longer in evidence. Instead, Facebook groups include proactive organisations partially funded by council and other bodies; the Swan Hill “Youth Inc.” group; the Swan Hill Yesfest; and the Swan Hill Youth Theatre Ensemble, mentioned above.

Swan Hill youths' experience of the city in the 20th and 21st centuries

“For many young people, public space is a stage for performance and contest,” Ward Thompson and Travlou posit in their study of Edinburgh youth, “where a developing sense of self-identity plays out in relation to their peers and other members of society” (2007 p. 71) More directly related to their urban experience though are the implications of adolescents spending “less time in the familiar, supervised, and narrow world of family and more time in the unpredictable, less controlled, and less secure world of peers” (Larson and Sheeber 2009, p. 12) Larson and Sheeber suggest that a broadening of adolescents’ “social worlds” is the defining point at which teenagers begin to assert themselves, as independent from their parents, in decision-making, relationships and importantly, in their socio-spatial domains (p. 4).

Youth participation in city life means that young people can be present, take part, and share in decision-making and in the implementation of policies and practices that will affect their lives (Holdsworth, 2006 p. 14). The importance of participation has been attributed to “improved outcomes for young people” (Kirby and Bryson 2002). The capacity for youth participation to develop a sense of ownership or belonging, respect for themselves and others as well as contributing to an “enabling culture” that lets the individual feel like an asset rather than a problem are some of the justifications for youth participation in planning. Fincher and Iveson’s (2008, p. 13) view of the “right to the city” refers specifically to the “right to encounter.” A “right to encounter” attributes individuals their “own spatiality – a life path peculiarly circumscribed for them by the spaces, places and governance structures of the city.” They argue that young people should be able to access the opportunities available in the city for social engagement and development of different kinds of social capital.

An analysis of Swan Hill school students’ writings in the 1970s and 80s suggests an ongoing ambivalence to cities only matched by a joking antipathy to Swan Hill itself; this is echoed in the work of those contributing creative writing and journalism to the Swan Hill College annual publication *Cygnets*. Here, students clearly position themselves as wry, sardonic viewers of the city experience; yet their discomfort with the anonymity, and fast pace, of the city is tangible.

The city is typically portrayed by students of thirty years ago as dazzlingly, frustratingly and perhaps exhilaratingly bustling. A city trip will involve “doing fifty yard dashes in the trams for the only spare seat” or “being pushed, pinched, punched (and) tripped” by “the savage animals around me who were pretending to be normal rational people” (Rodgers 1976). It might also involve confusion amongst students “refusing to take a taxi... thinking our hotel was closer than it was” (Anon 1977) or the experience of “hyper active” Swan Hill youth enervated by the “city smog” in their lungs (Campbell 1984).

It would seem that little has changed in contemporary teenagers’ view of a city such as Melbourne. The Swan Hill students polled in our recent study undertook city visits divided mainly between entertainment, shopping and school visits (all 21%), followed by general tourism (13%), which students described as “something to do” or “something different”. Half of the participants visit Melbourne city once every two months, the remainder visit once every three to six months (39%) or once a year (11%). Two participants from Swan Hill explained the city was a place one could “be themselves”.

Almost all of the Swan Hill participants observed that there existed a greater number of opportunities for diversion compared to their home town. Just over a quarter of Swan Hill students reported that, when they visited Melbourne, there was nowhere in the city they avoided (26%). Other participants from Swan Hill used general negative descriptions of non-specific places (16%), alleyways, places defined by people (ie. gangs), and used functional descriptions such as places with busy traffic as places they avoid (all 11%).

Almost all participants described city visits that had been supervised by parents or other adults. Participants in the Swan Hill focus group had a sense of the city as a place imagined in stark opposition to their local area. It is instead a site for tourism, where they are visitors. Participants were more likely to make a two hour commute to Bendigo, to see a film or go out with friends than they were to travel to Melbourne.

Swan Hill participants were the most unconcerned by stories that incited moral panic, “stranger-danger” or “invasion”. On the whole, they reported feeling safer in the city than they would in the Swan Hill town centre at night.

P1: In Melbourne you feel more safe at night ... cause there's lots of people around

P2: Yeah, but they get stabbed though

P1: You get stabbed here too

P3: There's people around so you might not feel like they're going to do something, whereas here there's no one else there but you and the person so you...

P4: So you just turn at the next corner

Their perceptions of danger were moderated by their local experiences of safety, or lack thereof. Participants in Swan Hill were grounded and unintimidated by the city. Although they described a sense of spatial claustrophobia they also described a liberating anonymity they could not access in Swan Hill.

The distance and length of the journey saw Melbourne city depicted as more imagined than real. Despite the apparent division of socio-spatial concentrations that appeared in mapping participants' recent city visits, there was an overwhelming optimism amongst a number of students in the Swan Hill group about the opportunities the city offered their social worlds.

Conclusion: the future of local youth culture in the regional city

“We are proud of who we are”, Swan Hill's council's 2009-13 Council Plan declares, adding that:

Council will seek to recognize, preserve, promote and celebrate our identity, our history and our future, embracing our diversity while building a cohesive community, by providing a wide range of cultural and artistic experiences.

A recent success story in which Swan Hill youth found both agency and expression was the redesign and reimagining of George Lay Park, an open space in the east of the city which had become derelict and was revived in large part through local high school students' design and effort. While council will justifiably and appropriately champion such activities as important both as a community bonding exercise and as a way for young people to claim ownership of their town, there is only so much such

works can achieve. The dichotomy between the agency and cultural experiences of country-based youth and those in the cities is often commented on, not least by the youth themselves. The question is, then, what young people find in a city that they cannot locate in a medium-sized town, and what might be replicable in a city of 10 000 people from a city of 4 million. The internet and its potential for social networking, for instance, seems to confirm the basic and repetitive nature of life in a small city (or “country town”) as much as, or more than, it provides opportunities to broaden horizons.

It would be simple to rail merely against a culture which preferences the urban experience over all others, and which confirms rural youths’ suspicion that their own lives are lacking because of the limited parameters of their geographical, and social, sphere. Certainly studies produced by Currie and others in recent years have found transport issues directly connected to social exclusion (Currie et al 2005, p. 7) and, in the case of a regional town a similar distance from Melbourne as Swan Hill a (generally positive) “pattern of relationships between social inclusion, well-being and mobility” (Stanley et al, 2010). At the same time, it must be acknowledged that there is a certain amount of apprehension felt by Swan Hill youth regarding the urban experience.

The proactivity required amongst rural youth in a town like Swan Hill to build a fulfilling social life is clearly daunting for many and overwhelming, or indeed impossible, for some. This is an ongoing issue for communities such as Swan Hill and one in which some measure of information, dialogue and of course state and federal government recognition can address; but also, and perhaps more importantly, it is a scenario which surely requires a cultural shift in expectations, aspirations and experience before any meaningful change can be made in the long-term. The establishment of a new cinema may prove to be the “game changer” that Swan Hill youth require.

Note: The research for this paper arises from an Australian Research Council funded project (DP09842223) exploring cultural sustainability in Australian country towns.

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Catalyst for Change?

R.A. McInnis and town planning in Launceston 1945 to 1956

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Between 1945 and 1956 R. A. McInnis served as Tasmania's first Town and Country Planning Commissioner and was charged with the responsibility of winning acceptance for the Town and Country Planning Act 1944, the first major piece of planning legislation in Tasmania. During his period as Commissioner McInnis faced many obstacles and challenges and did not always achieve his objectives, but he was pivotal to the successful implementation of town and country planning in Tasmania. Previous work on McInnis has provided an overview of his work, but this paper will analyse how influential McInnis was in stimulating town planning in Launceston, Tasmania's second largest city. Town planning enthusiasts in Launceston had been pressing the virtues of town planning since 1915, but without much success because of a lack of effective legislation and of town planning expertise. The context changed with the passage of the 1944 Act and McInnis' appointment. Although strains and tensions were evident in McInnis' relations with the Launceston City Council, aldermen and city officials came to rely on his experience and judgement before following through on town planning proposals. On some issues such as extending city boundaries and furthering regional planning McInnis was a valuable ally of the City Council in its relations with the surrounding municipalities that cramped the growth of Launceston. McInnis also assigned his staff, especially Dutch-trained Hans Westerman, to assist with a zoning plan for the city and a regional master plan. McInnis expended considerable energy selling the advantages of town planning to community and business groups and was assisted by visits from English experts such as Patrick Abercrombie and William Holford. The paper concludes that McInnis was an indispensable catalyst for change in Launceston and turned town planning from an unattainable ideal into a practical reality.

Keywords: Town planning legislation, regional planning, zoning scheme, R.A. McInnis, Launceston

Introduction

A characteristic of Australian planning history over the last three decades has been the focus on individual planners. Pioneers like John Sulman, Walter Burley Griffin, and Charles Reade and later many lesser lights have attracted scholarly attention and provided insights into the reception of town planning in twentieth-century Australia. One problem of a biographical approach to planning is the tendency towards hagiography, which Krueckeberg describes as “empathy overdone, overwhelmingly”.¹ He argues that biographies of planners should not provide role models, create heroes or kowtow to genius, but show how individuals shaped the communities that they were a part of and show planning not in abstract terms but in “human terms”. At their best, planning biographies can “reveal the myths” and virtues of the profession: “the wildest hopes, the darkest fears, the sweetest dreams, the worst offenses, the dullest foolishness”.² We might also add another point, which is the gap between aspiration and reality as planners try to persuade a myriad of interests groups that their vision for a better urban future is one worth supporting. The most useful kind of biography of a planner analyses the extent to which an individual planner’s aims were translated into action or not as the case may be. The key question must therefore be was a planner a catalyst for change in his city or region or did the status quo of immovable intellectual, social or political forces triumph?

This paper seeks to answer this question by examining the work of Ronald McInnis (1890-1982) during his period as Town and Country Planning Commissioner in Tasmania between 1945 and 1956. Arriving in Tasmania fortified by extensive experience in Queensland and Darwin, McInnis had the difficult task of persuading a largely apathetic community and hostile or indifferent municipal councils in particular that town planning was not a theoretical desideratum but a practical economic and social imperative in the post-war world. Tirelessly travelling around Tasmania and talking to municipal councils and citizens groups, McInnis spread the gospel of planning and the need for united action. As the Town and Country Planning Commissioner, the most knowledgeable and experienced professional in the State, he injected a new dynamism and gravitas into debates about the value of planning. McInnis worked with a small staff, but his task was greatly aided by the appointment of Hans Westerman, a twenty-six year old Dutchman who trained as a civil engineer at the Technological University of Delft and had planning experience.³ Beginning work with McInnis in March 1952, Westerman rose to become Assistant Town and Country Planning Commissioner in 1957 after acting in the position for nearly two years, helped prepare a number of local planning schemes, including one in Launceston, and wrote a number of comprehensive reports extolling the virtues of long-term planning. This paper will focus on the extent to which McInnis was able to persuade the Launceston City Council to begin and continue planning and to foster greater co-operation with the surrounding municipalities in the Tamar region.

McInnis’ major task was to advise municipalities on how to produce town-planning schemes. He saw himself as a missionary, enlightening the municipal savages, but many Councils were unwilling to take advice from a Hobart-based Commissioner.⁴ McInnis remained undaunted and repeatedly urged them to prepare detailed surveys of their towns, which would be the basis of planning and assist in building water and sewerage services. It was in the interest of the two largest and fastest growing councils of Hobart and Launceston to adopt planning schemes. McInnis tried especially hard to establish good relations with those councils and acted as a link between the councils and the

State and Federal Governments to ensure all levels of government worked together rather than in opposition when making plans for city growth.

A major feature of McInnis' tenure as Commissioner was the debate over the merits of co-operative and regional planning, which the State and Federal governments favoured in their quest for postwar reconstruction.⁵ In Britain, for "a brief period in the 1940s, regional planning assumed an intellectual dominance in the town planning movement" and this was also largely true of Australia.⁶ Encouraging co-operation between the Launceston City Council and adjoining municipalities would be a difficult assignment because the latter were wary of Launceston taking over areas that they had developed. Working in his usual diplomatic way, McInnis achieved some notable advances, with the formation of the Tamar Valley Planning Committee in 1952 and the Northern Metropolitan Planning Committee in 1955. The chances of co-operative planning in Launceston were extremely slim when McInnis was first appointed, but on his retirement most Councils accepted that co-operation was necessary.

The Context for Post-War Planning in Launceston

In mainland Australia town and country planning received endorsement from Federal and State governments intent on reconstructing society in the post-war period.⁷ Australian cities would be improved by removing slums, providing more parks and open spaces, building more housing and freeways, controlling subdivisions and development and introducing zoning schemes. Based on British town and country legislation, new planning laws were passed by Victoria in 1944 and New South Wales in 1945 giving municipal councils greater responsibility for planning with some co-ordination at the State level. In practice most councils lacked the resources and often the will to implement comprehensive planning and relied on discretionary interim development controls to guide city growth into the 1960s. Although master plans were completed for Sydney in 1948, Melbourne in 1954 and Perth in 1955, they were "top-down documents, largely concerned with issues of facilitating development efficiently in the interests of the ruling hegemony of land-related interests" and at best marginalized "public participation".⁸

These developments were largely mirrored in Tasmania. During the Second World War a consensus emerged in Tasmania about the need for town and country planning after 1945.⁹ The main drivers of this consensus was the need to improve living conditions for Tasmanians and to take advantage of the rapid economic development, which was expected to flow from cheap hydro-electric power and an influx of migrants to run new industries. In 1943 Premier Robert Cosgrove predicted that Tasmania would experience its most rapid industrial development after the war and that, as companies would need land, they must plan for future requirements before the war ended.¹⁰ In addition to industrial development, hectic house building and the paramountcy of building roads to cope with the increasing use of cars strengthened the argument for town planning measures.¹¹

In 1943 the Cosgrove Labor Government drafted a Town and Country Planning Bill, which was submitted to a Joint Committee of both Houses of Parliament to seek knowledgeable and interested comment on its provisions.¹² What emerged in 1944 was Tasmania's first major planning statute, the Town and Country Planning Act, gazetted to be operational in 1945. Based on the English Town and Country Planning Act 1932, the Tasmanian legislation strengthened local government responsibility for planning. Councils were required to submit a town-planning scheme to the newly-appointed

Town and Country Planning Commissioner. Once provisionally approved, the scheme remained open for public inspection and objection for three months.

The person chosen to be the Town and Country Planning Commissioner would be crucial to the success of the new legislation and the Cosgrove Government chose wisely by appointing Ronald Alison McInnis. McInnis was born in Queensland in 1890 and trained as a surveyor, but in the 1920s became increasingly interested in town planning.¹³ He made notable contributions to town planning in Noosa, Mackay, where he produced the first town plan in Queensland for an existing city, and Brisbane, where in April 1938 he was appointed city planner and developed a zoning scheme for the city. In 1940 he prepared a plan for Darwin, but the bombing of the city in February 1942 prevented its implementation. While cognizant of planning developments in New Zealand, France, and Germany, he was most heavily influenced by English and American approaches to planning.¹⁴ In the 1930s he quoted liberally from the writings of leading town planners such as the American John Nolen and the Englishmen Raymond Unwin and Thomas Adams. For McInnis town planning had two major objectives. One was to attain the “coordinated control of development by the representatives of the people for the community as a whole”.¹⁵ The other related objective was to provide everyone with “healthy, convenient, and pleasant living and working conditions”.¹⁶ Homes should be built in “pleasant surroundings” with provision for recreational areas. Children should have access to playgrounds and adults access to playing fields, bowling greens, tennis courts, and “all other facilities that varying tastes require for the hours of recreation”. Planning would ensure that workers did not have to travel too far to their workplaces or to parks and rural areas. Modern town planning was primarily concerned with improving the pleasure and comfort of the working classes.¹⁷ Aesthetic considerations remained an integral part of modern planning but it now put “the common good in the place of the individual good”, positive social benefits in place of selfish private interests.

McInnis was not naive enough to imagine that planners could win converts simply by asserting the benefits of their schemes. A town planner had to be above all a salesman, “selling ideas which induce action”.¹⁸ McInnis admitted to being obsessed with the idea of the planner as salesman and thought “there would be much more progress in planning if more planners had the same obsession”. To be a successful salesman a planner must first “be convinced that he has something that every local authority needs” and that every community will find “beneficial”. A planner was not a salesman who relied on “smart talk to make a quick sale, and then passes on to the next conquest”. A planner must “know and be able to show that his plan can be made to work”. One way of doing this was to point to the advantages planning had wrought elsewhere. The salesmanship did not end when the local authority agreed to adopt a plan or when the planner had received his instructions from the council.¹⁹ He should be available to advise the councillors and to shepherd them through to the completion of their scheme.

After falling out with the Brisbane City Council and city architect over their lack of support for his zoning scheme, McInnis accepted the new position of Town and Country Planning Commissioner for Tasmania in 1944 and began work in February 1945. The Minister for Lands and Works Edward Brooker made it clear that McInnis was appointed not to prepare plans for municipalities, but to advise on “how such plans should be prepared and by whom”.²⁰ He would approve plans by local bodies, co-ordinate plans and resolve any disputes that emerged between planning bodies and anyone affected by their plans. McInnis assured local bodies that “they need not fear undue

interference from him” and that he would feel a failure if he ever used his limited powers of “compulsion”.²¹ McInnis realized that Tasmanian municipal councils lacked the resources to appoint trained planners and formed a panel of experienced town planners from other Australian States to offer their services on technical matters, but it is unclear that their services were used.²²

Tasmania’s capital Hobart had already shown interest in town planning in 1943 when the City Council appointed Victorian planner F.C. Cook to draft a city plan, but, when Cook’s report received negative responses, the City Council did not proceed with it.²³ McInnis failed to persuade the City Council to prepare a town-planning scheme under the 1944 Act. In his quest for co-operative planning in the Greater Hobart area, McInnis managed to secure the creation of the Hobart Metropolitan Planning Committee in 1951 and it produced some valuable reports thanks to research carried out by McInnis’ staff, especially Hans Westerman, who produced some valuable reports, but no metropolitan plan was completed. The committee was succeeded by the Southern Metropolitan Planning Authority in 1958, another example of co-operative planning in the 1950s.

By 1945 Launceston, Tasmania’s second largest city and a commercial centre for northern Tasmania, had been debating the merits of town planning for thirty years since the British town planning expert Charles Reade first visited in 1915.²⁴ Architects led the way in espousing the virtues of town planning and were the driving forces behind the formation of the Northern Tasmanian Town Planning Association, first in 1915 and then in a revived version in 1933. Enthusiasts argued that town planning was needed to retain the city beautiful and garden city features that characterised Launceston and that had economic, health and aesthetic benefits to residents and tourists. While some progress was made in persuading aldermen to beautify the city, in practice financial impediments and a reluctance to interfere with private property owners prevented action to remove insanitary buildings and widen streets or to develop city-wide and regional plans. Although not uniformly hostile to town planning, before 1945 aldermen feared the thought of being straight-jacketed by a city-wide plan and losing their discretion to shape city growth to meet changing circumstances.

In a public lecture in May 1945 McInnis highlighted Launceston’s problems such as “sub-standard areas, access and communication, roads”, and problems arising from “uncontrolled siting of industries”.²⁵ Unless Launceston had a plan to co-ordinate “the development of all complex activities of urban life”, McInnis argued, it would be unable “to guide post-war expenditure” or obtain “the best and most lasting results in planning”. The *Examiner*, Launceston’s only newspaper, had been a critic of the lack of planning in the past and warmly endorsed McInnis’ appointment. It believed that “careful planning” now would influence “the development of the city for many years to come” and urged the Council to seek advice from McInnis on how Launceston should expand.²⁶

In September 1945 McInnis advised the City Council to form a Town Planning Committee consisting of its aldermen and officials and members of the public, drawn perhaps from progress associations.²⁷ In October the City Council responded positively by setting up the committee, including the Mayor and Chairman of the Works Committee, the City Engineer and the City Building Surveyor, a representative of the Transport Commission and four interested citizens—Roy Smith, G.R. Hutton, Keith Darcey and R. Campbell-Smith—all of whom had been advocates of town planning during the war.²⁸

By January 1946 the City Council had decided to prepare “a Planning Scheme to cover the whole of the City of Launceston”.²⁹ McInnis hoped that the city boundary would not be “a limiting factor” and that the City Council would call a conference to discuss “a united scheme” with adjoining municipalities.³⁰ He urged that work should begin on a scheme quickly and would be carried out “continuously”. McInnis especially noticed how industries crept into residential areas and their smoke, noise and “heavy” industrial traffic were “harmful and unhealthy”.³¹ This underlined Launceston’s need for zoning, which would be a key part of a town-planning scheme. Planning was also needed to cope with an expected post-war growth in population. From 1921 to 1947 Launceston’s population grew from 24,305 to 40,449 or 16,144 in twenty-six years, but by 1961 the population had reached 56,721, or an increase of 16,272 in fourteen years.³² The period 1947 to 1961 was one of the most rapid increases in population that Launceston had experienced and must partly explain why greater attention was given to planning from the mid-1950s

In what follows this paper focuses on the role played by McInnis in guiding the Launceston City Council in developing a planning scheme and in contributing to co-operative regional planning between Launceston and its adjoining municipalities, Beaconsfield, Evandale, Lilydale, Longford, St. Leonards and Westbury.

A Plan for Launceston

McInnis had an ally on the Launceston City Council in the City Engineer Leonard Harry Bird, who quickly began work on a town plan for Launceston along lines laid down by McInnis. He began compiling a base plan and maps indicating “in colour the existing amenities, together with transport services, location and type of industries, residential areas, reserves, schools, churches, hospitals, institutions and decadent building”.³³ After the base plan was completed, Bird intended to zone the use of various areas to meet local conditions and prepare “a civic survey”, which would indicate and classify trades and businesses in Launceston. Bird used aerial photographs of Launceston to compile the base and interim plans that would control future development. Bird intended to create “a much needed and reliable City Map”. The Town Planning Advisory Committee would discuss the tentative zones.³⁴

While work progressed slowly, the Town Planning Advisory Committee (TPAC) had no input into Bird’s preparations by April 1947.³⁵ After the National Council of Women, which represented twenty-nine women’s organisations, expressed interest in the location of factories and playgrounds, it was given representation on the TPAC.³⁶ The National Council of Women nominated Jean Law, Secretary of the Girls’ Home, and Marjorie Matthews, “a highly qualified architect”, as its representatives, but the City Council did not expect the TPAC to meet while it negotiated with surrounding municipalities about a plan for their combined areas.³⁷

By May 1948 McInnis was concerned that the Launceston planning scheme had stalled and sought a report on progress from the City Council.³⁸ Acting Town Clerk Staubi sent the Civic Survey Plan, which McInnis thought was “excellent and will no doubt prove to be a very effective base upon which the scheme can be built up”.³⁹ Bird had completed a tentative zoning scheme by November 1948 involving housing, industry, commerce and parkland, which were priorities for Launceston’s future development, but he realized that “a northern development plan” involving Launceston and surrounding municipalities was desirable.⁴⁰ While the zoning scheme was still being considered, the

Works Committee approved Bird's proposal to discuss it with McInnis, who offered advice and in July 1950 sent a copy of "the form of zoning control which is suggested as the method of giving effect to zoning in a town planning scheme".⁴¹

While the zoning scheme went through its long gestation period, the City Council regularly sought McInnis' views on the location of service stations, the building of workshops in residential areas and the location of second hand car yards.⁴² McInnis advised Bird that the growth of Launceston would continually raise such issues and that the zoning plan should be sent for his provisional approval as soon as possible. McInnis was generous with his time and in imparting his knowledge during the final stages of submitting the zoning scheme for approval.⁴³ Unfortunately, the City Council let matters drift and failed to confront the growing planning needs of the city, such as overcoming congestion and inadequate car parking in the centre and failing to provide for shopping centres in outlying suburbs.⁴⁴ In July 1954 the *Examiner* urged the Council to stop vacillating and "make planning a fact not the fiction it is to a large extent at present".⁴⁵

Growing public dissatisfaction was reflected in the March 1955 criticism by Alderman F.J.C. White, an insurance inspector, that the Council had been working to a "shortsighted and unrealistic" Tentative Zoning Scheme (TZS) that had been completed in 1948, but whose merits had "never" been debated by the Council.⁴⁶ Backed by architects, the Real Estate Institute and the Chambers of Commerce and Manufactures, White argued for "a firm plan for the future development of Launceston" as soon as possible. Opposition came from Alderman Thyne, who did not believe that "a firm, rigid plan was workable", and by five votes to three aldermen passed his motion that the TZS be considered by a committee, who could recommend "any desirable amendments".⁴⁷ In May 1955 the City Council reestablished the Launceston Town Planning Committee with three aldermen and representatives from the Chamber of Commerce, the Chamber of Manufactures, the Real Estate Institute, the National Council of Women, the Institute of Architects and the Institute of Valuers.⁴⁸

As planning had lagged in part because of staff shortages and lack of trained personnel, McInnis appointed his acting Assistant Commissioner for Town and Country Planning, Hans Westerman, to provide practical help to the City Council with traffic planning and zoning.⁴⁹ Westerman saw a zoning scheme as a first step "to restrict undesirable development", but realised there was "more attached to the planning of a city in which it is a pleasure to live, a city which is great".⁵⁰ Quoting Sydney University's Professor Denis Winston that a planned city was "a place where our personalities can be made to expand and glow", Westerman thought that in addition to planning a city on "a functional basis, we must try to give it a heart, a soul too". He saw Launceston as not just "a place to manufacture things or move goods, cars and people around", but "a place where we can meet, shop, go to the pictures, play bowls, a place where we can work and like to live". Westerman helped the Town Planning Committee review the TZS and provided it with the surveys and tables he had compiled.⁵¹ He suggested solutions to traffic problems and highlighted the lack of parks.⁵² Westerman proposed "separate plans for each group of uses, and then a zoning plan embodying them all", which McInnis thought "a very effective method".⁵³

In March 1956 the TZS was adopted in principle by the Launceston City Council.⁵⁴ The zoning scheme proposed three residential zones (closed residential, semi-residential and inner residential), three business zones (central business, inner business and suburban business), three industrial zones (light industrial, heavy industrial and noxious and hazardous) and one rural zone.⁵⁵ The committee devised

these zones after considering traffic needs, especially ringroads and outlets; flood dangers affecting residential development; existing building regulations, including preventing “undesirable activities” in “good class” residential areas; “economy in the costs of development, particularly in the area called “the urban fringe”; the distribution of shopping centres and children’s playgrounds; zoning around “special uses” such as hospitals and racecourses; and preservation of the existing skyline from “indiscriminate building”. Zoning would be controlled by a map of zones to indicate where the zones were located; a table of use classes, which classified land and buildings into twenty-seven use-classes; and a table of zones, which indicated whether the City Council would allow a use-class in a particular zone or not.

A degree of flexibility was built into the TZS. This was best illustrated by shops, which were allowed in business zones, but the Council could also allow them in industrial zones.⁵⁶ To avoid further “commercial ribbon development”, shops would not be permitted along major arteries. Shops were not allowed in residential zones, but, if corner shops fulfilled “a need and would not be detrimental to the neighbourhood”, the Council could recommend approval to the Commissioner as laid down in the Act. The same consideration would determine whether a service station would be allowed in a residential area. Another element of flexibility was the Council’s power “to extend an existing zone to cover an area contiguous to that zone”. Such powers could not be exercised too often because “zoning must be permanent to guarantee adequate protection”.

The TZS, with some 30 “painstakingly-drawn” maps and diagrams prepared by Westerman showing “every conceivable aspect of the city’s past and future growth”, was exhibited in the Queen Victoria Museum from 20 March to 4 April 1956.⁵⁷ After the exhibition, the City Council moved the scheme to the foyer of the Town Hall for public inspection and aldermen adopted the scheme formally in May 1956.⁵⁸ Only Alderman Keith Darcey strongly objected to the TZS because he thought it not “flexible enough” for a city “already showing signs of cramp” and lacked an imaginative approach to future needs.⁵⁹ He thought that the scheme would in any case be “ruined by uncontrolled and senseless development in adjoining municipalities”. Mayor Dorothy Edwards stressed that the plan remained “tentative” and “should be regarded as one for discussion, information and education”.

McInnis retired in 1956 before the TZS was submitted to him for provisional approval and he would have been disappointed with the vacillation of the City Council. While the TZS was used by aldermen to deal with applications for development, by November 1958 the City Council had not provisionally approved the scheme under section 14 of the Act and had not submitted the scheme for the provisional approval of the new Town and Country Planning Commissioner Neil Abercrombie under section 15 of the Act. Until such approval was given, the scheme could not “legally be placed before the public for the statutory period of 3 months” for comment and criticism. This meant that any objections to the zoning proposals would have no legal effect. On Abercrombie’s advice, the TZS was revised in 1959, but was still not formally adopted under the provisions of the Act. In the 1960s, with agitation most prominently by the Launceston Urban Planning Group from 1965, grew a general desire to prepare a formal Town Planning Scheme, which was begun in August 1967 with the appointment of C.J. Taylor as Town Planning Officer and completed in 1968.⁶⁰ The plan was finally adopted in 1976.⁶¹

Planning in the Tamar Valley

In April 1946 McInnis wrote to the municipalities adjoining Launceston that, as the City Council had begun preparing a planning scheme, they should hold a conference “to obtain continuity and co-ordination in planning”.⁶² They should discuss “the desirability of planning one co-ordinated scheme for the metropolitan area of Launceston; the probable boundaries of such a scheme; and the means by which it could be carried out”. At a conference held between the Launceston, Longford and Lilydale municipalities on 1 May, McInnis explained the advantages of such a scheme for future growth and the meeting affirmed “the desirability and urgent necessity” of a plan “embracing the City of Launceston and the area, irrespective of municipal boundaries, of which that City is the natural centre”.⁶³ They agreed that Town Planning Committees should be established in each municipality “to confer upon and determine areas to be included in such a plan”. The various councils considered combining to appoint “a qualified Town Planner ... to prepare a plan embracing the City and surrounding Districts”, but for financial reasons this was not proceeded with.⁶⁴

In August 1948 McInnis told the Planning Institute that developing “an effective plan” for the six municipalities had “so far been beyond my powers as a salesman”.⁶⁵ The rural municipalities had “a long-standing distrust” of the Launceston City Council because “ill-advised extensions of the City boundaries” had resulted in the loss of “developed suburbs”. They felt that they were merely “building up suburbs for the City”. McInnis approached rural Councils individually, invited to them to conferences and formed a Regional Committee, but could not overcome distrust of the Launceston City Council. Even a plea for co-operation over regional planning by visiting British town planning expert and author of the Greater London Plan 1944 and Clyde Valley Regional Plan 1946 Patrick Abercrombie failed to galvanise the municipalities into joint action.⁶⁶

The Northern Regional Planning Committee, formed by the State and Federal governments, around 1945 to develop northern Tasmania economically, hoped “community spirit” would get behind planning.⁶⁷ It agreed with McInnis on the advantages of developing a plan for the northern region as it foresaw a period of rapid economic growth.⁶⁸ McInnis welcomed the Northern Regional Planning Committee’s support to achieve “proper, far-sighted” and co-ordinated regional planning.⁶⁹ The *Examiner* advocated a Greater Launceston and the extension of Launceston’s boundaries as a solution to planning problems in the Tamar region.⁷⁰ McInnis agreed that boundaries needed to be extended, but declined to suggest in what ways. He thought that boundaries “should not be fixed by the amount of development which has occurred” as in Launceston, but by conformity to watersheds and wanted all drainage and sewerage to be dealt with by one local authority.⁷¹

One key reason that a plan was needed for the Tamar Valley region was to provide for efficient road communication between Launceston and surrounding municipalities. McInnis worked closely with the Director of Public Works to widen highways, build by-passes “to avoid shopping areas and congested localities” and preserve highways for through traffic in areas of new subdivision development.⁷² Although a joint plan had not been achieved in the Tamar Valley, McInnis had “continually viewed the major road system in the area, as a whole, doing all I can to build up a plan for it”. He had asked Bird to design a road plan within Launceston that extended out into the suburbs and joined up with highways. McInnis found Bird’s plan of “considerable service” when “co-ordinating subdivisions and ... considering proposals for road improvements”.⁷³ McInnis also advised the City Council that there was no alternative to taking part of the land from the much beloved Royal

Park to build “an outer ringroad along the Esplanade, joining up with the West Tamar Highway”, which would be “a vital link in the State network”.⁷⁴

Another reason that a plan of the Tamar Valley was necessary was the Federal Government’s interest in “regional planning for the decentralized development of Australia”, including developing a “leading provincial” town like Launceston into an industrial centre.⁷⁵ Director General of Regional Development Grenfell Rudduck expected such development to lead to rapid population growth, but was worried that without “a sub-regional plan” for the Tamar Valley such growth would be “uncontrolled” and cause social problems. Such a plan could be used as a model for other areas in Australia.⁷⁶ Rudduck favoured “a series of plans” showing urban growth over five-yearly intervals and taking into account the needs of industry, housing and town services. Regional planning was strongly supported by Premier Robert Cosgrove, who saw the necessity of overriding municipal boundaries and basing regional planning on “more real economic, social and community interests”.⁷⁷

McInnis assured Rudduck that the growth of the Greater Launceston area was not “entirely uncontrolled” because of his control of subdivision development, which was “now complete throughout the area surrounding the Tamar”.⁷⁸ McInnis had also begun work on a regional plan for the Tamar, where Lilydale was the only municipality not to prepare a scheme. Once the plan was complete, the Minister for Lands and Works intended to call a conference of local authorities and obtain “concerted action in the planning and development of the region”.

In 1951 progress on co-operation was expected to follow from the visit of Professor W.G. Holford of the University of London, “an eminent authority on town and regional planning” who had played a leading role in developing post-war town planning and largely designed the New Towns scheme in Britain.⁷⁹ The Federal Government sponsored Holford’s visit as a way of stimulating interest in regional development. In August 1951 at a lunch arranged by the Northern Tasmanian Development League, a private body interested in economic development, Holford stressed that future development would be obstructed by “competitive influences” among municipalities.⁸⁰

In October 1951 McInnis met with the Northern Regional Committee to discuss the need for a Tamar Valley regional planning committee. All agreed that this was necessary because of the rapid growth in the area and the development of a port at Bell Bay.⁸¹ In January 1952 the Minister for Lands and Works Eric Reece announced the appointment of the Tamar Valley Planning Committee (TVPC) chaired by McInnis and comprising nineteen representatives from local, State and Federal governments, the Launceston Marine Board, the Northern Tasmanian Development League, the Northern Regional Committee and the University of Tasmania.⁸² This advisory committee would report on plans for developing the Tamar Valley to ensure “the efficient functioning of industry and commerce, the maximum output of primary production, and the best work and recreation conditions”. The *Examiner* thought that McInnis’ “leadership” would ensure that the committee applied “intelligence and vision to shaping the growth of an entire region”.⁸³ Not everyone felt this way because, when McInnis met with the Wardens of Lilydale and St. Leonards, they expressed strong opposition to a Greater Launceston.⁸⁴ What McInnis later called “the Greaterisation difficulty” stood in the way of co-operation between Councils.⁸⁵

Over the next two years the TVPC compiled “a substantial amount of basic information relating to future planning for the Tamar Valley area”, but still needed to complete “considerable research” and

to secure an expert planning officer to co-ordinate the information into usable plans.⁸⁶ In March the TVPC formed two sub-committees to begin “detailed work on a master plan for the area”. One sub-committee worked on traffic and transport and the other dealt just with Launceston.⁸⁷ Both sub-committees would work from interim reports prepared by Westerman.

In 1955 the Northern Metropolitan Planning Committee was established and for “the first time united the representatives of the city of Launceston and its surrounding local authorities around the table to discuss the development of Launceston as a whole”.⁸⁸ McInnis appointed Westerman to assist the committee prepare “a master plan for the Launceston area”.⁸⁹ In a paper outlining his ideas, Westerman argued that their objective should be to do more than stopping the different local schemes from clashing; they should aim “to draw up one plan for the whole area and to see that local schemes fit into this overall scheme”. Westerman firmly believed that local government functions had to move beyond the municipal area not only for master planning, but also for water supply, traffic and transport, where it was desirable for local authorities to “combine and carry them out together”.

Westerman made it clear that the committee was “not a disguised attempt to create a Greater Launceston” but equally was not “designed to foster parochialism”. He expected “give and take” from the representatives of the various local authorities on the committee in the quest to make Launceston “a worthy place to live, well planned by its citizens for the future”.⁹⁰ To develop an effective master plan required information on the growth, distribution and “changing structure” of the population, on the socio-economic functions of Launceston and current and future land use, and on “planning principles, legislation and finance”. They also needed “a good base map”.

Despite meeting infrequently, the committee produced a topographical base map for the Launceston region, prepared “a very tentative master plan” and “unanimously” agreed to recommend to their Councils that a planning authority be established.⁹¹ Apart from “minor details”, the master plan proposals conformed to the City Council’s TZS.⁹² Wrangling between the Councils concerned and fears that the Launceston City Council would be the dominant force delayed the formation of a planning authority for the region until 1969 when, again with constant pressure from the Launceston Urban Planning Group, the Tamar Valley Regional Planning Authority was established and began a new era in “collective co-operation”, especially in areas like shipping, transportation and education.⁹³

Conclusion

There is no doubt that Ronald McInnis was a catalyst for change in the planning of Launceston. As the eminence grise of planning in Tasmania, he was charged with persuading municipalities to complete planning schemes and to encourage co-operative regional planning where the topography and services of an area made this a logical step. In many ways Launceston and adjoining municipalities can be seen as a model of his approach to his task, both in terms of success and failure. McInnis put much effort into helping the Launceston City Council develop a planning scheme and offered the services of his talented assistant Hans Westerman, who was crucial in gaining acceptance of a zoning scheme for the city. Unfortunately, aldermen did not formally adopt the zoning scheme under the Town Planning Act despite urging from McInnis’ successor Neil

Abercrombie, but the scheme was a break through for planning in Launceston and was a necessary step on the road towards a formal Town Planning Scheme.

Perhaps even more praiseworthy, because even more difficult, was McInnis' role in furthering the cause of co-operative and regional planning in the Tamar region. Without McInnis taking on the role of honest broker, stressing the benefits of co-operation and arranging conferences, it is doubtful that the municipalities surrounding Launceston would have overcome their suspicions of the motives of the Launceston City Council and taken the first tentative steps towards master planning. Again, Westerman's assistance helped make this happen.

McInnis was a man of infinite patience and understanding and a town planner with high professional and ethical standards. He battled tirelessly and mostly successfully against powerful interest groups and with limited resources to broaden the understanding of planning in post-war Launceston and its adjoining municipalities. What had once been an unattainable ideal was well on the way to becoming a practical reality by the time he retired in 1956.

¹ Krueckeberg 1993, pp 218-19.

² Krueckeberg 1993, p 219.

³ Freestone 1993, pp 3-4.

⁴ Conversation with Frank Bolt, 25 August 1999.

⁵ Sandercock 1977, pp 97-108.

⁶ Wannop and Cherry 1994, p 39.

⁷ Freestone 2007, pp 76-8.

⁸ Alexander 2000, p 102.

⁹ Petrow 1995.

¹⁰ *Examiner*, 27 May 1943, p 4.

¹¹ Robson 1997, pp 137-44.

¹² Petrow 1995.

¹³ Petrow 1997.

¹⁴ R.A. McInnis, "Modern Planning - Its Scope, Aims, and Objects", July 1937, Town and Country Planning Commissioner General Correspondence Files AA235/5, Tasmanian Archive and Heritage Office, (hereafter TAHO).

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¹⁶ R.A. McInnis, "Just 'Houses' - or 'Homes', June 1950 and 'Are Our Towns to Develop? - or Just Grow", 18 April 1945, AA235/5, TAHO.

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¹⁹ *Ibid.*, p 2.

²⁰ *Examiner*, 20 February 1945, p 4, 22 March 1945, p 4.

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²³ Petrow 1995-6.

²⁴ Petrow 2013.

²⁵ *Examiner*, 4 May 1945, p 4.

²⁶ *Examiner*, 29 August 1945, p 4.

²⁷ *Examiner*, 1 September 1945, p 6.

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- ³⁵ Roy Smith to Town Clerk, 29 April 1947, Town Clerk to Smith, 7 May 1947, LCC 33/3, 1946-47, QVMAG.
- ³⁶ Memorandum for Mayor, 6 August 1947, LCC 33/3, 1946-47, QVMAG.
- ³⁷ Edwards to Town Clerk, 6 December 1947, Town Clerk to Edwards, 18 December 1947, LCC 33/3, 1946-47, QVMAG.
- ³⁸ McInnis to Town Clerk, 11 May 1948, AA 236/1/101, TAHO.
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- ⁴⁰ *Examiner*, 25 November 1948, p 2.
- ⁴¹ McInnis to Town Clerk, 21 July 1950, AA 236/1/101, TAHO; Launceston City Council, Minutes of Meetings of Council Committees, 22 November 1948, AB 392/1/54, p. 699, TAHO; City Engineer's Report, City of Launceston, Tasmania, Mayor's Valedictory Address and Annual Departmental Reports 1947-1948, p. 50.
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- ⁴⁴ *Mercury*, 9 July 1954, p 3; *Examiner*, 26 July 1954, p 2.
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- ⁴⁶ *Examiner*, 6 July 1951, p 3, 29 March 1955, p 3.
- ⁴⁷ *Examiner*, 19 April 1955, p 3.
- ⁴⁸ Launceston City Council, Minutes of Meetings of Council Committees, 9 May 1955, AB 392/1/58, p. 161, TAHO; *Examiner*, 1 June 1955, p 3.
- ⁴⁹ *Examiner*, 1 June 1955, p 3, 20 March 1956, p 3.
- ⁵⁰ Hans Westerman, "Launceston Area Planning Committee: Suggested Basis for Discussion", 6 May 1955, Town and Country Planning Commissioner, General Correspondence, AA 235/1/130, TAHO.
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- ⁵⁵ Launceston Town Planning Committee, Explanatory Notes on the Tentative Zoning Scheme, pp. 1-2, Newspaper Cuttings on Launceston – Town Planning, QVMAG.
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Milton Keynes and the Liquid Landscape, 1967-1978

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Language describing urban planning is often reliant on organic imagery, from the 'flow' of traffic, bodily metaphors of cohesion and health, to the 'monstrosity' of unwanted or questionable urban developments. This paper explores metaphors of liquidity, flow and submergence, as used to express ideas of 'good' and 'bad' urban environments in debates around the growth of the large-scale, low-density, explicitly post-industrial planned city of Milton Keynes. Developed in the context of the postwar language of 'overspill', Milton Keynes' reception in print and popular culture suggests tendencies to understand urban landscapes as receptacles for an inert population which would adopt any containing shape imposed by the urban structure. Unlike many earlier planned developments in postwar Britain, Milton Keynes' plan was intended as less an imposition of form on its future inhabitants, than a flexible structure which would facilitate greater agency on individual, community and market-force levels. Through examining the tension between flow and containment, responses to Milton Keynes' early development suggest some preconceptions regarding the role of cities in determining the industrial and social form of its inhabitants' lives, while planned cities proposing to embrace rather than to restrict flow are viewed with suspicion. Over the course of the 1970s, the tone of this language shifted, becoming increasingly fearful of deterministic space and viewing the containment provided by Milton Keynes as a social evil rather than a positive construct protecting the British landscape. Investigating the symbolic language applied to urban planning offers a valuable perspective on the anxieties which can surround planned developments and their perceived sterility, while foregrounding the cultural definitions of landscape which inform the meanings given to new urban environments.

Keywords: Milton Keynes, new towns, Britain, determinism, agency, reception, media

Designated in 1967, Milton Keynes was an attempt to improve upon the perceived failings of British urban planning since the Second World War. Its revisionist plan sought to 'learn from' both tower-

block high-density development, and the perceived mono-cultural atomisation of the first wave of post-war new towns. Despite this, Milton Keynes has been widely reviled in British popular culture since its designation. This negativity is often framed in essentialist language, with the implication that Milton Keynes in particular, and by association new towns in general, are awful because they are planned. Such critiques tend to use metaphorical language to describe human interactions with landscape, with common themes including the city as organic, living entity, or through language of liquidity and flow.

This paper seeks to historicise the reception of Milton Keynes by exploring the metaphorical language used to describe it in British print media and popular culture from 1967 to 1978. In particular, I will examine metaphors of liquidity and flow in relation to containment. Responses to Milton Keynes' plan and to its early stages of development used these metaphors to express not only criticism of Milton Keynes specifically but also ideals of how cities should function in relation to populations and landscape, the role of plans and their determination of agency. This metaphorical framework became less subtle over the course of the 1970s, and by the late 1970s Milton Keynes was increasingly being described as a deterministic, rigidly planned landscape inconsistent with the prized ideals of flow, despite concerted efforts made by its planners to reject this type of planning. From 1979 onwards, however, as Milton Keynes opened its revolutionary Shopping Building, and the Thatcher government came to power, the rhetorical framework shifted away from this strict dichotomy. Through close study of these fluid metaphors, the idealised Other to Milton Keynes is also suggested, a landscape whereby individuals slowly form the functions and aesthetics of their built environment to their purposes over generations.

Milton Keynes in context

Following the Second World War, the British Government inaugurated a state-run new town building programme under the New Town Acts of 1946 and later of 1964. Many of the first wave of new towns were designated in South East England, along radial roads leading to London. The intention was to provide newer, better-quality housing stock for London's working-class population, many of whom were living in overcrowded Victorian terraces, or in pre-fabricated temporary structures thrown up in response to the Blitz. (Clapson 1998.) These acts designated largely greenfield sites as the locations for new, self-contained conurbations, where housing in a lower-density style could be provided alongside jobs and other infrastructure. A related Government Act formalised the green belt around London, an area of largely agricultural land encircling the city, as both an outer limit to sprawl and to ensure that green spaces remained accessible to the inhabitants of the city. (Hall 1973.) This green belt also separated the new towns in the South East area from London, helping them to retain that sense of separateness which was intended to facilitate both the containment of London and the distinctiveness of the new towns themselves.

Early new towns were generally more successful in attracting skilled manual workers and lower middle class people than other groups, a trend which led to criticism of these towns as monocultural. The balance of housing provision with social amenities such as pubs, clubs and community centres, however, was often not maintained, with many of the first wave of new towns suffering from inadequate shopping and leisure facilities. (Clapson 1998.) The housing style was deliberately unlike the crowded terraces of inner London, in suburban style of lower-density, semi-detached or terraced housing with gardens. In addition, the vast majority of the population of new

towns were new to the area, moving in with perhaps a job arranged but without other social ties and without being familiar with the towns themselves, which had been newly constructed. The combination of these factors - of social atomisation, more individuated housing and living styles, and low levels of social amenity provision - helped to give early new towns the reputation for causing a form of depressive neurosis termed 'new town blues'. (Craigie 1968.) Sociologists Michael Willmott and Paul Young published comparative studies of inner London with dormitory suburbs and new estates *Family and Kinship in East London* (1957) and *Family and Class in a London Suburb* (1960). These works ultimately favoured the historically bound close kinship structures of Bethnal Green over the increased individualisation of suburban lifestyles, and advocated housing solutions which did not rely on demolition and rebuilding, or indeed on the constructions of new estates or towns. These highly influential studies set the tone for much criticism of urban planning throughout the 1960s and beyond, adopting the opposition between the organic, almost pre-modern working class urban communities with the isolating consumerism of the estate.

Despite the criticisms of early new towns, the Labour Government's 1964 South East Strategy claimed that London's continuing population boom necessitated more new town programmes to move excess population out of the capital. (Ministry of Housing and Local Government 1964). These assessments of population growth were later found to be inaccurate, and during the 1960s in part due to the success of new towns, London was losing population at a substantial rate, a population decline discovered in the mid-1970s. (Department of the Environment 1978). By the second new town act of 1965, planners of new towns and of expanded town programmes were looking to address these earlier criticisms.

Milton Keynes was designated, or formally established as a new town, in North Buckinghamshire in 1967, and from the outset was intended to be distinctly different from earlier new town developments. The chosen site was located halfway between Birmingham and London along the newly constructed M1, subsuming the existing towns of Wolverton, Stony Stratford, and Bletchley. Bletchley had constructed overspill estates to take London population during the late 1950s and early 1960s, and in the early 1960s its council had already proposed the redevelopment of Bletchley as a new town in its own right, with a proposed plan notable for its high density waterfront aesthetic and fully subsidised monorail. (Bendixson and Platt, 1992.) However the late 1960s saw a backlash against high-density infill building and tower blocks throughout print media, popular culture, sociology and increasingly from planners themselves. (Cherry 1979.) The idea of an experimental new town in North Buckinghamshire persevered, with the added twist of low-density; in 1967 Milton Keynes was designated over a larger area and with a lower proposed density than many previous new towns. ('New town' 1967.)

Milton Keynes Development Corporation's (henceforward MKDC) board and planning department were heavily drawn from the Centre for Environmental Studies (henceforward CES), a research centre at University College London, founded in part to facilitate greater dialogue between urban planning and social scientific research. The revisionism in Milton Keynes' plan, and its heavy emphasis on monitoring and feedback mechanisms, reflects their a desire to better incorporate sociological thinking into urban planning. (Clapson 2012). The Plan for Milton Keynes, published in 1970, explicitly positions itself as flexible and non-deterministic. Its first goal was to provide "opportunity and freedom of choice", a goal which informed its architectural design, distribution of

facilities, and range of housing densities. (MKDC 1970.) Its intentions were to allow residents, both those moving in during the 1970s and the residents of future generations, to choose from a wide range of housing sizes, densities and architectural styles, from places to shop and spend leisure time, and where to work and send their children to school.¹ Lord Llewelyn-Davies, chief planning consultant to the MKDC, summed up the attitude of the plan as follows:

The future is rather indeterminate. Of course it's easy to look back at somebody's work 25 years ago and criticize it, but in planning of this sort it's futile to make guesses. You have to design a city with as much freedom and looseness of texture as possible. Don't tie people up in knots. ('Instant City', 1970.)

Lord Llewelyn-Davies' statement about the role of planning is a historically interesting one. Previous generations of planners and developers - from those constructing interwar overspill estates for the London County Council, to new towns built under the 1946 act, to high-density urban infill developments - had seen the role of planning as explicitly totalising. To use Lord Llewelyn-Davies' fabric metaphor, the texture of these places was tightly woven not only in density, but also in determining the lifestyles of the inhabitants. (Institution of Structural Engineers, 1974; Taylor 1973.) With limited ranges of housing styles, densities, or configurations on offer, and limited ranges of facilities on offer from shopping to schools and leisure facilities, the types of lifestyle choices encouraged by these landscapes was often proscribed. For Llewelyn-Davies to argue that "in planning it is futile to make guesses", and to call for "looseness of texture", indicates a shift away from intentions of determinism, towards a plan which defines itself as facilitating choice rather than closing it off. This draws on the research undertaken at the CES in the 1960s around the perceived need for planned spaces to offer visible opportunities for human intervention. (Clapson 2012). Indeed, the Plan for Milton Keynes explicitly rejects the "technological determinism" of attempting to plan for future needs that are yet unknown, and in attempting to encapsulate "any fixed conception of how people ought to live." (MKDC 1970, p. 23.) Moreover, in a departure from earlier new town administration, Milton Keynes instituted a complex Monitoring and Evaluation Programme to measure feedback from residents, through traditional questionnaires and statistical methods alongside less conventional measures as encouraging the establishment of grass-roots newspapers to communicate residents' criticisms. The consistent message from Milton Keynes' planners and architects was that Milton Keynes was learning from older new towns, and from inner-city developments, creating a new type of new town that allowed a greater degree of agency to its inhabitants.

"Overspill": Early coverage of Milton Keynes

Milton Keynes' designation and early development was widely covered by national print media, and was quickly assimilated into existing frameworks of discussion of new towns and planning development. Responses to Milton Keynes in national print media and book-length journalism from 1967 to 1978 tended to share conceptual languages, using the same metaphorical framework to describe the planning and building process. In early reports, Milton Keynes was frequently described in terms of its Americanness (especially as resembling the sprawl of Los Angeles), and in terms of its "monstrous" size and the potential for the proposed Cublington airport to "deform" its vision. ('Los Angeles, Bucks' 1970; "'Mongrel city' fear' 1970; b'Arr, 'Quasi-country?' 1970.) Alongside these

tendencies, analogies of liquidity and flow were particularly dominant and allowed reporters to succinctly explore the tensions between determinism and agency in urban planning.

The most obvious entry point to these metaphors is the term 'overspill'. From the time of its designation, Milton Keynes was frequently reported on as an overspill town, or as a receptacle for overspill from London. (Gardiner 1970; Silver 1970.) The term 'overspill' had historically been used to describe peripheral estates, in particular those established at the periphery of the Greater London metropolitan area under London council schemes, and was at times used to describe the movement of population to first-generation new towns. In geographical terms, overspill towns essentially functioned as urban sprawl or fringe developments with a derivative relationship to the central already-existing city. (Vaughan et al, 2009.) Like the term 'suburb', 'overspill' implies a teleology whereby the new estate is legitimated by the already-existing metropolis.

In terms of Milton Keynes, overspill was not used strictly as a noun with a specific correlate meaning. Rather, the notion of overspill was one aspect of a wider language of fluidity and flow which described population movement over an inert landscape, and designated very specific functionalities to cities and towns. Even after a substantial programme of new town development and population dispersal, London was described as a full container, as a city with a finite capacity that when reached would spill its contents out over an inert countryside, with the resulting flow of population submerging the landscape under a sprawl that obeyed similar rules to those of fluid dynamics. Population was conceived of as a singular entity that would take the shape of any container placed around it. ('Planning the South East' 1967; Craigie 1968; 'England's Green and Pleasant Land' 1970; 'City of the future' 1972; Willmott 1974.) The countryside, chiefly the agricultural land ringing the green belt, was conceived of in this framework as uncontained space which would be "submerged" by movements of people breaching or "flooding" over the green belt to saturate and subdue the countryside under new, undesirable urban-sprawl suburban formations. (Hall 1970; Best 1970.) While Milton Keynes was described as a necessary new container into which London population might be 'decanted', to detractors its large-scale low density plan framed it as a somewhat inefficient container, which used more landscape to hold less people. As such Milton Keynes was described as "drowning" or "engulfing" the bucolic Buckinghamshire countryside under an imposition of urban sprawl. (Lewthwaite 1967; 'Are these market towns doomed?' 1967; Pahl 1969; Gibbard 1971; Allan 1972.) Moreover, perceiving Milton Keynes as a container for sprawl on the other side of the green belt, and as a derivative city which teleologically related to London, suggested that should the fluid tensions burst with overpopulation, overspill population would flow into the countryside between them.

Rather than being merely an aesthetic affectation, this symbolic language indicates important preconceptions about the purpose of cities in constraining a fundamentally inert population mass, conceived of less than a mass of individuals with agency than as a natural force greater than the sum of its parts, obeying its own fundamental laws. Moreover, the language of fluidity encompassed a range of emotional responses to Milton Keynes and to population movement in general, ranging from the more benign evocations of the trickle of streams, to the steady outflow of rivers, to the more apocalyptic and violent imagery of the flood. The above examples indicate that immediately following Milton Keynes' designation and early development, the language used to describe its

interaction with the landscape had undertones of violent intervention, evoking submerging, drowning and flooding.

While the explicit content of these articles was more measured in its projections of Milton Keynes' potential effects and even its ultimate success, a significant portion of reporting on the town's early years bear this fearful undertone that frames population movement and city growth as catastrophic. This language carries implications of the need to fortify against a potential threat through the construction of containers; the kind of language which as Peter Hall has noted posits the green belt in negative terms, as a sort of planning no-man's-land which preserves a neutral space around which construction continues apace. (Hall 1973). This notion of preserving the pastoral from the encroachments of modernity has deep historical roots throughout the Victorian period, with notable more recent variants on this theme in the works of Clough Williams-Ellis and Ian Nairn. (Williams-Ellis 1928 [1975]; Nairn 1959). However as Hall noted in 1973, the increased car ownership of Britain in the 1960s and 1970s, along with the development of new towns around the green belt, allowed it to be "leapfrogged" much more easily; as such the green belt could no longer function as a tool to preserve the Home Counties from the encroachment of London. (Hall 1973.) The framing of Milton Keynes as a 'home for Londoners' and as an overspill town therefore defined London's population as making its biggest 'leapfrog' yet, to the very borders of Buckinghamshire, thus creating a new high-water mark for urban sprawl halfway to Birmingham. In this context, the urge to preserve embedded in the language of floods suggests that Milton Keynes was being interpreted as a new outer limit for sprawl that negated earlier efforts to contain, and which further threatened to make the green belt redundant.

The tendency to describe Milton Keynes in this way indicates preconceptions about the function of cities which were very different to those espoused by the Plan for Milton Keynes. In this context of understanding cities as containers, the subtle difference between "tight" and "loose textured" plan as championed by Llewelyn-Davies was not maintained in this language. The low density of Milton Keynes, in keeping with the idea of the city as container, was reported on in terms of emulation of sprawl, as an inefficient use of landscape whereby the new town formed a container stretched too generously over too broad a portion of agricultural land. (Gibbard 1971; 'Giving streets a head' 1976; Ward 1978.) Low density building on a large scale indicates a conceptual comfort with the idea of human occupation of landscape spread more widely than that of a tight containing force bulwarking against the flood. Tentative early positive assessments, while making reference to the ambitious non-determinism of the plan, remained more interested in what was visibly present, rather than the theoretical adaptive capacity of existing design.

From 1972, *The Times*, *The Daily Mail* and the *Guardian* ran periodical special reports on the town, noting the latest housing styles and the attitudes of the new inhabitants. During 1974 and 1975, these reports were cautiously optimistic, largely suspending judgement until more of the plan had been constructed. ('City of the future' 1972; 'Milton Keynes: a special report' 1973; 'Milton Keynes' 1974; 'Guardian special report on Buckinghamshire' 1974; 'Guardian special report' 1975). As the political and economic climate grew grimmer in the later 1970s, what Jim Tomlinson has called the "declinist" tendency to attribute blame for the supposed contemporary "malaise" turned increasingly towards the planning industry. (Tomlinson 2009.) As the British government experienced more economic difficulties, culminating in the 1976 application for an IMF loan to

discharge national debts, the pursuit of expensive infrastructural projects was increasingly seen as an extravagance which had caused the nation to humiliate itself by obtaining a bailout. (Moran 2010; cf. Baws 1976.) In 1976 as part of the wind-down of new town planning, the British government designated a planned new town at Stonehouse, Strathclyde, in 1976, in an attempt to curb expenditure. (Booth 1976.)

While in this context Milton Keynes was occasionally presented as a return to quiet suburban life after the excesses of modernist architecture, the criticisms of perceived financial extravagance during a time of high inflation and growing unemployment placed Milton Keynes under further pressure from critics. From 1976 through to 1978, media, political rhetoric, and popular culture became increasingly focused on the idea of Britain in the throes of an economic crisis which it might not survive. (Turner 2008.) Moreover, the inaccuracy of the 1960s population projections which new town developments were based upon had been discovered in the results of the 1971 census. (Department of the Environment 1978.) London was perceived less as an overflowing container and more as a “hollow” space from which new towns had “siphoned” off too much. (Booth 1976; Hillman 1977.) The absorptive capacity of new towns was now viewed as having created scarcity, having drawn population and investment away from established inner-cities, which had been left to languish. As such new towns in general, and Milton Keynes in particular, were frequently depicted both as having contributed significantly to national decline.

Milton Keynes and determinism, 1976-1978

In this context, the language of flow and containment persisted in assessments of Milton Keynes, while becoming increasingly polarised. Reportage on Milton Keynes began to focus on polls depicting low resident satisfaction, and those residents who chose to leave the new town in a “steady trickle”. (Adamson 1977; Hillman 1977). The use of roundabouts instead of traffic lights in the city’s major thoroughfares came in for ridicule, as a planning device intended to facilitate traffic flow was considered a “bewildering maze” that made the town un navigable. (‘Giving streets a head’, 1976; Wainwright 1977; Karpf 1977.) Even those reports on Milton Keynes which gave positive assessments of the town noted the “indeterminate general air” of the town, describing it in terms of a lack of clarity about its role as a city, town, suburb or overflow estate. (Young 1976; Ward 1978.)

As such, the balance between structure and freedom was seen to be consistently out of alignment, with infrastructure designed to create flexible and fluid relationships between people and the town either experienced as too constraining or as insufficient. These tendencies towards diagnosing national decline and criticism of Milton Keynes coalesced in the 1976 and 1978 writings of Christopher Booker and Jeremy Seabrook. These two writers analysed Milton Keynes through the tension between flow and containment, ultimately depicting the town as a deterministic space unlike the image promoted by Milton Keynes Development Corporation.

Christopher Booker helped found the satirical magazine *Private Eye* in 1961, transitioning his career over the course of the 1960s from satirical journalism to more serious and conservative political journalism. His 1969 book *The Neophiliacs* was a wide-ranging attack on the alleged cult of “newness” in British culture, which he saw as a decadent retreat from willingness to make tough decisions at the expense of national stability and prestige. During the 1970s Booker went on to develop this argument, identifying tower blocks as a particular symbol of a quick-fix attitude that

betrayed historical traditions and living patterns, ignored the desires and aspirations of their inhabitants, and which formed an aesthetic blight on the urban landscape. (Booker 1976 – Booker 1980.) His assessments of Milton Keynes, published in *The Telegraph*, *The Spectator* and later in his book *The Seventies* replicate many of these criticisms. His 1978 feature “Urban Rides” described a tour of Britain’s “major provincial cities” to describe the effects of recent redevelopments. Explicitly invoking the tradition of internal travelogues stretching from William Cobbett to J.B. Priestley, Booker sought to present “the very worst of the horrors”, starting at Glasgow and culminating in Milton Keynes.

While Booker objects to the aesthetic of Milton Keynes, in particular those earlier steel-and-concrete developments constructed during the national brick shortage, he ascribes the planned landscape of Milton Keynes with a deterministic intention, where the very fact that it is a planned space is problematic. (Booker 1978b.) Emphasising those more “futuristic” elements of the town’s design - from the grid square to the numbering of main streets, to the emphasis on increased car use - Booker argued that Milton Keynes as an urban planning project shared the same fraught conceptual basis as tower blocks and urban regeneration programmes in existing cities. Milton Keynes’ grid system, as a non-organic geometric “grid iron” form, was singled out for especial criticism as a form not legitimated by historical forms. This critique is not entirely true, considering that the whole grid was aligned with the Roman road Watling St and that the shopping centre on Midsummer Boulevard was aligned with the rising and setting of the midsummer sun. (‘Solstice sun on the supermarkets’, 1979.)

In these works Booker presents urban planning as a top-down imposition on British people, whose lives are best lived in urban and rural settings which they themselves shape, and which bear the markings and forms of historical living patterns. This is framed as more democratic, as a more meaningful relationship between people and places where the shape of cities and housing is seen to reflect the unencumbered choices made by generations of inhabitants. Urban planning, particularly that of the public sector, is defined in opposition to this as an imposition, an encumbrance; an attempt to counteract the natural unencumbered flow of human movement with an alternative flow of propaganda “pouring” from institutions like the Milton Keynes Development Corporation. Even “cosy sprawl” is presented as a more positive alternative, suggesting that rather than density, the interventionist act of planning is the greater evil. Booker places this in an explicit contemporary political framework, arguing that the postwar decay of the nation both morally and economically has been manifest through the “unimaginative authoritarianism” of socialist development programmes such as new towns. As such Booker’s laissez-faire critique of planning melds nostalgic pastoralism and an equation of market forces with democratic choice, in a way which revolves around fluid metaphors, exploring the movement of people through space and time with reference to fluid dynamics, encumbrance and flow. For Booker, the idea of a loose-textured new town is a utopian farce born of the kind of utopian neophilia he so derided in the late 1960s. Any urban planning, for Booker, was the imposition of too tight a determinism on both a landscape and a population which demanded greater freedom.

On the other end of the political spectrum, the widely published journalist, activist and historian Jeremy Seabrook campaigned against slum clearances in Northampton throughout the 1970s, objecting specifically to the psychological effect of removing people from houses, neighbourhoods

and livelihoods that they had worked for and in over generations. (Seabrook 1967; Seabrook 1971; Seabrook 1974.) His early books take a similar approach to that of Willmott and Young, while adding a more visceral focus on the psychological distress caused to individuals by forcibly changing the setting of their lives. As such he had argued consistently that urban planning interventions were determining lifestyles not relevant to the ways that working class people had sought to make their lives meaningful, and that “under a guise of altruism” the needs of local communities were subsumed under the drive to accommodate London overspill. (Seabrook 1974, p. 231.) In the late 1970s and particularly in the articles forming his 1978 book *What Went Wrong?*, Seabrook developed his criticism of urban planning’s intervention on working class life by defining authentic lifestyles as unbound by deterministic spaces. Utilising the same dichotomies of flow and containment, and of determinism as opposed to agency, Seabrook inflects his criticisms of urban planning in general with a notion of authenticity which is in opposition to falsity and simulation.

Seabrook acknowledges the slick advertising image of Milton Keynes as providing greater choice and flexibility for its residents, recognising that its feedback mechanisms and dedicated arrivals staff to assist new residents were designed to address the perceived failings of earlier new towns and ward off “new town blues.” (Seabrook 1978, p. 234-240.) Seabrook argues, however, that these features promote the idea of a “loose textured town” where the reality is as deterministic as ever; where the choices are not open-ended decisions to be made about how post-industrial Britons should live, but are predetermined in advance. The choice of one suburb over another, two bedrooms or three, this shopping centre or that one, are not in Seabrook’s eyes adequate for the people of Milton Keynes to express their agency in this new landscape. Rather, they are funnelled into predetermined possibilities in the same manner as older new towns, with the added twist of being told that they are experiencing more freedom. Seabrook presents anecdotes from Milton Keynes residents, describing themselves as embattled, trapped, with nowhere to turn; rather like, as Llewelyn-Davies had warned, they are “tied up in knots” by the prescriptive nature of their lifestyles. The intentions of the planners to create feedback mechanisms and offer choice were depicted as sinister, further deterministic interventions on the inhabitants’ lives which only served to disguise the limiting structure inherent to the planned city. Significantly, any loose-textured planning could not disguise the city’s newness and the fact that its forms, from streets to shopping centres, were imposed upon its inhabitants arbitrarily, rather than to testifying to the osmosis-like actions of previous generations. The idea of planning for freedom is presented as an oxymoron, an impossible dream, and attempting to do so is described increasingly over the course of the 1970s as inherently deceitful, a way of repackaging determinism for those attempting to resist it.

Seabrook sees this in explicitly political terms, as providing a “carceral” space whereby working class Londoners can be “remodelled and perfected” in the consumerist aesthetic of the suburbs, while the old inner-urban fabric with its traces of industrial capitalism can be redeveloped into more palatable forms. (Seabrook 1978, p.235-36.) He argues that Milton Keynes’ lack of “secret places” and unplanned areas creates a landscape of excessive containment, and that this “paradoxically” presented as giving greater freedom to the town’s inhabitants. (Seabrook 1978, p.239.) This dishonesty is for Seabrook a “charade of dehumanized authenticity”, a place where agency is proscribed by an urban landscape that celebrates the expansion of suburban living to the working classes, where choices are offered from a predetermined consumerist agenda. (Seabrook 1978, p.240.) The main problem then for Seabrook is that Milton Keynes simulates a fluid dynamic which it

does not provide. Like Booker, he ultimately cannot reconcile the “loose textured” intentions of Milton Keynes to the act of urban planning, with the new town creating lifestyles and aesthetics which lack the kind of innate meaning which only historical roots, can provide. As such his image of Milton Keynes is apocalyptic not in that it represents the flooding of Buckinghamshire with unfettered human interaction, but rather that it inevitably exerts too great a restriction on the lives of its inhabitants. For Seabrook Milton Keynes therefore represents not too much flow, but too little.

Both Booker and Seabrook therefore build on the early symbolism of fluidity metaphors, updating the dichotomy between flow and containment for the new polemical framework of late 1970s Britain. In doing so they draw on the implicit tendencies of early reportage of Milton Keynes, where the language of overspill betrayed concerns with the catastrophic gushing of population across Buckinghamshire. As such, they retain the tone of urgency, while shifting the focus towards determinism not as a bulwark against a flood of human movement, but as a social evil with psychological mal-effects. As such while the focus of earlier journalism was on the potential for too much flow, Booker and Seabrook diagnose too little. Transposing this sense of catastrophe to the evils of too much containment indicates that the attempts of the CES and the MKDC to create a non-deterministic plan were seen to have failed. The revisionist idea of “loose textured” planning ultimately could not be reconciled to an interpretive framework which saw all planning as equivalent to containment, and which fetishized organic relationships both in language and concept.

In this sense, many 1970s media critiques of Milton Keynes posit it in opposition to an archetypal “authentic” city, governed by referential systems of heritage and generations-old social structures which, albeit problematically, permit individuals to govern their lives according to a sense that its meanings are derived organically from “reality”. (Sampson 1971; West 1973; Lewis 1977; Booker 1976; Boston 1977; Booker 1980.) Milton Keynes, as a planned space, does not conform to this image, and the notion of a less-deterministic “loose-textured plan” was ultimately seen as a paradox. These narratives celebrate problems, inadequacies, illogical and imperfectly functional design elements in urban landscapes, which are defined as providing testimony to the lived past of British people, creating a landscape where meaning is laid down like the sediment at the bottom of a river, in the steady accumulation of patterns and forms by osmosis. The arbitrariness associated with planning in these critiques was described as inherently totalitarian and potentially psychologically damaging.

By contrast, integral to the idea of a healthy space was one whose inconveniences and inefficiencies had been formed by erosion and deposit, under the stream-like steady flow of generations of people. (‘City of the future’ 1972, Allan 1972, Barker 1975; ‘Giving streets a head’ 1976; Booker 1978.) This idea of heritage as a legitimiser for space was presented as a form of historical testimony by osmosis, where the action of the individual human was less important than the faceless perception of “generations” which were assumed to have shaped the landscape into a form that honestly reflected their needs and desires. (‘Special Report’ 1972; Taylor 1973; Seabrook 1978; Booker 1980.) This relationship is cyclical, with humans shaping landscape, and landscape shaping humans; the disruption of this relationship through the act of urban planning is to break this perception of mutual influence through continuity. This shifts the flow language from its function in the earlier 1970s to describe “overspill” and the impact of population in the present, to positing a historical flow, whereby the actions of people in the present was seen to need to be legitimated by

the actions of those in the past. This conception of flow moves beyond the image of a container overflowing its contents to posit valuable human intervention on the landscape as the course of a river, determined incrementally over time by habit, repetition and tradition.

Milton Keynes' revisionist attempt to create a non-deterministic plan was eclipsed by the escalating backlash against the abstract notion of planning, which in 1970s political culture was scapegoated as a social evil, and potential cause of Britain's supposed social and moral decline. Milton Keynes struggled to fit into the existing discursive patterns about space, which expressed planning's tension between determinism and agency through a language of liquidity that ultimately favoured the historic rather than the new. Constructed during a backlash against urban planning, Milton Keynes has had limited opportunity to escape the negative image that has consistently been attached to it. Examining the conceptual content of Milton Keynes' bad press during the 1970s, however, allows us to locate this negativity within broader cultural debates around what makes a good city, and about British national identity and decline. This opens the opportunity to tell new stories of Milton Keynes less reliant on assessments of value and establishing its success or failure, while interrogating the rise and fall of new town planning in light of broader cultural trends. Engaging with the cultural responses to planning facilitates a more integrated approach to the problems cities pose more broadly to the countries and cultures that surround them.

¹ While it is beyond the scope of this paper to discuss The Plan for Milton Keynes and the early social history of the town's residents in detail, considerable work in this field has been undertaken by Mark Clapson. See Clapson (1998), (2004), (2012).

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A Boggy Question

Differing views of wetlands in 19th century Melbourne

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The site of European settlement in the Port Phillip region was a place of many swamps. For the Indigenous population these features were essential to their way of life, for the wide diversity of foodstuffs and raw materials they provided. They were the main support for the meetings of large numbers of the Kulin nation that occurred regularly around the top of the Bay. As the immigrant population of Melbourne increased so too were the indigenes excluded from their customary haunts, and were thus eventually unable to maintain their traditional ways. The immigrant settlers viewed the swamps in a different light: they were a source of disease, and of such little regard they could be used as dumping grounds. As Melbourne grew and the need to improve commercial facilities increased, these areas were progressively transformed into a range of other, more culturally useful forms. The ways in which these wetlands played a part in the histories of both Indigenous and settler populations are examined.

Keywords: wetlands, swamps, Eastern Kulin, Melbourne

Introduction

Swamps or wetlands—whatever term one applies,¹ terrestrial features that comprise more or less permanent, but relatively shallow, water—have had an interesting conceptual place in western cultures. Perhaps this is because, unlike other parts of the landscape, they did not fit easily into the natural classification of environment as either land or water (Giblett 1996). Wetlands could not be farmed or built upon; but neither could they be put to the same uses as rivers, lakes or the ocean. Historically, this ambivalence has shaped European ways of thinking about such areas and been a major influence in the ways Europeans have interacted with them.

Perceptions of swamps as sources of airborne disease, and as unproductive areas with no potential for useful development were embedded in European culture. Such attitudes had evolved in the countries of origin over many generations but they were given new ground within which to grow

In *UHPH_14: Landscapes and ecologies of urban and planning history*, Proceedings of the 12th conference of the Australasian Urban History / Planning History Group, edited by Morten Gjerde and Emina Petrović (Wellington: Australasian Urban History / Planning History Group and Victoria University of Wellington, 2014).

following European intrusion into Aboriginal environments. There, the immigrants' perceptions of wetlands—indeed, of the whole of nature—came face to face with a completely different set of beliefs, held by the people whose land was being invaded. Although none of these newcomers realised it, in all parts of the continent Indigenous people viewed all landscape features within their estates, including wetlands, as fundamental and necessary parts of their very existence. Over thousands of years Indigenous Australians had developed a view of their world that saw nature and culture as indivisible parts of the same series of creative acts (Maddock 1974).

With these markedly contrasting perspectives in mind, this paper will consider the uses to which the many wetlands in the Melbourne area have been put. This examination aims at elucidating the place and impact of wetlands in the history of the area, and of providing insights into the differing ethnic perspectives on Melbourne's many wetlands.

The immediate area of Melbourne is a useful historical context in which to consider culturally-based differences in environmental perspective. On the one hand it is a region in which the activities of both Indigenous people and immigrant settlers are well documented; on the other, at the time of settlement wetlands were a common feature in the immediate vicinity. Indeed, much of the surface in the general area was covered by swamps and lagoons.

The specific location chosen for a settlement by Europeans in the Port Phillip area in 1835 was largely determined by the presence of a reliable source of potable water — the Yarra River (Presland 2008). An area on the northern bank of the river, adjacent to a rocky bar that was the limit of tidal reach, represented the most suitable site available for settlement, lightly timbered and sufficiently raised above the flood level. On a visit to the settlement in March 1836 Governor Richard Bourke described it as “a beautiful and convenient site” (Bourke 1981). As the town grew in size and importance, however, some features of the landscape came to be seen as less than convenient. In the early years of settlement a number of large water-laden swampy areas, adjacent to the river and in its estuary, had virtually determined the shape and spread of the expanding township (Figure 1). But as Melbourne's population grew and the urban centre began to be transformed into a major mercantile hub, these areas increasingly posed problems for future commercial expansion, and also for the health of the increasing population.

For perhaps thousands of years before the arrival of Europeans, the site of Melbourne and its surrounding area had also presented a convenient place for major gatherings of the Indigenous population. Members of the two local language groups, *Woi wurrung* and *Boon wurrung*, were part of the Eastern Kulin nation, an interconnected cultural bloc of language groups that occupied the area of central Victoria, from the Murray River to Bass Strait (Barwick 1985). At regular intervals Kulin clanspeople had gathered in their hundreds in the very area that was to become the site of European settlement. Such meetings were not uncommon across Aboriginal Australia but all relied on the availability of sufficient resources to support such unusually large numbers for a period of three to four weeks. At the top of Port Phillip Bay those resources were to be found in the same numerous and extensive wetlands that were subsequently viewed with disfavour by the European settlers.



Figure 1: Hobsons Bay and River Yarra River, Melbourne; Henry Cox 1863.

Kulin country

At the time of European settlement south of the Murray River, the central part of what is now Victoria comprised the collective estates of Aboriginal clans that formed the Eastern Kulin language groups. The Kulin Nation was made up of 22 clans, members of which were closely connected by kin, thought and tongue (Barwick 1985; Clark 1990; Presland 2010).

Within the Kulin world every individual was connected, by family and spiritual bonds, with members of clans whose estates were some distance away. These relationships, developed by marriage ties and shared beliefs, needed to be affirmed and confirmed through regular meetings of the clans concerned. Such meetings were occasions to create and re-create alliances and connections to kin and clan; to settle disputes; to exchange goods; and to conduct the necessary business of their world. Because they involved people from across the whole of the Kulin world, these periodic gatherings brought together hundreds of individuals normally resident in estates as far apart as the Yarra River and the lower reaches of the Goulburn River, as much as 200 kilometres.

The places within the collective Kulin territory at which clans gathered were time-honoured and generally areas of abundant seasonal resources. By an unfortunate chance, one of these localities was the area where Europeans first established themselves in 1835, the area that was to become the township of Melbourne.

Whenever Kulin clans gathered in the region of the Yarra River ahead of a series of meetings, each group set up camp in a particular location, favoured by tradition. In each case the preferred area was adjacent to an extensive wetland. Thus *Watha wurrung* speakers from the Bellarine Peninsula and

further west generally camped on the rising ground at the western end of what is now Lonsdale Street, an area that overlooked West Melbourne Swamp. Members of the *Daung wurrung* speaking clans, approaching the Bay from the Goulburn River area, camped to the north of the river, in the area now called Clifton Hill. The *Boon wurrung* took up their customary position in the high ground of the future Botanic Gardens, adjacent to a large billabong on the Yarra; and the *Woi wurrung* set up in the area that would one day include the MCG, from where they had ready access to a number of wetlands along the northern bank of the Yarra.

While these various wetlands were the mainstays of the Kulin world at times of major meetings, a number of other wetlands a little further from the river also figured in the traditional seasonal round of local clans. For example, a large area on the southern side of the Yarra estuary, in what is now Port Melbourne, Albert Park, Middle Park and the major part of South Melbourne, was low-lying and consisted of a boggy marshland. This area included a couple of sometimes-connected lagoons that subsequently formed the basis of Albert Park Lake. This and the other swampy areas provided a wide range of seasonally-available resources for the *Yalukit willam* clan of *Boon wurrung*, as did an extensive freshwater wetland in the Elwood area further south along the shore of Port Phillip Bay.

Ecologically, these areas were highly productive and thus the haunt of abundant birdlife (Corrick 1982). At the right time of year—from late spring through to early autumn—the wetlands were favoured spots for the local clans. How productive these areas were can be gauged from an early European description of West Melbourne swamp. Mattingley (1916), writing in the context of what had been lost in the making of North Melbourne, described the swamp in the following terms:

on the waters of a large marsh or swamp graceful swans, pelicans, geese, black, brown and grey ducks, teal, cormorants, water hen, sea gulls ... disported themselves, while curlews, spur winged plover, cranes, snipe, sandpipers and dotterels either waded in the shallows or ran along its margin, and quail and stone plover ... were very plentiful eels, trout, perch inhabited its waters.

Add to this animal abundance a plant regime consisting of dozens of useful plants and it is not difficult to see why it was an attractive place to the Indigenous people. Such areas have been likened by some (eg. Department of Conservation 2003; Bataluk Cultural Trail 2013), to contemporary supermarkets. Given the range and variety of resources available in a relatively small area this may be a helpful simile. But if we want to continue with this analogy we should perhaps also refer to wetlands as pharmacies and hardware stores, since a number of plants found in such localities were used for purposes other than food. While many plants have parts that can be eaten—rhizomes, flowers, bulbs, tubers and seeds—often, the same species has other parts that can be put to a range of uses. For example, while Cumbungi (*Typha* sp.) was a major food source in the Melbourne area, its leaves and fronds, when dried, could be split into thin lengths for weaving baskets, or making nets and items of personal adornment (Gott 1999; Zola and Gott 1992). Further, a number of aquatic plant species, such as Marsh watercress (*Rorippa palustris*) and River clubrush (*Schoenoplectus tabernaemontani*) were gathered, when needed, for their medicinal qualities (Lassak and McCarthy 2011).

Settler views of wetlands

Where Kulin clans saw natural provision, white settlers viewed with some disquiet what most saw as unproductive swamps, areas of little value. More tellingly, they saw these elements of the natural world as something that could be amended. For many, the Biblical injunction in Genesis 1:28 to “subdue the earth” was to be taken literally; indeed, many Europeans took it as the role of humans to improve upon what God had made (Coleman 1996).

Initially, because the wetlands around the settlement were of no practical use to the immigrants, they could be ignored. Although the town quickly achieved city status, its development, particularly on the southern side of the river, was relatively slow. Here a collection of smaller urban areas occupied the higher ground that surrounded the low-lying wetlands (Fig. 1). But following the discovery of gold in Victoria in 1852, Melbourne grew rapidly in size and importance, and attention became increasingly focused on those wetlands. Two concerns were paramount regarding the presence and location of these areas: the health hazard they posed to nearby residents; and the impediments they had become to urban and industrial development.

The former concern stemmed in large part from the prevailing view of the spread of disease. It was a common belief in European society, first voiced by the ancient Greeks and reinforced during the Middle Ages as a result of the widespread occurrence of the plague, that diseases such as cholera and malaria derived from bad air emanating from swamps. From early in the 18th century onwards this belief came to be called the miasma theory. It held sway well into the 1860s, until disproved by John Snow in London, at about the same time that (independently) Louis Pasteur and other researchers demonstrated that it was germs, not foul air, that were the principal agents in the spread of disease (Giblett 1996; Halliday 2001). In Melbourne, the influence of miasma theory continued to be felt for some time. A proposal by John Watson (reported in *The Argus* of 10 February 1866) to drain West Melbourne Swamp suggested that such action would diminish “the risk of epidemic by destroying what is now a copious source of miasma”.

Over and above their belief that marshes and swamps were the sources of disease, for many of Melbourne’s residents these areas were places of little regard. The prevailing attitude to such features is clear from the way in which the wetlands of inner Melbourne were misused. By the mid 1870s, Sandridge Lagoon, for example, had become a cesspit, filled with dumped rubbish, and sewage from adjacent councils (Buckrich 2002). Although such blatantly insanitary use of wetlands only contributed to the threat to public health, it was difficult putting a stop to it. The usual means of policing the regulations set out in legislation were generally inadequate (Dunstan 1984). More than 20 years later, although drainage into Sandridge Lagoon from surrounding areas had been improved, manure from thousands of horses docked nearby was being dumped into the water of the remaining part of the Lagoon (Uren and Turnbull 1983).

The parlous state of Sandridge Lagoon was mirrored by most of the wetlands within the Yarra’s estuary; it was a function of the low esteem with which such areas were regarded, and the fact that they had been neglected for decades. This was easy to do when there was no pressure to make use of the areas. By the early 1870s, however, there was a push for more urban and industrial development close to the city and the low-lying areas that were previously ignored by governments became the subject of a Royal Commission on the Low Lands (Dunstan 1985).

The Commission was an indication of the growing concern that had arisen within the city regarding wetlands and their future. The enquiry became the first step in a lengthy process of improving those areas that had to date been not worth worrying about. Wetlands that were being encroached on by urban development were seen now as potential impediments to the expansion of further industry or housing. In the succeeding thirty years the landscape of Melbourne was changed dramatically, as all of the wetlands were drained, or transformed into an amenable form. The result of these endeavours takes a number of forms, varying according to the location of each area and a range of determining social factors. These elements are detailed briefly in the remainder of this paper, along with the means and methods employed in the process of creating a desirable urban landscape.

The reclamation of swamps

In the period from the mid 1870s through to the earliest years of the 20th century almost all of the swampy areas within a two kilometre radius of central Melbourne were reclaimed. About a dozen wetlands were affected, all within the combined estuary of the Yarra and Maribyrnong Rivers, or along the Yarra itself. With a few exceptions, nothing now remains to indicate the former presence of any of these wetlands. In three cases, however, although the wetland is long gone there are hints that point to the fact that they were once part of the Kulin world. The fate of these three features, plus that of the largest of the swamps in the inner Melbourne area, are considered here, and used as examples of the range of outcomes achieved as a result of European exploitation of the Port Phillip environment.

West Melbourne Swamp

This swamp lay on the northern side of the Yarra within the estuary of the river, immediately to the west of the settlement; at about 30 hectares, it was the largest wetland in close proximity to the settlement (Presland 2011). Because of its proximity to Batman's Hill, this wetland was often called Batman's Swamp. In the early years of the settlement it was seen by a young boy as an attractive feature in the landscape. About 70 years later Gordon McCrae (1912) wrote in glowing terms of what had he had seen in the 1840s but had long since disappeared:

... stretching away from the base of the Flag-staff Hill, lay a beautiful blue lake ... a real lake, intensely blue, nearly oval, and full of the clearest salt water; but this by no mean deep. Fringed gaily all round by mesembryanthemum (*vulgo*, "pig's face") in full bloom, it seemed in the broad sunshine as though girdled about with a belt of magenta fire.

The majority of the area in this part of the estuary was covered by a Brackish Grassland (EVC 934)² that was subject to tidal inundation and regular flooding. This grassland enclosed a Brackish Lake Aggregate (EVC 636), which was rimmed by an area of Coastal Saltmarsh (EVC 9) (Oates and Taranto 2001).

Away from the edge of the saltmarsh the ground surface of the surrounding grasslands was firm enough to be used as the venue for the first race meeting in the settlement. This took place on 8 February 1837 (Boys 1959).

Although plans had been made as early as 1849 to drain the swamp (*The Argus* 24 April 1849, p. 2), little work actually took place before the late 1870s. Through the 1850s and 60s a part of the area

was given over to cow-herders, and boiling down works and a bone mill were established along the river on the southern portion of the wetland. There were periodic complaints over many years about the offensive smells from the fellmongery and boiling-down works (*The Argus* 13 September 1864, p.7) and the stench of liquid mud in the swamp (*The Argus* 5 June 1871, p. 4). Pollution was also coming into the Swamp from tannery yards in Flemington, via Moonee Ponds Creek (Lack 1985). The fact that an area of several acres of the north eastern corner of the wetland continued in use as a refuse depot into the 1890s, did nothing for the cause of clean air or a healthy environment (Dunstan 1984).

The biggest impetus to the reclamation of West Melbourne Swamp was the creation of a Harbor Trust in 1877. Although the area was not within the jurisdiction of the Trust (Buckrich 2002), it was soon impacted by the Trust's primary purpose, which was to plan the improvement of Melbourne's port facilities (Dunstan 1984). One of the earliest actions of the Trust was to engage an English engineer, Sir John Coode, to advise on how to solve the associated problems of Melbourne's narrow and circuitous river and a lack of adequate docking facilities (Bentley and Dunstan 1996). Coode's scheme, when put into effect, shortened the river by about 1500 metres and led to the use of a part of the wetlands for the new Victoria Dock. The Coode canal opened in September 1886 and the docks in 1893. The reclamation of the swamp was still going on in 1905 when the Melbourne Harbor Trust established a depot in the old stream bed of the Yarra to store material it had dredged from the Bay, for use in raising the level of the West Melbourne Swamp. (Melbourne Harbor Trust 1905).

Today the area formerly covered by West Melbourne Swamp contains a number of urban features of comparatively recent construction, including the Docklands Precinct; the extension of Moonee Ponds, constructed in the early 1890s as a means of barging coal to ships moored in Victoria Dock; the Melbourne Freight Terminal; and Melbourne Wholesale Fruit and Vegetable Market.

Sandridge Lagoon

During its survey of the perimeter of Port Phillip Bay in 1803 the Grimes exploratory party "came to a salt lagoon about a mile long and a quarter of a mile wide; had not entrance to the sea" (Flemming 1972). Following settlement in 1835 and the subsequent development of a village adjacent to the sand ridge on the shore line, this feature—possibly a remnant of a former course of the Yarra—became known as Sandridge Lagoon. Because of its shape and closeness to the Bay, in the earliest period of the urban development of Sandridge (later Port Melbourne) the lagoon was a defining and determining feature of settlement in the immediate area (U'Ren and Turnbull 1983).

During times of flood the lagoon filled through runoff from the surrounding area, and sometimes (as in December 1849) the water broke through to the Bay (*The Argus*, 4 December 1849, p. 2). This passage through the sand ridge allowed small boats to find shelter in the lagoon but this was usually a temporary thing. With an entrance to the Bay, the water level within the lagoon was subject to tidal influence; at times of high tide the extent of the lagoon could be as much as 27 acres (U'Ren and Turnbull 1983).

By the mid 1860s pollution in the Lagoon had begun to be a concern to residents. The Sandridge Council felt that a channel cut from the Lagoon into the Bay would solve the issue of accumulated pollution, much of which, it was recognised, came as run-off from Emerald Hill (U'Ren and Turnbull

1983). As well as the health issues raised by the presence of noxious material in the Lagoon, the area posed a danger to people who accidentally wandered into the marsh. In November 1869, two men drowned in the Lagoon in the space of as many days. But while these and other human bodies were always removed from the water, such was apparently not the case with goats and dogs that drowned there (*The Record*, 19 November 1875, p. 3).

There had been repeated calls since 1854 for a dock and harbour to be created in the lagoon (*The Argus* 16 March 1854, p. 5), but little progress to that end. In 1869 Sandridge Council offered a prize of £100 for the best and cheapest solution to the unsanitary condition of the lagoon (U'Ren and Turnbull 1983). This produced no workable scheme and by 1879 the only change to the lagoon was that the northern end had been filled in as far as Bridge Street; the rest was still something of a cesspit. With the creation of the Melbourne Harbor Trust, in 1877, the lagoon became a political football, its fate bouncing around between the Trust, the colonial administration and the Councils of Sandridge and neighbouring Emerald Hill. In July 1886 an agreement was reached between the players that saw the lagoon mouth opened to the Bay as far as Graham Street and drainage from streets diverted away from that portion (Hoare 1927).

Pollution continued to flow into the lagoon, however, and in 1890 a pumping station was constructed to pump the sewerage and drainage past the lagoon to assist in keeping it clear (U'Ren and Turnbull 1983). This had limited success but ultimately contributed to the shoaling of the small harbour (Hoare 1927).

In 1921 a breakwater was built adjacent to the outlet of the lagoon, which provided shelter for small vessels. The lagoon was thus made redundant and was finally closed (Hoare 1927). The only easily visible clue to the previous existence of the lagoon is the appropriately-named Lagoon Reserve, which lies between two of Port Melbourne's streets that are suggestively named Esplanade East and Esplanade West.

Albert Park

Albert Park is perhaps best known today as the venue of the Australian Formula 1 Grand Prix, staged around the perimeter of the Albert Park Lake. That the area still exists as a public reserve, albeit one that is annually given over to well-heeled people with fast cars, when most other similar areas in the inner city have been given over to urban or industrial use, is interesting in itself.

On Robert Hoddle's map of North and South Melbourne in 1842, the area of Albert Park was shown as containing not one piece of water, but several swampy water-holes with a bordering of teatree (*Leptospermum* sp.) (Sutton 1912). The vegetation in these perennially wet areas comprised Brackish Lake Aggregate (EVC 636), which was enclosed by Brackish Wetland (EVC 656) (Oates and Taranto 2001). Perhaps because it was an open area and there was little urban development in the vicinity, it had an appeal not normally accorded to other wetlands. Late in 1844 a petition was made by the Melbourne City Council to the Lieutenant Governor, C J La Trobe, to have an area south of the Yarra set aside as a public park.

Nothing happened immediately but the area was permanently reserved by the government in 1864 and given the name Albert Park, to commemorate the recently-deceased Consort of Queen Victoria

(Barnard and Keating 1996). Previously, the area was known as South Park and was administered by the adjacent Emerald Hill and St Kilda councils.

Since the area was destined as a public park, rather than draining the lagoons, as was done in other wetland areas, in Albert Park they were transformed into a permanent lake. The impetus to create this lake was twofold: firstly it was a way of dealing with the increasingly unhealthy state of the swamps; and secondly it was intended to create a place where boating activities could be pursued. The two major lagoon areas were deepened and joined to make the lake. It was found, however, that over the summer months the water level in the lake became too low for sailing. Boating enthusiasts petitioned parliament and from 1877 until 1892 the level was kept topped up by piping water from the Yarra River via a steam pump installed in the Domain (Lamb 1996). This pump was superseded in 1892 by a newer installation at Dights' Falls, and was the same that supplied fresh water to the Botanic Gardens, over the same period.

By the latter part of the 1870s, although all the land between the park and St Kilda Road was in private hands (Barnard and Keating 1996), the park itself was reserved for public use in essentially the form it retains today.

Yarra River Lagoon

In March 1846, when C J La Trobe selected a site for Melbourne's Botanic Gardens, the area he chose on the south side of the Yarra River was an "indefinite swampy tract" (Grose 1956, p. 76). The major feature of the area was a billabong, which was connected to the Yarra River. Unlike the Sandridge Lagoon and other swamps within the estuary of the river, this was freshwater lagoon, rejuvenated through periodic flooding from the Yarra River. The vegetation within the billabong was that of a Reed Swamp (EVC 300) (Oates and Taranto 2001).

Langhorne's Anglican mission had operated immediately to the east of the chosen site between 1837 and 1841, to take advantage of the regular gatherings of *Boon wurrung* who made use of the lagoon (Cannon 1982; Pescott 1982). In addition to a range of plant resources the lagoon was noted for its abundant birdlife. A count in the mid-1850s listed 63 land- and 19 water species of birds (Wilson 1857). Because it was connected to the river, the lagoon also held a regular supply of eels and other fish species. Eels were taken by Aboriginal men using spears, the hunter having detected their presence while wading in the water. George Robinson recorded (29 January 1841) seeing two Aborigines catch about forty pounds (18.2 kg) of eels in a very short time.

As the lagoon was connected to the river it was prone to flooding, but from the beginning it was incorporated into the general plan of the Gardens. It was subject also to silting up through run-off from the adjacent slope; as a result it needed to be deepened in 1850 (Pescott 1982) Ferdinand Mueller, who was appointed Director of the Gardens in August 1857, left it essentially unchanged except for the installation of a fountain on an island in the lagoon. His successor William Guilfoyle developed the area in ways that eventually led to its becoming a lake. The lagoon was to be deepened again, the height of one of its islands was raised, and the lagoon's edges were shaped (Pescott 1974). Although the work to give effect to these plans was begun in the late 1870s it was delayed and spread over a couple of decades through government work on the river itself. Much of the surface along the southern side of the river in this area, including parts of the Gardens, was low-

lying and subject to inundation when the river rose. A government enquiry recommended the straightening of the river in the stretch adjacent to the Gardens. This led to the passing of the *Yarra Improvement Act 1896* and, in turn to the carrying out of 'improvements' to the river. These were completed in 1901, breaking the nexus between the lagoon and the river, since when it has effectively become a lake (Pescott 1974).

Conclusion

The area at the top of Port Phillip Bay, chosen as the site of European settlement, was one that contained a number of wetlands. For the local Kulin clans these places were essential sources of a wide range of foodstuffs and materials; for the immigrant settlers they were generally disregarded as places of little economic or social value and increasingly used as dumping grounds. Such contrary views of these wetlands reflected the nature of the connection each group had with its physical environments. Notwithstanding this disparity, however, these landscape features can be seen as a significant factor in the local history of both groups.

The enduring presence of Europeans across Victoria ultimately spelt the end of a way of life for the Indigenous people. In the area of Melbourne, as increasing numbers of whites settled so more and more were Aboriginal people excluded from the areas that had sustained them over thousands of years. The wetlands of the Port Phillip region had been a significant resource base during the customary seasonal round. Of greater importance, however, the presence of these wetlands had supported the regular meetings of clans from across the entire territory of the Kulin. These gatherings were an essential element in maintaining the Kulin world, providing opportunities for a range of necessary activities such as exchange of marriage partners and the enacting of religious and initiatory ceremonies. Denial of access to these areas of abundant resources was thus a blow against not only the material underpinnings of the Kulin world but also against its spiritual and conceptual bases. The exclusion of Aboriginal people was a major factor in the collapse of local Indigenous culture.

The rapid expansion of the city during the 1850s, following the discovery of gold, put enormous pressure on the wetlands areas around Melbourne. On the one hand decades of neglect had allowed many of these areas to become the repositories of sewage and waste; on the other, the location of some of them was pivotal in the future development of Melbourne's shipping facilities and urban expansion. Europeans beliefs regarding nature in general, and the character of swamps in particular, lead to these areas becoming a focus of attention, in efforts to create a landscape that was amenable to the commercial and cultural interests of the city. Significant parts of the inner Melbourne area have been shaped as a result of the countermeasures enacted to achieve these ends.

Although many of the wetland areas in the inner Melbourne area were drained and filled in, to be completely lost to view, a few were transformed and continue to have a presence in the urban environment. Of the four wetland areas considered here, ultimately three were turned into areas of public access and recreation. Today they survive as markers of a past, but not-quite-forgotten landscape form. It could be argued, too, that despite the vastly different ways in which wetlands were appreciated and used by the immigrant population, in some fundamental sense these same areas continue to function as they did before settlement. Today, when large numbers of people get

together at Etihad Stadium, for example, to take part in social or ritual activity, it should be remembered that the stadium is located close to where West Melbourne Swamp once stretched. And that in Aboriginal times large numbers of people also gathered there, for not entirely dissimilar purposes (Presland 2002). The swamps of Melbourne may be gone but, in effect, something of their social function remains.

¹ While distinctions (based on various analyses) can be drawn within a range of landscape features, variously referred to as 'fens', 'marshes', 'swamps', and 'aquatic wetlands' (see for eg. Corrick 1981; Greb and DiMichele 2006), in this paper the more general terms 'wetland' and 'swamp' will be used throughout. Both of these terms are taken to refer to 'any area of low-lying land where the water table is at or near the surface most of the time, resulting in open-water habitats and waterlogged land areas' (Jones *et al.* 1992, p. 441)

² Three of the four wetlands examined in this paper—West Melbourne Swamp, Albert Park and the Yarra Billabong—have been categorised within the system of Ecological Vegetation Classes (EVCs) devised by Oates and Taranto. The terms used to describe the vegetation in these wetlands is drawn from that work.

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The Record and Emerald Hill and Sandridge Advertiser

Incentivising the Regeneration and Maintenance of Cultural Built Heritage in NSW

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Conservation of cultural built heritage in society has become vexed with political, financial and planning difficulties. The listed stock is in gross need of information, funding and policy direction. Opportunities to capture value, to maximise conservation incentives and generally to encourage owners to maintain their listed heritage properties, are being sorely missed. Yet, the survival of the heritage listed stock is dependent upon flexibility, consistency and certainty in the system. To what extent do current controls cope with adaptive re-use, continually evolving aspects of cultural significance and a need to keep the purpose of heritage listing alive and relevant? Attitudes and opinions of heritage practitioners, owners, developers, managers, planners, lawyers and policy makers working within the NSW heritage sector, have been documented in recent PhD research undertaken by the author at the Faculty of the Built Environment - University of NSW. The area of the study is confined to the NSW heritage management system at local government level. The paper records the attitudes and opinions of at least 50 separate interviewees and provides leading evidence of systemic failure in current local government planning frameworks. The paper attempts to analyse internal and external pressures upon such frameworks and alludes to future policy development in the sector by way of incentives, funding schemes and innovation.

Keywords: Cultural built heritage, Incentives, Local Government, NSW Planning Framework

Introduction

This paper draws from a larger PhD research investigation into opportunities for incentivising privately owned heritage places through local government planning frameworks in NSW. Part of that

research has entailed a large number of interviews with practitioners working within the heritage sector. The purpose of the survey was to ascertain current thinking about heritage funding in NSW. The primary focus of this paper is to distil preliminary findings about private and public funding mechanisms in order to enumerate the main areas of concern pertaining to cultural built heritage (CBH) and policy development in the NSW heritage sector. As Table 1 shows, approximately 90% of the listed heritage stock in NSW is in private ownership. Yet current policies do not acknowledge this fact and they do not address the expectations and concerns of the private owners of the listed stock. After listing, local councils do not follow up with any assistance to owners in terms of information, advice, conservation guidelines, grants or any other kind of service except when work is lodged as part of a development application. Owners of CBH are forced to commission the services of private heritage consultants to assist with the changes that they wish to make. Owners complain that costly advice and maintenance pushes up the cost of owning a listed building for which little is given back in return. The unavailability of assistance from local councils in the form of financial assistance, grants and planning dispensations for private owners of CBH causes many owners to take a dim view of the process. Such sentiments combine with highly vocal negative development lobby groups to give the sector a bad name. This in turn has begun to negativise heritage and cause governments to walk away from the sector, leaving a policy vacuum. In the meantime, owners have become ensnared in having to absorb the full cost of heritage listing. This inequitable situation is addressed by many of the interviewees who understand that some form of compensation is required in order to sustain the listed stock. They recognise that CBH is a public good which is essentially being financed by private owners. They recognise too that simple planning incentives could be introduced to convey benefits to owners at relatively small cost to councils and communities. This paper turns its attention to that discussion and sets out some of the initial policy thinking, attitudes and ideas.

This paper is divided into ten sections as follows; first the context of NSW's heritage management system; secondly the survey methodology employed for the interviews and then each of the seven groups interviewed followed by a conclusion. The nature of the seven groups is explained in the 'survey methodology' section. The conclusion comprises a brief reflection on funding issues and incentive schemes for privately owned CBH and the means by which local governments might capture value for purposes of re-directing resources into their heritage management systems.

Context

The majority of domestic Australian legislation enacted to protect CBH did not appear until the mid-1970s, following Australia's signing of the World Heritage Convention (1974) and the Commission of Inquiry into the National Estate in 1974 (the Hope Inquiry). Since that period, heritage legislation has been established in all States and Territories and at the Commonwealth level. In NSW, protective legislation has been enacted for locally listed heritage items and conservation areas under Local Environment Plans (LEPs) and Development Control Plans (DCPs). In concert, this suite of legislative measures provides a safety net across the State's 152 separate local government areas (LGAs) for 27,000 items of local environmental heritage and a further 1,600 State-listed heritage items. Adding to this number is at least 500 separate conservation areas whose contributory items therein would probably swell the number to 40,000 local heritage items. However, this number has never been officially calculated.

One might expect that from such robust suite of protective measures, NSW's CBH would be well taken care of. However, there appears to be a number of issues plaguing the effective regulation of it at local and State government level. These may be listed as follows:

- Incapacity and under-resourcing at local government level;
- Cost shifting onto the private sector;
- Lacklustre policy settings (innovation and incentives);
- Deficient revenue base for local government;
- Failure by government to promote CBH as a public good in society;
- Unavailability of private and public funding mechanisms for the heritage sector.

The above information was gleaned from the interviews as part of a current PhD research project. The qualitative data received illustrates certain attitudes and concerns of practitioners working within the sector as well as those of owners and developers. The purpose of the survey is to ascertain current thinking about various funding mechanisms available to private owners of heritage places in NSW. These interviews are discussed in the next section of this paper.

Table 1: Extent of CBH in Private Ownership in Australia.

State	Councils with a heritage list	Individual places	Heritage areas(a)	Council owned places (b)	
				Average	Maximum
	% Respondents	No.	No.	% Listed Places	% Listed Places
NSW	93	25,847	512	8.8	71
VIC	97	19,183	497	9.3	83
QLD	42	9,852	191	19.9	100
WA (c)	84	8,178	391	12.7	100
SA	52	7,489	92	7.9	33
TAS	86	5,804	87	5.6	29
TOTAL	Average 75	76,353	1,770	10.4	100
(a)-includes historic conservation zones, heritage precincts, streetscapes and special areas (b)-includes parks and monuments (c)- may include places in Municipal Heritage Inventories					
Source: Productivity Commission 2006. <i>Conservation of Australia's Historic Heritage Places</i> . Table B.2:324					

The interview data illustrates the shortfall of local government resources. In NSW, local government through its 152 councils and shires is charged with the responsibility of regulating the 27,000 locally listed items and numerous conservation areas in the state. Owners, developers, architects, designers and builders turn to such councils in seeking clarification of planning controls, availability of grants for heritage projects, advice on conservation approaches and other technical requirements.

Survey Methodology

The purpose of the survey generally was to ascertain current thinking, knowledge and ideas about public and private funding mechanisms available to private owners of CBH and whether they are sufficient, known about and adequate. Interviewees were selected from a wide variety of stakeholders distributed into seven groups: heritage advisors working in metropolitan areas; heritage advisors working in rural areas, planners operating in the NSW heritage sector; planning lawyers operating in NSW, government officials presiding over various departments; developers of heritage buildings and owners of heritage places.

The approach taken was intensive face-to-face interviews following a questionnaire of 20 key open-ended questions relating to:

- Heritage as a public good;
- Benefits of listing;
- Financial assistance for owners;
- Duties and obligations of listees;
- Availability of incentives for owners;
- Sustainability of the heritage stock;
- Listing processes adopted by local government;
- Purpose of heritage listing;
- Regulatory framework for CBH;
- Political and social dimension of heritage listing;
- Communication of heritage values;
- Fairness and equity of council processes for CBH;
- Community expectations of protecting CBH;
- Adaptive re-use potential for CBH;
- Development rights and credits for CBH;
- Tax and rate relief for owners of CBH;
- Information levels required for listings;
- Accreditation for practitioners working in the heritage sector;
- Promotion of CBH by government;
- Public support for CBH.

Interviews were conducted between April and August 2013 in the Sydney metropolitan area. Fifty separate interviews were conducted and digitally recorded and then subsequently transcribed. The analysis of this rich data set is proceeding. In this paper, a preliminary analysis is made of responses relating to only four of the issues as set out below:

- Financial assistance for owners;
- Availability of incentives for owners;
- Development rights and credits for CBH;
- Tax and rate relief for owners of CBH.

A summary of the concerns for each group follows. Most of this material constitutes quotes by the various interviewees in each group. However, they are presented below as a rolling narrative of concerns, issues and ideas stitched together from one interviewee to the next.

Heritage Advisors Operating in Metropolitan Areas

This group believes that because there is a public good element to heritage listing, it is appropriate that a benefit of some kind be provided to the owners. Members of the group believe there should be more delegated flexibility for CBH including up-zoning, planning agreements and relaxation of controls. What is actually required is a greater recognition from government that CBH is worth funding. Whether from local or state government, financial assistance ultimately adds to conservation areas and benefits many people therein. Lack of funding is a disincentive for developers and owners who would otherwise develop their heritage properties. However, under current legislation, councils don't really have any legal powers to sustain comprehensive incentive schemes. Current levels of legislated incentives in NSW are not sufficient and they are not working. In fact, according to one in the group, they act as a disincentive as they are currently written. There should be much more funding available from the state, the local, and even the federal level but the funding just isn't there; councils have simply shut their heritage funding programs down. Even wealthy councils have no funding available for CBH and they point out those in rural areas, there is absolutely no money. Yet, heritage items are important to our cultural health and therefore the degree to which we fund these things will indicate the degree to which we think they are important. If councils list heritage buildings and then offer owners no funding, it would be a very ambiguous message that they are sending out.

The group expressed the view that funding assistance only makes a difference where there is a conservation area due to the collective listing. They point out that incentive schemes only work for communities whose socio-economic values endorse CBH. Financial assistance needs to be spent on targeted conservation of heritage fabric itself as opposed to improving the setting of a place. They are concerned that usually there is very inexperienced management and advice applied to CBH with few standards and policing established. In the absence of incentives, there will be a gradual degradation of the heritage qualities of the asset rather than the asset itself. Notwithstanding, there is possibly an unrecognised benefit provided for CBH because it is predominantly privately owned as opposed to government owned.

In relation to grants, they point out that financial assistance encourages owners to conserve. Irrespective of the amounts, grants convey a positive message about the value the community and government places on heritage listings. For many private owners of heritage places, there is a lot of capital tied up in properties but no real income. For these people especially, grants are needed for maintenance. As a funding mechanism, they are favourable because they come from the public sector to help maintain heritage streetscapes. Grants can work well as long as they are for specific things; particularly for public realm things like facade restorations. Financial assistance to owners of

CBH should be restricted to elements of the fabric which generate a public good like repairs to street elevation components. Grants encourage and reassure owners especially when listings are proposed because there are always concerns about additional costs. However, there are two problems with grants. Firstly, staff time required in councils to process applications and secondly, the applicants need to do the work before they get the money. There are complications in assessing the applicant's financial situation and the value of the works undertaken. It is not a straightforward thing to administer. The group points out that unless the grants are substantial and the politics is taken out of the system, they will remain unpopular. The reality is that the current 'level of grant funding in NSW is atrocious'. There is a state heritage fund with no money in it. Therefore, as a mechanism, grants are regarded as patchy and inconsistent albeit that they are a highly transparent vehicle for delivering funds to worthy recipients under a targeted incentive scheme.

In regard to taxing and rate exemption, the group believes that there is already the ability for locally listed private owners to apply for land tax rebate or exemption, but most people don't know about it. Tax and rates exemptions are tricky they say and we are probably not going to see them applied in any foreseeable timeframe. Land tax exemptions are effective and available. One can get a valuation for property based on the extent of current development rather than putative development. A land tax exemption is helpful for private owners of CBH because it sends a good message out as well as providing some practical support. Councils could exempt owners of CBH from paying rates provided that the owners can prove that they have spent the equivalent on the maintenance and restoration. The group points out that one has to either tax everybody and set a constant rate or decide the specific purpose for which the tax is to be raised. With the latter, there will always be community disagreement.

However, there is no single kind of incentive or funding that can be applied; different kinds need to apply to residential, commercial and community type buildings. Development credits would work for commercial buildings, dollar for dollar funding would work for community buildings and grants with tax or rates exemptions would work for privately owned dwellings. Development credits and TDRs (transferable development rights) could work but would require intensive micro-management to administer and would have to operate under very strict rules and guidelines.

In regard to other forms of raising revenue for CBH, some of the ideas discussed by this group are:

- UK Heritage Lottery; as a model to be applied in NSW. The Heritage Lottery Fund provides an unending source of externally derived income for CBH;
- Taxing privatised profit such as that resulting from upzoned areas. Profits should be taxed to pay for heritage and infrastructure;
- Second residence bonus; one could give owners a bonus of a second residence on the land of a listed item so long as every other amenity is considered;
- Differential rating system for heritage items and items in conservation areas could be introduced;
- Subdivision; opportunity to create value where there otherwise is none - at no net cost to the community;
- Green star rating system; if one awards green star points for embodied energy in CBH, one would change the behaviour of corporate private owners concerned about their triple bottom line;

- Section 94 Contributions as a potential way of raising appropriate funds for CBH;
- Low interest loans for CBH providing funding at the official rate rather than the bank loan rate;
- Demolition bounty on neutral buildings in conservation areas; the bounty would be set as a discouragement except for those keen to replace them and who can afford it;
- Heritage bank; the establishment of a heritage bank for general heritage purposes and distribution of funds;
- Local government levy for CBH; so long as affected communities are convinced that there will be a benefit.

Heritage Advisors Operating in Rural Areas

This group believes that financial incentives are more about good will than about money. All those who are beneficiaries of a public good like heritage could be expected to pay a tax as long as owners and local businesses can show that there is a benefit. Financial assistance can be a very strong incentive for people to value properties, nominate them onto lists and to entice them to undertake conservation. A well-managed heritage advisory service as part of community capacity building works particularly well in regional communities. If communities can see that something is adding to the attractiveness of their area or to the capacity of their area, then they see that as a tremendous benefit. Legislated incentives can often be irrelevant if they are conceived for metropolitan needs and not for regional areas. A different set of incentives for regional areas need to be applied. Regional properties have a much lower value whereas in the metropolitan environment property values are relatively high with historically high increases in value. The best incentives are those that come out of relationships and trust rather than legislated incentives. Rural communities benefit mainly from the advice and the guidance they receive from heritage practitioners; it is highly valued even if financially, it's a drop in the ocean. There used to be very good incentives provided from the NSW State Heritage Office for locally listed places but now it has dried up. In the future, private owners of CBH are going to have to conserve heritage because they want to. Local government can't afford to pay, but owners can.

However, the group points out that the heritage that needs funding is the less obvious and less iconic aspects of our social, historic, regional and industrial past. In terms of grants, the group acknowledges that in rural areas, grants provide huge political kudos if they are targeted to particular strategies. Targeted grant schemes get community buy-in, publicity and increased awareness about CBH. Grants for rural areas are available but they are a drop in the ocean. Dollar-for-dollar or even less than dollar for dollar, i.e. pro rata funding works just as well in rural communities. In terms of tax and rates exemption, the group sees that there should be tax deductions for upgrades and repairs on CBH because they generate income for others. However, rates exemptions would cause councils to worry about their reduced rating revenue. Finally, in respect of local tourism, all members of the group felt that imposing a tax on local and regional tourism would probably affect the viability of a lot of tourism operators and therefore, it would not be a good idea to do that as a means of driving additional revenue into a heritage fund.

In terms of some of the other suggestions for incentives, the group identified that:

- Documentation refund; it ought to be possible for private owners to get money back for heritage DA documentation under a general local government grants scheme;
- Differential tax offsetting; with tax breaks, one could have different levels of offsetting based on different levels of responsibility for looking after heritage buildings in private ownership;
- DA fees waiver for CBH; local councils should waive DA fees on heritage properties;
- Company vouchers; commercial companies like paint companies which get a benefit from fixing or conserving heritage places could offer owners vouchers in the form of 20% discounts or free advice.

Planners Operating in the NSW Heritage Sector

This group believes that there can be incentives at each level of government; Federal tax deductible write-offs, State stamp duty exemption and local rates reduction. There should be greater community recognition of the value of the retention of heritage properties in the form of incentives. If the costs are beyond the normal type of building cost, owners should be getting financial assistance, but not the full cost – only the difference. Heritage listing has the effect of hindering growth and sustainable development. Listing for the sake of listing without a strategic plan creates a disconnect which is complicated by inconsistency in approach to CBH amongst various councils. The group expressed a concern that funding needs to be linked to community attitudes not to the attitudes of politicians and heritage specialists. It needs to come from the bottom up. CBH is a public asset whether privately or publically owned, but the only way it will remain as public asset is if it is funded. The benefits of being heritage listed are not properly communicated to private owners by local councils. Generally, it was felt that maintenance of heritage listed properties is something that should be met by public assistance and not by the private owner. It is unfair to expect listees to maintain their properties at their own expense when still placing very strict controls on them. The public is gaining some benefit and should therefore contribute by assisting owners to defray the costs of maintenance. If the item is important enough to benefit the community and the state as a whole, there should be some offer of financial assistance for owners of CBH. Financial assistance should not be limited to a one off deal; it needs to be for ongoing assistance.

The group suggested there should be a state-wide heritage listing incentive clause for all LGAs which would contain FSR, relaxation of car parking requirements and extended uses; these things are highly beneficial for private owners of heritage buildings. Financial assistance could be based upon approved works being done as opposed random handouts. Incentives don't all have to be financial; they could be procedural such as fast tracking DAs involving CBH which would save owners and developers substantial costs. The heritage funds could apply to building facades so that it's something that the community can appreciate externally in the public domain. The group acknowledges that owners of heritage buildings are faced with having to undertake very expensive repairs and this puts a higher impost on them compared with the burden placed on owners of non-listed properties. The current incentive provisions are not sufficient and they are hidden so that owners do not understand what is available. One in the group pointed out that the Heritage Chairs and Officials of Australia and New Zealand prepared a Handbook of Incentives for Heritage Protection in 2008. It canvasses a range of incentives. Yet, planners at councils and those in the private sector have done little to introduce them into their planning regimes. Many incentives have been removed since the introduction of the new standard LEP; the government justifies this by

claiming that there is clause 4.6 which is a mechanism much like the former SEPP 1 which allows an applicant to vary a development standard.

The group believes that the relaxation of numeric controls for heritage buildings would be an effective mechanism; it has a lot more certainty and immanency to it than TDRs which are quite convoluted and complex and grants which put applicants through a series of tests. However, it is important for owners to have grant assistance available to them; one thinks of places of extremely high heritage value where the demands of maintenance are very significant. They believe that ordinary heritage places do not need additional financial assistance for things that are otherwise just maintenance. Assistance must be proportional to heritage significance; proportionality would be measured by the extent to which the item either has unusual demands of maintenance or is significant – it would have to be put to the public interest test. An incentive already available in the new legislation is for various minor works to be undertaken without approval but council planners are uncertain how to apply the dispensation and they fear the loss of lucrative DA lodgement fees. The incentives provisions under Clause 5.10 of the standard LEP do allow flexibility for land uses that are otherwise prohibited, but there needs to be a heritage management document in place. They feel that there is definitely scope for more flexibility to be built in to the legislation but one has to tie the development opportunity works to the conservation works and make sure that the conservation works will in fact be undertaken. The government's current attempts through the Planning White Paper, to increase the take-up of exempt and complying development is at odds with the narrowness of the heritage provisions under Clause 5.10. They feel that where incentive schemes tend to fail is where one ends up with things that either shouldn't be added to heritage buildings or are not consistent with the ultimate goal of protecting them. The planning regime can assist in a very productive way by the widening of potential uses; by granting discretions which add value to the property. Owners would be greatly assisted through the provision of professional advice by independent heritage consultants paid for by the councils or by the community. They feel that with incentives, the less one has to rely upon the public purse, the better.

In terms of alternative funding and incentive schemes that the group suggested:

- Fast tracked DAs; applicants for heritage listed properties could be given a fast-track approval process; granting minor works without full DA consent thus saving the owner's time and costs;
- Fee for use; charging a fee for use by which businesses or corporations that occupy heritage buildings enter into reduced rental agreements in return for maintaining and conserving them;
- Heritage levy; introducing a levy to contribute towards heritage, say ½% towards heritage funds that would constitute the local grants that go to worthy projects within council areas;
- Exemptions for CBH; increasing 'exempt and compliant development' dispensations for CBH say for minor internal changes to a heritage building without a DA process involved thereby saving owners cost;
- Betterment tax; re-introducing a betterment tax akin to the *Land Development Contribution Management Act, 1970* which required 30% of any green field re-zoning of land to come back into the government purse. The funding of a public good such as CBH requires the

collection of money outside of general revenue i.e. outside of tax. The betterment idea generates huge amounts of money for heritage and other things as well;

- Permissible use; declaring that any use is permissible within an HCA or a block that has a heritage item on it.

Planning Lawyers Operating in the NSW Heritage Sector

This group expressed the view that any incentive scheme will be regarded as being disproportionate if the benefits only flow to a minority. Only where restrictions result in a lower land value, would compensation be justified. Incentives should focus on maximum adaptive reuse flexibility. All members of the community should be paying for the benefit of well retained heritage. It is only through the increase of the value of the asset that heritage can be preserved at the public level. Private owners should not have to pay the full cost for the maintenance of listed buildings. Owners face future costs of maintenance at higher prices than for normal building work. However, existing incentives are too proscribed. One requires incentives that address the needs of heritage item and the rights of the owner. Any building placed on an environmental list should be exempt from rates. There needs to be education and promotion of heritage that shows that owners are entitled to financial assistance because they provide a public good. If blanket funding is available to all owners of CBH, one risks diminishing the capacity to financially assist in a meaningful way.

Change of use as an incentive allows dispensation for CBH that goes beyond zoning restrictions, but it is not sufficient as an incentive. If one doesn't tailor incentives to the circumstances i.e. owners' needs, they just don't work. People don't get interested in them. The group expressed the view that incentives are generally susceptible to market forces and that there is a high level of volatility over the cycle of most incentive schemes. One risks a reduction of CBH significance with incentives like development credits, upzonings and relaxation of numerical controls even if those schemes are successful financially. A compromise to a planning control is acceptable if there is a public benefit as a quid pro quo. Setting limits on height and FSR are arbitrary controls anyway. With funding, one has to have a number of things going at the same time; one cannot just do one thing, it will never be enough.

With grants, the group was unanimous about one-off grants not being useful for ongoing maintenance because one needs ongoing assistance. They felt that TDRs are inequitable as a potential funding source for CBH because they undercook development potential. However, they do facilitate someone else paying for upzonings on other properties which aren't heritage listed thereby financing expensive restoration and maintenance on CBH. A TDR scheme should be run at a state level not at a local LGA bound level because the area in which to use those transferred development rights ought to be broader. Developers are willing to pay huge sums for extra rights and if that is harvested in the heritage sector, one gets a public benefit without a public disbenefit. The group felt that tax and rates exemptions are used in other countries and that we should be seeking ways of applying them in NSW.

In terms of alternative solutions for incentives in NSW, this group suggests:

- UK Heritage Lottery model; which has been shown to be excellent for sustaining tourism and educating people about CBH;

- Subdivisions; allowing subdivisions to raise money for heritage but ensuring that impacts are minimal;
- Regular Listing reviews; to ensure that retention is worth the effort (cost to maintain);
- Open house days; occasional open house days which allow private owners to showcase their listed properties while naturally engendering pride and care amongst owners and the community;
- Ranked significance; one could fund CBH on the basis of ranked heritage significance; the higher the ranking, the worthier the funding.

Government Officials Working in NSW Heritage Sector

The six government officials who were interviewed for purposes of the PhD research maintain that incentives are available, it's just that they are generally not known about and local councils do not make them known for reasons either associated with a lack of resourcing or a fear that their rate bases will be reduced through the granting of valuations by the Valuer General to reduce a state land tax or vary a council rating application. Therefore, the incentives, even if they do exist, remain hidden. They feel that the priority is to ensure that CBH does not deteriorate and that in principle, financial support should be available to private owners for maintenance and repair. In the absence of such support, particularly rural properties will be at risk. If heritage confers a public good, they feel that the public should provide some support to have that benefit and that if one imposes standards of renovation that puts owners to extra expense, the public should be prepared to contribute to that.

As a reflection of the public component of privately owned heritage, they feel that there should be some form of recognition, but it does not have to be financial. There are other forms of assistance that ultimately translate into financial benefits. However, with the provision of an incentive scheme for CBH available for private owners, one has to be very careful how it is administered in order to suppress any mendicant rent seeking mentality and prevent political influence entering the system. All local governments should have a program of assistance for owners of CBH. They maintain and acknowledge that currently, there is incapacity in local councils possibly because of rate capping and the need to amalgamate – a debate which is currently ensuing at a legislative level in NSW. There needs to be major reform of local government because currently about 60% of local governments in Australia are not financially viable. Local government reform should include amalgamation of councils or the establishment of regional centres. If local government were put on a decent footing with the ability to raise rates and be large enough to gain bureaucratic momentum, it could attract high levels of professionalism to assist with conservation of CBH.

It is also acknowledged by this group that because the state is under pressure from the property industry to make planning controls more flexible; invariably, policy becomes vulnerable and heritage loses out. They generally feel that current levels of legislated incentives are sufficient in NSW; it is just that the public and owners do not understand what is available to them. There needs to be a wider educational program or public relations campaign explaining to owners what happens when a building is listed.

In respect of TDRs, they believe that the City Council has raised the bar too high, making the scheme unworkable. They believe that development credits and TDRs have traditionally had a tendency to

violate development standards and are problematic to administer. However, TDRs are capable of working and we ought to be going further with it. TDRs work as long as one sets sub-optimal and ultimate maximum limits; topping up from sub to max has to be purchased as development rights. TDRs create a market which does not destroy the heritage item and one drives the benefit towards targeted good causes. Although, a TDR system which is supposed to facilitate the community and the development industry may not be as effective as a SEPP 1 type clause which is now enshrined in Clause 4.6 of the standard instrument LEP. Clause 4.6, it is pointed out, provides the developer with pure benefits and no obligations, whereas a TDR scheme obliges the developer before they can get the benefit. It is therefore, a more cumbersome vehicle for developers. One member of the group pointed out that there is a system of grants provided for CBH operated by a semi-autonomous group in Melbourne which works extremely well, but in NSW, politics ended up destroying the incentives that were originally conceived to assist private owners. The assumption in NSW then was that only rich people bought old heritage buildings and government shouldn't contribute in any way to that process.

In terms of the other financial mechanisms, government feels that grants and tax/ rate relief are more transparent vehicles. It is better to provide general rates or land tax relief and would be simpler to administer. It would make councils think twice about what they list because with every new listing, the rate base would be reduced. Tax and rate exemptions work better than taxing because one risks spilling the collected and redistributed money on the way through. With tax exemptions as opposed to taxing, the government saves money and so do the home owners. Grants are reactive and not strategic. They are not necessarily accessible because some people can get them and others cannot. Grants have problems of political access; they have a role but they have limitations. The problem with a hypothecated LGA fund is that that it only initiates when a property is sold; between times, there is no bucket of money. If one has an accumulated bucket of money sitting around there is an incentive for councils to just let it sit there and live off the recurring income – like the S94 monies. Dollar for dollar funding would work well because it pushes the partnership idea; it encourages private owners to do the work and it gives security to government that it's getting twice the value of what it is paying for. The implementation of grants would have to be strictly controlled and dispensed only where there is a demonstrated need.

Other ideas raised by the group as possible incentives include a heritage valuation system that could actually increase the value of listed heritage properties:

- Matching fund; a matching fund or a 20% match to targeted programs facilitating the restoration of listed properties and; for commercial heritage properties
- Special heritage levy; imposing a special heritage levy for CBH might work. Special levies have been shown to be popular in NSW because people have the security of knowing where the money is going and what it is being used for
- Heritage agreements; tenants could be encouraged to enter into rental agreements whereby they commit to carrying out conservation works in return for very low or reduced rental compared with market rates.

Owners of Heritage Places in NSW

This group believes that if councils genuinely care about heritage items for posterity, they will provide financial assistance. For owners of large heritage places who are older and are not working or have become immobile, rate relief is essential. If councils desire that CBH remains in perpetuity, there needs to be a partnership arrangement to pay for the maintenance of the heritage items. In return for the custodial role that owners fulfil over the listed property, they should be allowed a certain leeway for development in excess of the restrictions as a quid pro quo. The upkeep of heritage buildings is expensive; owners need financial assistance to maintain them. There should be incentive provisions in NSW allowing for planning flexibility, exemptions from rates, land tax exemptions and exemptions from having to pay the stamp duty component of heritage listed properties. Funded streetscape maintenance programs in conservation areas would get the greatest level of support from owners because they are public domain elements from which the community gets the greatest benefit. Owners would benefit from free upfront advice from heritage professionals as to long term maintenance strategies. Owners need to be educated about the history of their place and the reasons for listing; most have no understanding at all.

The group suggests that dollar-for-dollar funding for private owners should be presided over by neutral bodies and they should be community based. Incentive programs have a psychological effect for owners; they provide a level of support and it gets things done quicker because owners would be otherwise disinclined to fix things or care for their heritage buildings. They point out that there is urgency about incentives because the longer things are left unattended, the greater the expense both for owners and the community. Where incentives are not being provided, it is unfair of councils to place prohibitive restrictions on owners because of additional costs.

One member of the group who operates a business out of a heritage building in a conservation area stresses that the costs and restrictions are enormous; there is maintenance, repairs, restrictions in terms of changes and greater costs to lodge a development applications, customised fittings, specialist advice, more expensive materials, more expensive tradesmen etc. He claims that with CBH, there are plenty of restrictions but very few incentives. If we don't assist owners, the whole notion of heritage becomes deflated and owners lose interest; the stock will simply decline because nobody will want to go in there in fear of the unknown costs. He feels that if councils did consider the financial burdens of owners, they would be less inclined to list buildings. Another in the group suggested that owners of CBH should be able to acquire TDRs which can be sold or traded or transferred or bequeathed or transacted in the marketplace. Owners believe that if society in general and the government as representing the society, is serious about maintaining any buildings of historical significance then it should come to the party and assist private owners when they restore their buildings. To not give something back is really unfair – it calls into question the whole purpose of listing. They point out that maintenance and conservation of heritage buildings is very expensive. People are generally not interested in CBH because of the cost doing conservation work and the specialist nature of the trades and the inability to get suitably qualified tradespeople except at high cost. Accordingly, local councils should be a little bit more flexible on their minimum building lot size for heritage buildings for purposes of subdivision and getting extra credits of floor space so that these very high costs can get defrayed.

In terms of alternative ways of incentivising CBH, this group suggests:

- Differential classifications; with different levels of assistance or latitude with what you can do to a place for each designated class. Classifications would assist owners plan for the future and factor in costs to long-term business plans;
- Alteration of boundaries; councils should consider the idea of allowing heritage owners to alter the boundaries of their properties with their adjoining neighbours in order to allow the latter to purchase more land and the former to pay for heritage conservation of the listed property;
- Open heritage days; it was suggested by one that heritage open days would allow heritage owners to open their homes to the public twice a year; councils could sell tickets and the money from that could go to owners to help them pay for certain things related to conservation.

Developers of Heritage Buildings in NSW

Developers of heritage buildings in NSW share the view that there are insufficient incentives for them to realistically take on heritage projects. They see many restrictions but no incentives. Where there are no grants provided, no tax relief and no transferrable development rights, the developments effectively become owner-funded projects. They feel that each project should be dealt with on its own merits and therein, an exchange of value should take place otherwise the owner/ developer pays 100% of the cost and the community receives the benefit at zero cost. They feel that this would be inequitable. Developers assert that the listing of heritage property confers a requirement to provide some sort of benefit to the listee whether it is from local government or State fund. The purpose of the assistance would be to maintain the integrity of CBH. Because heritage listings inhibit the potential for redevelopment, there should be some sort of offset available for listees. This is because there is a public benefit to retaining heritage. They feel and there needs to be funding to sustain expenditure in the sector. However, currently, there is nothing tangible or usable for developers when it comes to getting incentives for heritage buildings. They urge that planning schemes need to provide developers of CBH with more options or leniency towards how they approach heritage developments and refurbishments. These extra options would offset the restrictions and additional refurbishment costs.

Theoretically, a TDR scheme would allow developers of listed properties to reach the development potential of their non-listed neighbours without affecting the listed item. TDRs on the basis of pre-set sub-optimal maximums and ultimate maximums with say a 20% difference could work as a system of incentivising heritage buildings so long as the ultimate maximums are set and not varied. Developers believe that only where restrictions result in additional costs for the public good, would compensation be justified and they find that because the restrictions are far greater on heritage projects than normal building stock, the compensation ought to be robust. In return for the developer's investment in CBH, they believe that a hierarchy of freedoms could be introduced. Starting with the public domain interface requiring the greatest level of intactness, they would accept that the most stringent restrictions would apply. However, to the less seen parts like those hidden behind the façade or at the rear of the main formal rooms, there ought to be fewer restrictions and greater freedoms in terms of what changes can be made to a listed property. Such freedoms would give developers the security of knowing that there will be a gradation or ranking set in place as opposed to the current system which one developer referred to as the 'great unknown'.

Developers accept that incentive provisions achieve equity only on properties that are big enough to ensure that credits or bonuses can be materialised outside the curtilage of the heritage building itself.

In terms of their stance on heritage funding and incentive schemes, they make a distinction between private owners knowingly purchasing heritage stock conscious of the restrictions and owners having listings created under them usually against their will. They feel that private owners, who purchase or own a property that is heritage-listed are aware of its limitations. It is a bit like buying a house in a flight path and asking for financial assistance to reduce the noise. If one knows of the limitation at the outset and has bought the property for less because of the limitations, one may have already gained a slight advantage financially. They feel that providing incentives on the basis of a requirement of maintenance is philosophically and economically unjustifiable because, although CBH needs to be maintained for longevity so too does every other property for the common purpose of maintaining the streetscape in a community. On this basis, they feel that owners of listed heritage places should not get a benefit of financial assistance for maintenance. In terms of their position on stamp duty, they feel that already stretched governments would not be able to tolerate a tax base reduction.

Conclusion

Questions concerning the effectiveness of heritage incentive schemes are based upon (1) the extent to which an incentive induces conservation outcomes that would not have occurred in the absence of that incentive, (2) the extent to which an incentive provides equity for the owners of heritage places, (3) the effect that the heritage incentive has in relation to other forms of government expenditure, and (4) the effect that one form of incentive would have compared with another. An incentive may be effective even if it does not induce additional conservation activity. Public policy may simply dictate that the public should share the cost of a conservation activity from which it derives value. Heritage incentives have rarely been subjected to systematic research and analysis in Australia (Joint Taskforce, 2004).

The interview data in the preceding sections of this paper illustrate aspects of the four *Joint Taskforce* stated principles. Community support for CBH has suffered as a result of radical shifts by Australian governments away from supporting privately owned CBH in recent years. Neoliberal policy strongly dictates that the market is the most efficient form of control and governments should not meddle in privatised sectors of the economy except to regulate gross abuses. A failure by the state system to incentivise the listed heritage stock through local government planning frameworks has led steadily towards a negating of the enterprise. Lacklustre, non-reflexive policies that are absent of incentives and innovation further compound the issue. In terms of dealing with the financial shortfalls facing local government, more innovative thinking is clearly needed.

Another reform document in circulation in NSW, *Future Directions* suggested that there may be scope to raise a greater share of revenue from fees and charges levied on services and that rates, which are a tax and not a fee-for-service, need to be set in accordance with principles of taxation – equity, efficiency, simplicity, sustainability and policy consistency. It was also suggested that there may be a case for moving from ‘land value’ to ‘capital improved value’ as the basis for rates to better reflect capacity to pay and keep abreast of the demographic shift towards urban consolidation.

Future Directions suggests that councils should consider asset sales to fund new or replacement infrastructure, including rationalisation of facilities, and it urges that the concept of tax increment financing should be embraced as a means of raising special rates to tax the increased value of land where development takes place on the back of public infrastructure e.g. high density residential development around railway stations.

The concept of seeking ways of driving more capital into public institutions such as local councils has become known as 'value capture'. The basic economic principles behind value capture have grown both in number and creativity in the USA and Latin America in recent years. Value capture tools are increasingly being used in combination with traditional practices. This trend may be attributed to regional economic stabilisation and fiscal decentralisation; more progressive strategies for urban planning and management; increased social awareness and demands for equitable public policy responses; changing attitudes toward privatisation and public-private partnerships; the influence of multilateral agencies and; pragmatic considerations to capture land value increments in order to raise funds for local community needs (Smolka and Furtado, 2001).

Conventional fiscal policies and instruments are prone to ignore the costs of providing urban infrastructure and how services are socialised, but their benefits privatised. Value capture focuses on the benefits that the community at large receives for some or all of the land value increments (unearned income) generated by actions other than by landowners such as public investments in infrastructure; administrative changes in land use norms and regulations; property taxation and betterment contributions; exactions and charges for building rights or for the transfer of development rights; large scale approaches such as development of public land through privatisation or acquisition; land readjustment and public auctions of bonds for purchasing building rights (Dye and England, 2010).

Cultural built heritage in NSW is starved of funding despite active community support for it. The legislation is robust, yet it is failed by the executive arm of government responsible for the delivery of heritage services especially at local government level. There is therefore much scope for future improvement in NSW heritage management especially in the policy area concerning the provision of incentives for private owners who make up 90% of the listed stock.

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Design with Nature

A proposed model for coastal settlements in Australia adapting to climate change and extreme weather events

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The Australian coast is rich in history and is scattered with coastal settlements amongst a contrasting landscape with infinite visual and ecological diversity. These attributes provide the opportunity to create sustainable and resilient settlements, linking the wholeness of a place to the foundation of living in harmony with nature. On the contrary the coastal regions of Australia are facing dynamic changes of population growth including the looming impact of a changing climate. Acknowledging these challenges, the Australian Government highlighted that one of the key requirements for a sustainable future is to establish sustainable settlements that are resilient against the impacts of climate change. Recent government studies and reports highlighted various possible impacts to the Australian coast and regional settlements due to sea level rise with associated coastal recession, extreme weather events, flooding, and prolonged heat waves. Various adaptation frameworks are proposed to deal with this issue, but very few consider the relationship between ecological systems and human built environments. The resilience planning of settlements must consider the co-evolution of human and nature under future climate effects. This paper is thus seeking answers to the question: How can the theoretical principles of Design with Nature (McHarg, 1967) and The Nature of Order (Alexander, 1980) provide for input to a adaptation model for settlements along the coast? Reflecting on a literature review of these two well established theories, the author select key principles from both as input to a ecological design based adaptation model for coastal settlements, which establishes a system of unfolding steps to create sustainable communities that connect with the landscape, and are resilient against future impacts of change.

Keywords: Resilient Communities, Coastal Settlements, Climate Change, Adaptation, Design, Generative, Pattern Language, Regenerative.

Introduction

Our human species' affinity to water in the landscape, more specifically the attraction to the sea, and the resources it can offer, drew people to settle along the coastal areas of Australia more than 40,000 years ago (Flannery, 2005). Even now in the 21st century people flock to coastal areas in ever-increasing numbers, wanting a change in lifestyle from urban life, seeking the amenities and attributes that coastal settlements can offer. This phenomenon is known as 'Sea Change', the migration of people to smaller coastal towns within the regional areas of Australia. This fascination for the coast equates to an increased unsustainable development in the destination regional coastal settlements. The environmental changes associated with these land developments in the small coastal towns threaten the very qualities that make these places unique and attractive (Green, 2010).

Additional to population growth, the coastal settlements in Australia, especially those beyond the capital cities and in regional areas, are at the forefront of being impacted by climate change effects (DCC, 2009). These coastal communities are exposed to various levels of climatic hazards and direct impacts due to sea level rise, the recession of the coastline, short term flush flooding, long term inundation and storm surge events. These levels of physical exposure to impacts of climate change represent significant environmental and social risks to these coastal communities. The settlements along the coast are in peril. We know enough about how human actions are impacting the environment through the role we play. However, even with this knowledge, unsustainable behaviours of intense land development continue in the regional coastal areas.

The problem is clear; we have to change our behaviours, we need to acknowledge the vulnerability of our human species, and reconnect to nature. To connection with nature and the human relationship with the environment as well as dependency on the resources the environment offer for the survival of the human species, is paramount in the argument of this paper. For this reason the author propose that this paper considers the design theories of McHarg and Alexander, both supporting the co-evolution and the duality of man and nature. These theories have a common thread, the consideration of the whole. The wholeness of spatial configurations is present in many natural occurring events, phenomena, and aspects of complex systems behaviour (Alexander, 2003). In the context of the earth's environment and climate, this wholeness is evident in the Gaia theory (Lovelock, 2009). Humans are part of this whole, and all their actions have a direct impact to the whole.

It is this connection to the ecological system that is evident in the teachings of Ian McHarg, where the solution for a sustainable future lies within the processes of design with nature. In his book with the title - *Design with Nature*, he provided a roadmap for applying ecological information to the way we interpret, plan and shape our surroundings (McHarg & Steiner, 2006). Similarly, arguments have been put forward by John Lyle and Christopher Alexander that climate and ecological systems are influenced by design (Lyle, 1991; Alexander, 2006). Every building project large or small, city making or settlement development contributes to climate moderation or extremity in some way or the other as part of a watershed, ecological system, floodplain or coastal environment (Lyle, 1991).

The conclusive arguments by both McHarg and Alexander state that humans and the environment are holistic connected, and that humans need to consider the protection and enhancement of

ecological systems to be resilient and adaptive. This paper thus explores options on how can the theoretical principles of Design with Nature (McHarg, 1967) and The Nature of Order (Alexander, 1980) provide for input to a adaptation model for coastal towns that are located in the coastal zones of Australia.

Methodology

To be able to link the supportive theories of McHarg and Alexander to the proposed design based adaptation model in this paper, the step by step process of pattern language (Alexander, 1977), requires that all aspects of a place and its history, heritage as well as ecological values to be considered. Further to consider the impacts of climate change, the structure of this paper follows a methodology of investigation of issues, and then a review of the application of the proposed model, concluding with outcomes and recommends further work. The research methodology used for this paper followed a systematic process as follows:

1. Literature review of the theories of Ian McHarg and Christopher Alexander, specifically identifying the design and planning methods for including the natural environment and the built environment as a whole;
2. Review the coastal history of Australia relating to the growth of human populations and its impacts on the coastal environment;
3. Identify the threats to the Australian coast, coastal communities as well as the impacts of potential climate change and sea level rise;
4. Identify and review climate change adaptation models, risk assessment tools and climate change approaches, considering the connection of humans and nature, and how these models approach this issue;
5. Establish the principles of a design based adaptation model through the importance of human and nature considerations;
6. Apply the principles of the design based adaptation model and align this model with the pattern language principles of Alexander as a potential combined methodology for adaptation; and
7. Summarise in conclusion the findings and recommendations, identifying future work.

Coastal History

Australia can be defined as a coastal society, with more than 83% of all Australians living within 50 kilometres from the coast (DEH, 2001). The coastal populations of Australia are distributed evenly along the coastline. A good example of this phenomenon is that in Victoria, the most densely populated state in Australia, 85% of its population lives on the coast, but human habitation still only occupies less than 10% of the physical coastline (DEH, 2001). However, Australia is a highly urbanised nation, and the settlement patterns of the population are characterised by high rates of urbanisation, and low-density cities, mostly within the 50km zone from the coast, as indicated in Figure 1.

There are also a large number of small remote settlements along the regional coastal areas, accounting for a very small proportion of the population (Newton, 2001). This geographical

distribution is a due to the result of many years in history making from pre European settlement, as well as post European settlement due to the discovery and colonisation of Australia.

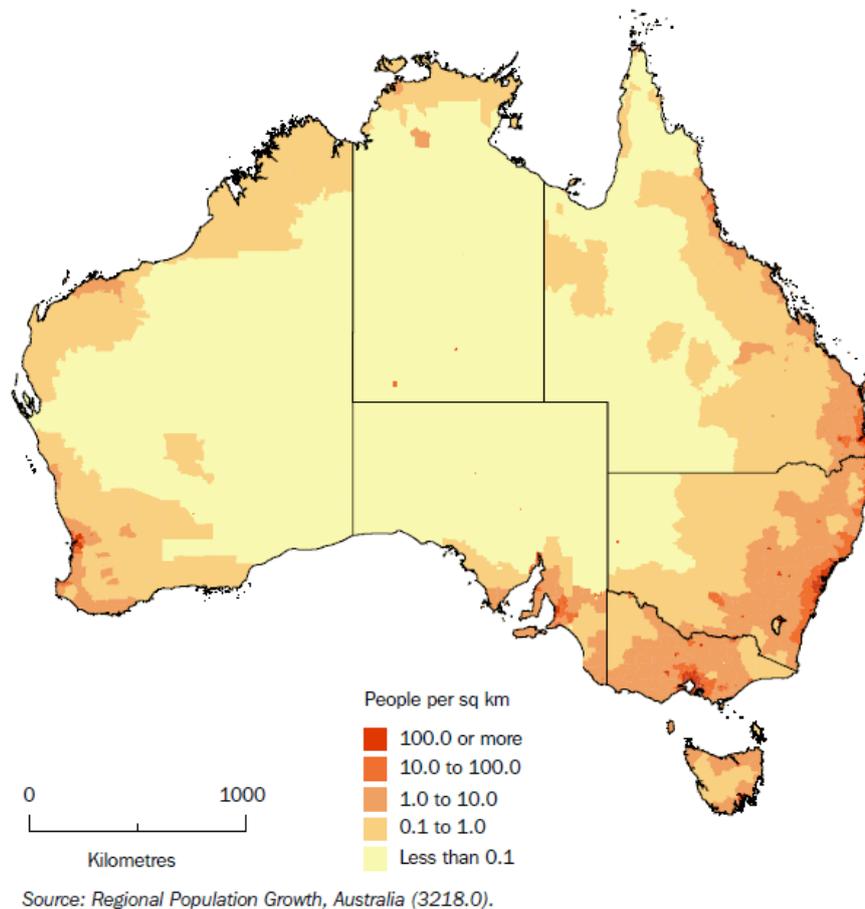


Figure 1: Population Distribution Australia (Source: Australian Bureau of Statistics)(3218.0).

Human settlement in Australia dates back at least 50 000 years, with coastal zones favoured by the Indigenous population engaged in hunting, fishing and gathering. With the arrival of Europeans a little over 200 years ago, the sighting of the Australian main land by Captain James Cook in April 1770 was the first step in the establishments of European settlements along the Australian coast (PIRG, 1977). Throughout history and even today, the coast is favoured for habitation due to its amenities, attributes and pleasant environment that it offers. It is these attributes that are causing today a major population shift to coastal areas by city dwellers. Seeking a change in lifestyle and environment, this phenomenon is known in Australia as “Sea-change” (Burnley, 2004)

This trend is occurring on an international scale, where suburbanisation is occurring in smaller coastal towns in Europe, North America and Australia (Green, 2010). This form of migration is driven by the lifestyle values and the attraction of the coastal landscape, rather than other forms of migration that are typically driven by economical growth such as employment and industry (Roös, 2013). In essence what people are looking for are places that contrast with city life and provide beautiful scenery, which makes them, feel that they have escaped the pressures of a high pacing,

stressful day-to-day life. Unfortunately, this migration to the coast is adding to the elements that are putting the coastal areas under threat.

Coast under Threat

The migration from urban cities to the coast results in an unprecedented population growth in the coastal zones, with this shift of people from main metropolitan areas to coastal towns requiring more land development to provide housing and amenities (Green, 2010). The coastal townships in regional Australia, that are within two to three hours drive from major metropolitan areas, follow a distinctive growth pattern, sprawling along the coastline in a linear fashion, with properties and land development that demand ocean views (DSE, 2004). A good example of this coastal settlement ‘sprawl’ is the growth of new suburbs in the Bellarine Peninsula just outside Torquay, a coastal town two hours drive outside Melbourne in Victoria, Australia. This coastline sprawl has devastating effects on the natural coastal environment (VCC, 2008; VCC, 2013).

Additional to population growth, the coast is constantly under stress due to the dynamic forces of nature. It is the coast where the land interacts with the sea, experiences the forceful action of the wind, waves, tides, and currents that not only erode the shore, but also expand it with sedimentary deposits (Roös, 2013). Storm systems gather energy from the ocean and intensify natural coastal forces with wind, waves, and rain, powerful enough to severely damage natural and built assets with hastened erosive processes (GORCC, 2012). These dynamic forces of the coast make the coast in itself vulnerable, and the coast is constantly under threat.

Coastal Impacts

Changes in the climate and rising sea levels make the coast more vulnerable to these natural dynamic forces (IPCC, 2001; IPCC, 2012). Social and economic forces also bring stresses to coastal areas. Combining the impacts of climate effects and the pressures from peak tourism and increased coastal settlement growth makes the coast more vulnerable to drastic changes to the coastal landscape (VCC, 1998). Rising sea levels will bring significant change to Australia’s coastal zone in the future. Many coastal environments such as beaches, estuaries, coral reefs, wetlands and low-lying islands are closely linked to sea level. Additional to the natural assets, many built environment assets are under risk.

The Climate Change Risks to Australia Coast report (2009), indicated that up to \$63 billion (replacement value) of existing residential buildings are potentially at risk of flooding, and inundation due to a 1.1 metre sea-level rise, with a lower and upper estimate of risk identified for between 157,000 and 247,600 individual buildings (CSIRO, 2009). Climate change also results in risks to people and organisations, impacting the day-to-day operations of our culture (DEEH, 2012). The level of impacts on these natural as well as built environments due to climate change and sea level rise, are influenced by the coastal stability of the regions, the geomorphological characteristics of the coastal zones.

These geomorphological coastal zones are classified in four coastal regions in Australia. As indicated in Figure 2, these regions are:

Region 1 – The Muddy North: highly tidal, cyclone influenced and muddy

Region 2 – The Limestone South and West: small tides, carbonate rocks, high wave and wind energy

Region 3 – Eastern Headlands and Bays: small tides, quartz sands, moderate wave energy, many bays

Region 4 – The Barrier Reef: northern Queensland, including low-lying rocky mainland coasts and the Great Barrier Reef and its islands.

Tasmania and the Bass Strait islands share many of the characteristics of regions 2 and 3 (Woodroffe, 2012).

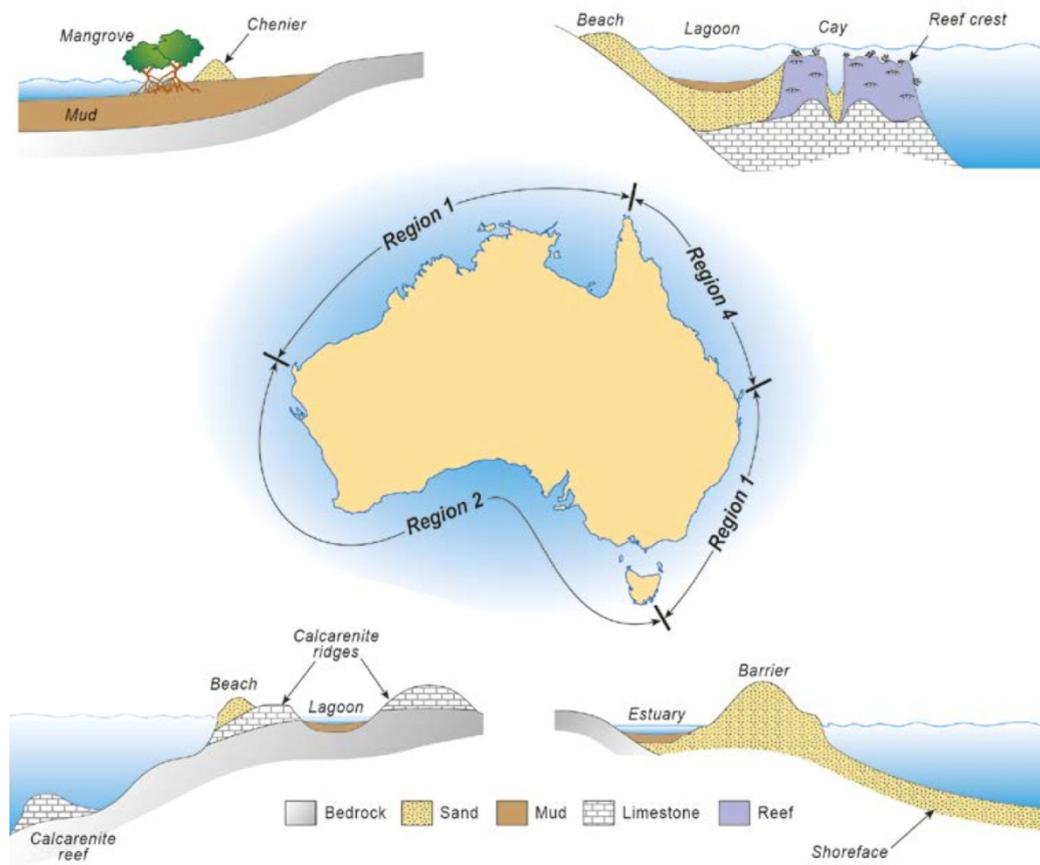


Figure 3: Four coastal regions around Australia (Source: NCCARF 2012)

The nature of the landforms in the different coastal regions means that while parts of the coast are highly resistant to erosion, the beaches and erodible sediments found in other regions are quite susceptible to coastal recession as sea levels rise. Due to the different landforms, the recent Surf Coastal Climate Change Vulnerability and Adaptation Project identified that significantly increased numbers of natural as well as built assets are located in areas that could be severely affected by coastal recession when allowing for 100m of recession for each metre of sea level rise, according to the Bruun rule (GORCC, 2012). It is evident that different methods of adaptation need to be considered, applicable to different scenarios and the type of coastal regions.

Adaptation and Risk Management

Theories, frameworks and models have been developed to provide possible solutions for adaptation for climate change impacts in Australian coastal areas. Key economic principles and risk management approaches are considered to provide frameworks for responding to the implications of climate change. A significant portion of climate change risk to coastal assets is in the future, but it is acknowledged that there is a need for early and immediate action for coastal adaptation for many coastal communities that will be affected by short-term climate impacts (DCC, 2009; IPCC, 2012). Mostly, it is the coastal communities that are located on sandy beaches and sandy and muddy shorelines, which are most susceptible to the effects of storms and can erode rapidly over a very short period of time (NSW Government, 1990; DSE, 2012).

Various coastal councils in Australia apply different coastal policy approaches to deal with climate change, both for short and long term. In coastal planning policy four classifications (do nothing, retreat, defend or adapt) have been widely used to examine response to climate change impacts (Norman, 2009). Although local adaptation actions differ from region to region, it is acknowledged that adapting to climate change could be costly in some areas, doing nothing is likely to be more expensive over the longer-term as substantial investments and assets are placed at risk (DCC, 2009).

Responding to these risks, a planned adaptation is proposed to proactively build communities' capacity to minimise, adjust to or take advantage of the consequences of change, as indicated in Figure 3.

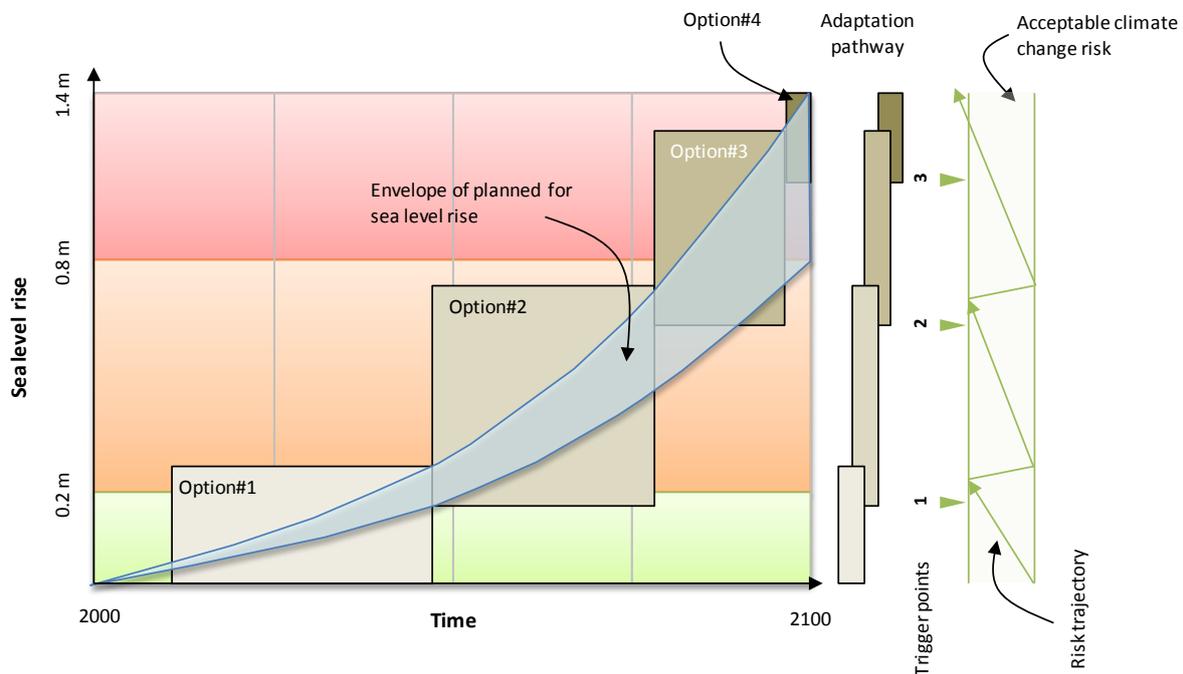


Figure 3: Framework for flexible adaptation options across times of change (GORCC, 2012)

The adaptation framework for planned adaptation provides for the development of flexible adaptation that is responsive to changes in sea levels, coastal recession and risk perception. It provides for the sequential deployment of adaptation options or tactics, each of which are suited to particular 'windows' of sea level rise or coastal recession. The deployment process begins before the risk threshold is reached to ensure there is sufficient time for planning, finance allocation and stakeholder engagement. Trigger points are risk-based and draw on experienced coastal hazard conditions. This process provides flexibility to adapt to more or less rapid sea level rise while remaining within acceptable risk levels (GORCC, 2012).

One of the key factors in adaptation planning is the consideration of risk. It is for this reason that coastal management and adaptation management plans are based on risk management principles. The risk assessment process is applied to adaptation planning by various local councils and governments, and is consistent with the broad approach to climate change adaptation promoted by the Australian Government. The risk framework is based on the Australian Standard for risk assessment and management AS/NZS ISO31000:2009 and comprises five core steps (Standards Australia/Standards new Zealand, 2009):

- Establish the context – determine the objectives for the risk assessment, its scope, stakeholders who need to participate or be aware of it and the climate and climate change scenarios being considered.
- Identify risk – describe how climate change affects key elements of the system, which is the subject of the risk assessment.
- Analyse risk – consequences and likelihood of each specific impact is assessed and from this the overall level of risk determined.
- Evaluate risk – the severity of risk is ranked and minor risks screened. High-risk impacts that require more detailed assessment and response are identified.
- Treat risk – options for treating priority risks are identified and evaluated. More effective and practically implementable measures are incorporated into action plans.

What is clearly lacking, in the above review of the adaptation planning and risk management processes, is the consideration of the impact of settlement sprawl on the natural environment and the relationship between ecological systems and the establishment of human built environments.

Decisions can be made for climate change adaptation actions based on risk assessments, economic assessments, coastal management and adaptation planning policies, but these decisions need to acknowledge that nature and human settlement goes hand in hand. It is the nature of order that is inherent in the qualities of the land and community structures, driven by generative patterns that will influence the future character as well as the adaptive capacity of these settlements in the future. (Roös, 2013; Alexander, 2006). The author argues that adaptation planning of settlements must consider the co-evolution of human and nature under future climate effects. This proposal requires a good understanding of the relationship between our built environment and the ecosystem.

Built Environment and the Ecosystem

Lyle argued in his book *Design for Human Ecosystems - Landscape, Land Use, and Natural Resources* that ecologists choose to study ecosystems that exclude the human species, and humans think of

themselves as somehow separate from ecosystems. In contrary, humans are interacting and are integral components of ecosystems at many levels, and both contribute to the system of environmental balance (Lyle, 1991). A.G. Tansley has defined the concept of an ecosystem the first time in 1935 as: *“Simply defined, an ecosystem is the interacting assemblage of living things and their non-living environment.”* Among these living things are human beings, and both are coupled in an intrinsic complex system of nature and human built environments.

Our connection to nature and interaction with a global ecosystem are the foundation for the survival and adaptation to future changed climate environments. This consideration of how the ecosystems of planet earth are coupled to human environments is fundamental in an ecological design based adaptation model, considering the design of settlements with nature and acknowledging the patterns of order.

It is this connection to the ecological system that is evident in the teachings of Ian McHarg, where the solution for a sustainable future lies within the processes of design with nature. In his book with the title - *Design with Nature*, he provided a roadmap for applying ecological information to the way we interpret, plan and shape our surroundings (McHarg I. & Steiner, 2006). Ian McHarg, John Tillman Lyle and Christopher Alexander have put a similar argument forward that climate and the ecological system are influenced by design. Every building project large or small, city making or settlement development contributes to climate moderation or extremity in some way or the other as part of a watershed, ecological system, floodplain or coastal environment (Lyle, 1991).

This paper thus proposes that for human settlements on the coast to be resilient against changes of climate impacts, is to understand the patterns of natural systems, how we connect within these patterns, and how we can use these patterns for adaptability. Further, using regenerative design principles that seek to develop approaches to support co-evolution of human and natural systems is the only way to achieve true long lasting resilience.

Design with Nature and Patterns

Frederick Steiner summed up the influence of McHarg’s theory on contemporary design and planning as: *“Nothing is as good as a good theory”* (McHarg I. & Steiner, 2006). The dictum of *“Design with Nature”* not only changed design and planning disciplines, but also enormously influenced fields as diverse as engineering, geography, forestry, environmental ethics, ecology and even soil science (McHarg I. & Steiner, 2006). The theory not only deals with man’s relation to his environment as a whole, but also how ecology based design can shape and change the future for both. With input from the science of anthropology, McHarg developed his theory of ecological design. The principles tell us that culture is our most important instrument of adaptation. Furthermore, human’s ability to evolve their culture distinguishes them from other species (McHarg, 1992). Design and planning can then be viewed from a cultural perspective as adaptive mechanisms, and be used as tools for resilience. Design with nature in essence considers the regenerative capacities of both natural and human systems.

To shape our future, design with nature is key, a design that is regenerative. Regenerative design relates to people and nature, and seeks to develop approaches that support ‘the co-evolution of human and natural systems’ so that both natural and social capital is supported (Cole, 2012). To

achieve this balance requires the simultaneous consideration of cultural, social, economic and environmental aspirations. To do this, the uniqueness of 'place' needs to be understood and valued, and ideas about any changes in a locality need to be worked through with different people, representing different interests, over a period of time (Cole, 2012).

In its native form, the concept of regenerative design is based on a process oriented systems theory, including processes that restore, renew or revitalize their own sources of energy and materials, creating sustainable systems that integrate the needs of society with the integrity of nature. Regenerative design matches ecosystems in that biotic and abiotic material is not just metabolized but metamorphosed into viable materials. The process of morphogenesis applied to the design and planning of the built environment to achieve 'deep sustainability' was argued by Christopher Alexander in his Schumacher Lecture in Bristol, 2004, titled: "Sustainability and Morphogenesis: The Birth of a Living World". The lecture explores the phenomenon of wholeness of a place, and proposes that the morphological growth of a place give it character and allows the settlement to adapt to changes (Alexander, 2003). Based on this natural process the coastal settlement achieves resilience (Roös, 2013). Alexander referenced most of his lecture content from his theories published in four books under an essay titled: "The Nature of Order: An Essay on the Art of Building and the Nature of the Universe, 2006".

Alexander describes the formula that leads to a good liveable and sustainable built environment as a set of patterns, a system of explicit steps, for creating living structures within fabric. The generative codes are specific to the environment, and can be found in nature through the process of morphogenesis. The theory defines the word 'generative' as a process where there is always a sequence, an order, instructions that follow the rule of centres which appear within the larger whole as distinct and noticeable parts (Alexander, 2006). The generative codes are capable of driving the organic unfolding of a settlement in such a way that the people who live and work in the settlement have a good chance to be resilient and flourish personally, economically and ecologically (Alexander, 2005).

Using the principles of these theories, the possibility rise to develop a holistic integrated ecological design method that incorporates the regenerative patterns of nature, helping coastal communities to better appreciate how the landscape will change and therefore inform their adaptive responses.

Adaptation Model

The review of climate change impacts and methods of adaptation and risk management earlier in the paper reveals that there is a systematic process to be followed in the different scenarios of adaptation. This systematic process consists of clear patterns that follow specific sequences. The opportunity is thus there to combine the process of a risk based adaptation framework with a design scenario model, using the methods of design patterns and generative design. Reflecting on the theories of Ian McHarg and Christopher Alexander, including the systematic requirements of risk management and adaptation planning, key principles can be used as an input to a design based adaptation model that establishes a system of unfolding steps to create sustainable communities that connects with the landscape, and are resilient against future impacts of change. The combination of the two processes, and the relationship between the risk based adaptation and design based adaptation systems are demonstrated in Figure 4.

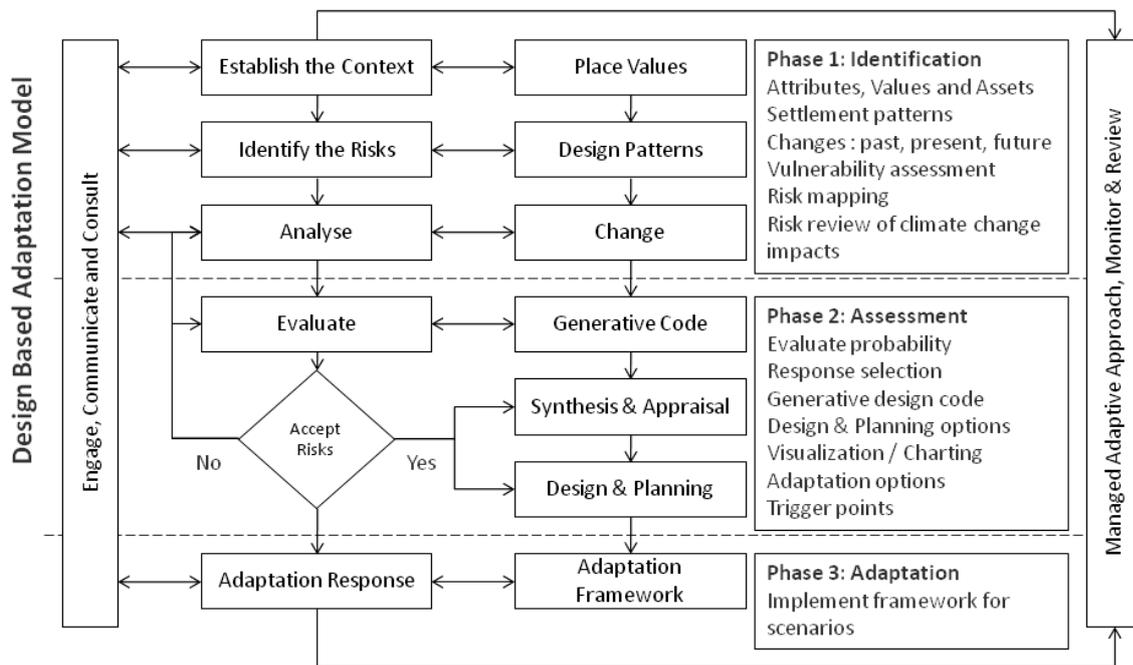


Figure 4: Relationship: Risk and Design Based Adaptation (Source: Roos).

Combining the process of a risk based adaptation framework with a design model based on pattern language, using the methods of design patterns and generative design, the Design Based Adaptation Model (DBAM) can be used to chart the changes and consequences through design. Following an example on how the combinations of the processes are applied within the DBAM model by combining the identified design patterns with climate change risks and assets that are under threat.

To demonstrate this theory, the outputs of a workshop held for the Coastal Climate Change Vulnerability and Adaptation Project are used, where the potential effects of sea level rise and coastal recession on the key Surf Coast assets were identified (GORCC, 2012). A generic list was developed and used as appropriate, depending on the assets that were actually located within the relevant section of the coast and that were potentially exposed to the effects of climate change (i.e. due to temporary/ permanent inundation, long-term coastal recession and storm erosion) under the most extreme climate change scenario (GORCC, 2012). Indicated in Table 1, this list of assets has been allocated into a pattern language, and has been aligned with the patterns of the *Pattern Language* theory of Christopher Alexander.

Asset at risk	Description of risk(s) as per risk assesment for climate change impacts	Relevance Pattern Language * Alexander, C.
Beaches	Loss of beach. Temporary/permanent inundation. Loss of amenity. Loss of access.	25. Access to water
Boat ramps	Loss/reduced use of asset. Inundation and erosion.	30. Activity nodes
Car parks	Temporary/permanent inundation. Closure of car parks. Loss of amenity.	22. Nine per cent parking
Caravan parks	Erosion/recession/inundation leads to loss of use. Reduction in availability of sites, leading to reduced income and business viability.	91. Traveller's inn
Commercial properties	Reduced turnover and/or loss of property value. Loss of access to commercial properties. Closure of business. Increased maintenance.	41. Work community
Creeks and estuaries	Loss of vegetation, destruction of fauna/flora habitat. Change in water quality and ecology. Loss of creeks.	64. Pools and streams
Cultural heritage features	Damage to heritage sites from erosion / recession / inundation. Loss of cultural values and tourism attraction.	13. Subculture boundaries
Drainage	Damage or reduced drainage capacity. Increased storm flood damage.	95. Building complex
Dune and cliff habitats and fauna	Loss of vegetation and destruction of habitat.	7. The countryside
Inter-tidal habitats	Loss of habitat and fauna	60. Accessible green
Pathways, walks	Loss of access. Tourism value reduced. Safety hazard.	100. Pedestrian street
Parks and facilities	Damage and loss off use due to erosion / recession / inundation. Increased maintenance. Reduced amenity.	67. Common land
Pier	Erosion damage. Temporary/permanent inundation. Loss of access, reduced amenity. Safety hazard.	25. Access to water
Residential property	Damage from erosion / recession / inundation. Loss of access. Reduced asset value. Increased maintenance. Loss of property.	48. Housing in between
Roads and bridges	Temporary or/and permanent inundation. Loss of use of roads/bridges. Increased maintenance. Loss of access. Damage to bridges and roads.	52. Networks of paths and cars
Sailing clubs	Damage from erosion / recession / inundation. Access to buildings diminished. Property damaged or destroyed. Increased maintenance.	72. Local sports
Surf breaks	Loss of beach or reef surf break. Reduced tourist/recreational usage. Loss of amenity.	25. Access to water
Surf Life Saving Clubs (SLSC)	Damage to SLSC results in diminished capacity to provide beach patrol services. Reduced user safety. Amenity loss.	72. Local sports
Water infrastructure	Accelerated deterioration. Increased maintenance. Damage to pipes and loss of land in easement. Loss of infrastructure.	95. Building complex

Table 1: Allocation of Assets / Climate Change Risks to Pattern Languages (Roös, P, 2013)

Application

Allocating numbers and group the same pattern together of uses, assets and similar climate change impacts, a pattern language is emerging for the coastal environment. For example "Assets at risk" that can be allocated the definition of the pattern number "25. Access to water" of Alexander's pattern language; clearly emerges with the similar patterns of climate change impact risks for assets numbers 1, 13 and 17 such as:

- Loss of beach.
- Temporary/permanent inundation.
- Loss of amenity.
- Loss of access.
- Erosion damage.

Using a systematic process, or “chain of effects” can be developed, informing the Design Based Adaptation Model (DBAM) framework, combining the process of a risk based adaptation framework with a design model based on pattern language (Figure 4). In the framework this process will start with *Identifying the Risks* and the *Design Patterns* which are established in Phase 1, and then *Evaluating the Generative Code* in Phase 2, *Synthesise & Appraisal* of these will help with *Design and Planning* of a final *Adaptation Framework* in Phase 3 that can be implemented in a staged approach for the communities on the coast.

Conclusion and Discussion

In his theory of Design with Nature, Ian McHarg argued that the artefacts of man as a process are naturally deterministic, same as natural processes that are deterministic in an ecosystem, supporting morphology of man-nature relationship (McHarg, 1992). Similarly, John Tillman Lyle argued that human ecosystems are part of an order, and in the concepts of ecology there are three modes of order: structure, function and location (Lyle, 1991). In landscape design practice, Lyle refers to the principle of hierarchy of scale, and he developed a process for design what he called “*The Chain of Effects*”. The matrix developed by Lyle identifying the chains of environmental effects brought about by human actions in the environment is strikingly similarly in principle than the “*Pattern Language*” developed by Christopher Alexander (Alexander, 1977).

It is evident that according to these theorists that human’s connection to nature are deeply routed in a mathematical pattern and process, and this can be used as a roadmap for applying ecological information to the way we interpret, plan and shape our coastal settlements.

“To work our way toward a shared and living language once again, we must first learn how to discover patterns which are deep, and capable of generating life” (Alexander, C. 1977)

Facing unprecedented changes in our environment due to future climate effects, the way forward is to reconnect man with nature, and to discover the patterns for the co-evolution of both to establish resilience for the future.

This paper concludes that it is essential to combine the theories of McHarg, Lyle and Alexander, selecting key principles as an input to an ecological Design Based Adaptation Model for coastal settlements, which establishes a regenerative-adaptive system of unfolding steps to create sustainable communities that connect with the landscape, and are resilient against future impacts of change.

Further Work

The example above of the establishment of patterns and a language that is connected with coastal town development as well as climate change adaptation is the first step in putting the elements

together of the Design Based Adaptation Model. Important considerations are to map these patterns with natural environmental patterns, or processes. Using the example of the Surf Coast: Coastal Climate Change Vulnerability and Adaptation Project, the assets at risk need to be further investigated to identify the relationships between the built environment assets and ecological assets. Evident in this establishment of the patterns is a generative process that is expressive, which are morphologically determined.

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Landscapes in Transition

Local perceptions of indigenous and European settlement changes along the Victorian coast

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Around the world coastal areas are witnessing dramatic changes due to the consequences of the growth of human settlements. Rapid urban expansion in coastal settlements due to 'life style migration' impacts negatively on environmental coastal amenities that are the driving factor behind the attraction of these areas. The Victorian Coast in Australia is under stress, with the growth pattern of coastal settlements in a sprawling linear fashion resulting in devastating effects on the natural coastal environment, biodiversity and the loss of cultural heritage. The Victorian coast is rich in history, and the coastal towns are often described in literature as places with 'sense of place', or referred to as place character. This place character has been formed over many years with the interaction between social histories and natural environments woven together across time. This paper reviews the transition of the landscapes along the Great Ocean Road coastal region, and ask the question how can a potential Generative Plan be developed to establish a process to keep the place character of coastal towns. The proposed plan considers the interrelationships of nature and people as fundamental to forming place character, from the time of Indigenous habitation before European settlement, to the current day of rapid increased developments scattered along this coast.

Keywords: Landscape Change, Indigenous Heritage, Place Character, Coastal Settlements, Urban Expansion, Generative Plan, Adaptation, Sense of Place.

Introduction

It is estimated that more than half the world's population live in coastal cities and towns. In Australia over 85% of the population live within the coastal zone (ABS, 2002). It is predicted that by the year 2050 more that 75% of the world's population will live at the coast, or at least within 150km of the coastline (Green, 2010). Australia has become a coastal society, and more and more people seek a

lifestyle in regional coastal areas. It is this love affair that societies have got with the coast that is also the threat to its own sustainable survival.

In Victoria the coastal region that experiences the largest population growth is the region from Geelong to Warrnambool with an estimated population growth from a current 270,000 to 400,000 people by the year 2050 (DSE, 2008). The population of the Surf Coast area, which are part of this greater Geelong coastal region, along the Great Ocean Road, will increase from 28,631 in 2012 to around 44,100 people in 2031, a phenomenal growth of 54.03% in population (SCS, 2008). This regional growth and economy is strongly dependant on its coastal amenity and attributes. It is the communities in these coastal settlements that are more vulnerable to sea level rise (Harvey, 2010), and may result in significant socioeconomic, environmental and built infrastructure impacts resulting in the potential loss of these attributes.

The main attribute that makes the Victorian coast so attractive for settlement is the place character of small towns that are dispersed within a natural landscape of beach, forests and cliffs. The coast of Victoria has a long history, with heritage of Indigenous as well as European settlement contributing to the rich history of settlements. This paper reviews the history of this coastline and investigates the potential impacts due to population growth and new developments in these settlements, its landscape and visual attributes. The coastal towns applicable to this study are indicated in Figure 1. The author proposes a potential 'Generative Plan' to be developed to establish a process to keep the place character of coastal towns. The proposed plan considers the interrelationships of nature and people as fundamental to forming place character, using the wholeness of a place in considering the heritage and historical character as a method of resilience to community values.



Figure 1: Location of Coastal Towns along the Great Ocean Road Coast Region (Source: Redrawn from GORCC).

Our Affinity with the Coast

Our affinity with the coast is rooted in history even before initial European settlement, and to understand this attraction to the sea we have to acknowledge our European ancestral behaviours, as well as Indigenous history of coastal settlement. The lowering of the sea level during the last glacial era increased the land area of continents, and similarly the Australian continent increased by one third, almost linking the landmass of Australia with the islands of Asia (PIRG, 1977). More than 50,000 years ago the first people landed on the northern shores of the coast, and spread throughout the continent. Since these early times, inhabitants of Australia had an affinity with the coast, and the sea. The reason for preferring to live along the coast was that the coastal zone had obvious advantages; the climate is milder than the inland harsh deserts, providing availability of food supplies such as fish, birds and other animals. The discovery of heaps of middens indicates an affinity with the coast, and Aboriginal art shows that the values of the coast influenced mythology as well as settlement patterns.

Indigenous settlements

In Victoria, the coastal environment is a very important aspect of the cultural heritage of the *Wathaurong* and *Gadubanud* peoples of the region. The value and importance of the coastal environment and the connection of people to the land, is reflected in the Dreaming Story of the creation of *Punjil* and *Pallian* (Thomas, 1969). The story reflects the authority that Aboriginal ancestors had over the land and the sea, which has been passed down to the current generations and motivates the *Wathaurong* and *Gadubanud* people to look after the Sea Country. The short summary below of the *Punjil* and *Pallian* Dreaming Story reflects the interconnection of nature and the Aboriginals:

“Punjil is the maker of earth, trees, animals, man and woman. Punjil had a wife named Boi Boi, but he never saw her face. She bore him two children, one a son named Binbeal and the other a daughter named Kara-karook. To Binbeal is committed the sovereignty of the heaven and to Kara-karook the incidental occurrences on earth; while great Punjil stalks like a big gentleman in the clouds, on the earth, and always carrying a big sword. Pallian, brother of Punjil, made all seas, rivers, creeks and waters, also all the fish in the oceans, seas and rivers. He governs the waters, was always in the waters, walking, bathing, and going over the seas. One day when our ancestors awoke, Punjil, Pallian and Karakarook had gone up above. They had departed from Deen Maar (Lady Julia Percy Island), which remains sacred to our people to the present day” – William Thomas, 1969.

The dreamtime stories such as the above reflect environmental knowledge, social behaviour, rituals, morality, religious and daily social living practices (Roberts, 1975). The middens found along the coastal area of the Cape Otway (Figure 2), on the west coast reflect the past camp sites and popular places for migration of the Aboriginal people. Fish, seals, and waterfowl were plenty, and the freshwater springs at Crayfish Bay provided for abundance of crayfish in the rock pools (PIRG, 1977). Various inlets provided shelter to the wind due to the morphology of the cliffs and have encouraged the Aboriginals to settle, and a semi-permanent settlement at these sites has been established.



Figure 2: Aboriginal shell midden place, Aires Inlet, Split Point, Victoria (Source: Terra Culture, 2012).

Today, the *Wathaurong* and *Gadubanud* people still respect the benefits of the coastal zone, and in an effort to protect the connection between human habitats and our engagement with nature, developed the Kooyang Sea Country Plan. As part of the South-east Regional Marine Plan, 2004, two Sea Country Plans initiated for collaboration with coastal Indigenous groups to provide an opportunity for Indigenous involvement in natural resource use and planning of the coastal and marine environment as well as the coastal Aboriginal cultural heritage conservation in the South-west Victoria and South Australia regions.

Various cultural heritage sites along the coast are important to protect for the conservation of cultural Indigenous history. Many of these sites are within or right next to development areas for housing in the coastal settlements along the Victorian coast, one such example at Aires Inlet, Victoria is indicated in Figure 3. As part of place character, these sites need to be considered as valuable contributions to the spirit of the place.

Indigenous Heritage and Place Character

In Victoria, the Indigenous people have an intimate and ongoing relationship with coastal environments stretching over thousands of years and up to the present day. This ongoing relationship is reflected in the cultural sites present along Victoria's coast, with the current relationship with nature based on a long tradition of ownership, stewardship, utilisation and cultural significance and history (Roos, 2013b). For Indigenous people, their cultural values are built upon traditional use, spiritual connection, ancestral connections and respect for the land and Sea Country, including the resources that land and sea provide (Smith, 1980). This connection with nature resulted in methods of management of the environment, landscape, natural resources and settlement patterns. In establishing and considering place character, the acknowledgement of these Indigenous sites and places are just as important as the preservation of place character of our European settlements since the early 1700's.

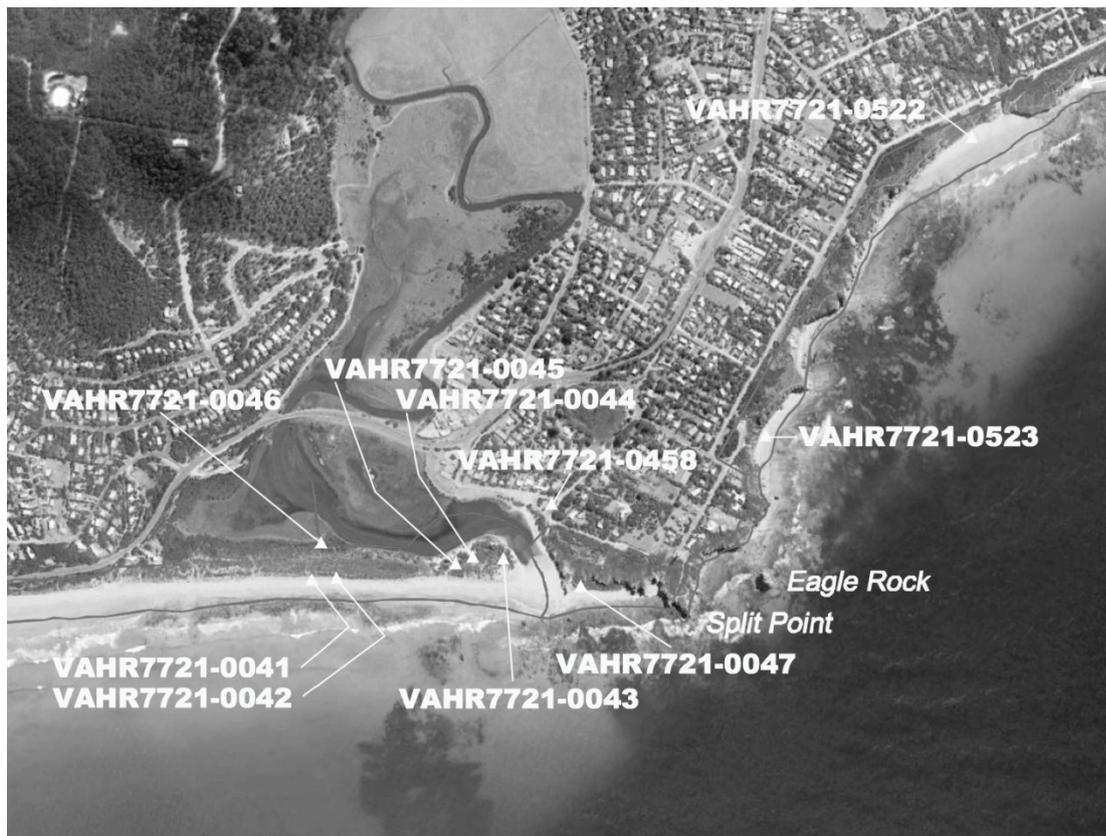


Figure 3: Registered Aboriginal Cultural Heritage Place – Aires Inlet (Source: Terra Culture, 2012).

European settlements

It took thirty years after Captain James Cook take sighting of the Australian mainland in 1770 that George Bass and Mathew Flinders conducted explorations south from Port Jackson and discover the east and west Victorian Coast. On the 7th December 1800 Lieutenant James Grant sailed around a large cape, and named it the Cape Albany Otway (Leggett, 1970). It didn't take long, and the first European settlements was established when in 1849 William Lindsay was issued with a licence to extract timber from the shores of Louttit's Bay and Apollo Bay (Lorne Historical Society, 1970).

Soon Lorne developed as a seaside resort, and the beautiful coast of West Victoria became a destination for many settlers, other towns began to grow in the numbers of permanent dwellings such as Peterborough, Port Campbell, Apollo Bay, Warrnambool and Princetown, and the affinity with the coast was clearly evident in these early years. Easy access and amenities that provide comfort influenced the establishment of settlements along the Victorian coast, evident in the photographs represented in Figure 4.



Figure 4: Early settlers of the Otways and Mountjoy Parade, Lorne (Source: PIRG, 1977).

Today the same affinity with the coast is evident as many people are flocking to the coast in increasing numbers to enjoy the attributes, the more relaxed lifestyle that these attributes of coastal settlement can offer. The growth rates in Australian coastal towns are higher than any other areas, and the migration to the coast includes more and more young people attracted to the amenities of surfing, the sun, beaches and a more relaxing lifestyle (ABS, 2004).

Adding to the young population, a large number of senior citizens of 50 years and older are migrating to the coastal settlements just within 150km of main cities, seeking a lifestyle that is more relaxed, resulting in more than 150,000 people settled in these coastal areas in Victoria, between 1996 and 2006 (Green, 2010). In Victoria this settlement occurs within the 2 to 3 hours drive from the main city of Melbourne. This trend is continuing, and more housing will be needed in these coastal towns. This “sea change” phenomenon will continue, as such the coastal environment will be under pressure of substantial urban growth.

The pressure on the coastal towns along the Great Ocean Road is due to sea change migration as well as tourism. Increase in tourist activity during holiday periods results in the peak overnight population of the coastal towns’ on the Surf Coast Shire, located on the Great Ocean Road region, growing to 10 times the permanent population rate (City of Greater Geelong, 2004). Tourism is one of the main contributors to the economic values of the Victorian Coast, and is by far the largest contributor to employment, with an estimated 23,000 jobs created directly on an annual basis (Worley Parsons, 2013).

Australia and Sea Change

The migration to non-metropolitan areas on the coast is known as the ‘sea change’ phenomenon. This migration is purely due to the seeking of a change in lifestyle (Burnley, 2004). A form of migration based on amenity migration, seeking the values and attributes that the place character of these coastal towns offers, drives this. This was portrayed in the Australian television series, *Sea Change*, set in an imaginary coastal town of Pearl Bay. The story reflects the change of city life to coastal town, of main character Laura Gibson who leaves behind her stressful corporate life and joins a community on the coast to pursue an idyllic lifestyle.

The setting of Pearl Bay was in fact Barwon Heads, on the banks of the Barwon estuary, located 90 km south west of Melbourne. Barwon Heads (Figure 5) is one of the small coastal places people are

attracted to along the Surf Coast, representing the idealistic Pearl Bay ‘sea-change’ type of settlement such as Torquay, Bells Beach, Anglesea and Lorne, all the way to Apollo Bay on the Victorian coast. These towns have a distinct character, attracting more and more people to settle within these towns.



Figure 5: Barwon Heads – The ‘Sea Change’ town of Pearl Bay (Source: Roös, 2012).

The types of towns, with specific character has been recorded in 5 typical sea change types by a study done at the University of Sydney (Gurran, 2005):

1. Coastal hamlets – small rural communities;
2. Coastal gateways – small to medium sized towns within 3 hour drive from a major city;
3. Coastal commuter settlement – towns located close enough to major cities for daily commuting;
4. Coastal regional cities – smaller regional cities located on the coast.

The place character of the coastal types 1, 2 and 3 are the most attractive for migrants from the cities, seeking a sea change lifestyle, attracted to the place character of these coastal settlements. Along the Great Ocean Road coast, the following towns can be classified under the following coastal types:

Table 1: Coastal Types of Coastal Towns along the Great Ocean Road Coast.

Coastal Type:	Town:
Type 1 – Coastal Hamlet	Lorne, Wye River, Anglesea, Aireys Inlet, Port Campbell, Peterborough, Separation Creek, Skenes Creek, Kennet River.
Type 2 – Coastal Gateways	Torquay, Jan Juc.
Type 3 – Coastal Commuter Settlement	Barwon Heads, Breamlea, Torquay, Jan Juc, Bells Beach.
Type 4 – Coastal Regional Cities	Apollo Bay.

Place Character

Place character is the 'feel', 'atmosphere', the 'ambience', and the 'soul' of a place. This is a difficult term to define, but a common description of a place that make people feel at home, and attracted to its inherent qualities. All places in the built environment as well as in the natural environment possess character (Green, 2010). Some places are considered to have recognizable qualities and have a unique character, and these are often refer to as having a 'sense of place'.

Sense of place is a term that developed from the term *genius loci*; a term initially used that describe the appreciation of landscapes (Jiven, 2003). This can be acknowledged as the technical term, specific to the new landscape, but as this term developed over time, the concept moved away and included its application to any landscapes, including the urban form (Jackson, 1994). *Genius loci* in its application to perception of a place, evolved into describing the quality of places and its transition to modern times as 'Sense of Place' has been well described by landscape author Jackson:

'Sense of Place' is a much used expression, chiefly by architects but taken over by urban planners and interior decorators and the promoters of condominiums, so that now it means very little. It is an awkward and ambiguous translation of the Latin term genius loci. In classical times it means not so much the place itself as the guardian divinity of that place. ... in the eighteenth century the Latin phrase was usually translated as 'the genius of a place', meaning its influence. ... We now use the current version to describe the atmosphere to a place, the quality of its environment. Nevertheless, we recognize that certain localities have an attraction which gives us a certain indefinable sense of well-being and which we want to return to, time and again. (Jackson, 1994)

When Jackson refers to the 'atmosphere' of a place, he indicates that this development of the acknowledgement of *genius loci* has also linked and become allied to the place character (Jiven, 2003).

This place character, the spirit of a place is considered as a high amenity, and can be defined as the most important aspect that adds value to a place. Place character can be termed also the values of that environment, or place. These values include the things that people experience which are special, they can be emotionally attached to and respond to, and influenced by physical objects, such as the beach, historical buildings, trees, footpaths. It is the visual attributes of these objects and spaces that contribute to a sense of place and uniqueness of place-character (Roos, 2013a).

Communities on the coast exist due to the high visual and natural attributes of these values they are situated within, or adjacent to, that underpins the qualities of these values. Change these landscape and built values and you have a dramatic effect upon their context, influencing the overall place-character. It is the place-character, the unique constellations of socio-physical characteristics that differentiate these environments from one another (Tuan, 1974).

Christopher Alexander has defined place character as the 'living centres' of a settlement, connecting human built environments and nature together in a wholeness. This uniqueness, the living structures within a neighbourhood are fundamental to the ongoing resilience of a place, resulting in sustainable futures of the community (Alexander, 2006). These living structures are crafted over

many years by local residents resulting in its unique character and defined as the heritage and history of the place. An important aspect of place character is the heritage and cultural identity of place, shaped by the history of the settlement. In coastal towns it is this history that draw people to settle there, and results in increased numbers of overnight visits during holiday seasons. Heritage and history, culture as well as natural landscapes contributes to the appreciation of place. Examples of key heritage attributes shaped by history that contribute to place character of the coastal towns of Inverloch and Lorne are indicated in Figure 6. Both attributes are landmarks and major tourist attractions in these coastal towns.

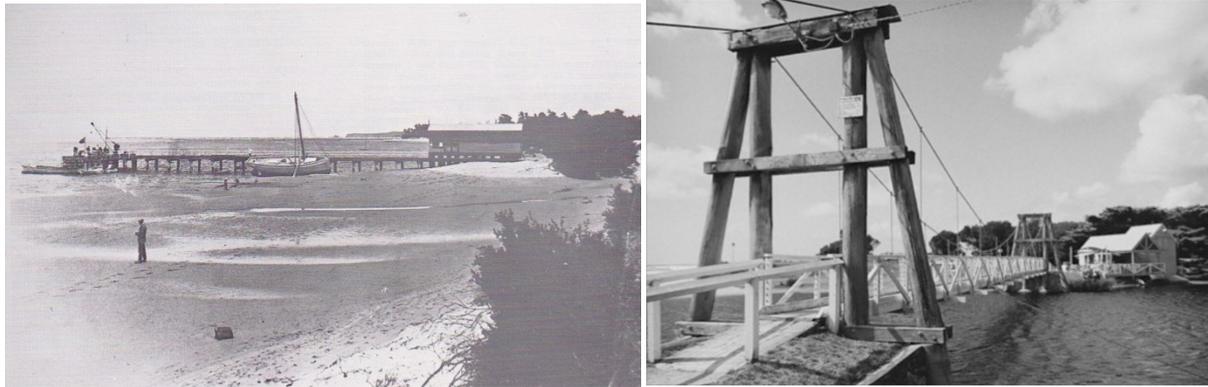


Figure 6: Contributions to Place Character through Heritage and History – The old Inverloch Jetty and the Lorne bridge (Source: PIRG, 1977).

In the coastal region, that is the direct coastline, as we perceive it, the character and visual relationships for the human eye is very important. The importance of the green landscape to human well-being has been long and widely recognized (Lewis, 1979), similarly the visual attributes of the coast and its natural habitat is a very important aspect for the psychosocial positive experience of humans. The high visual and natural attributes of the coast are always in a transition stage. Natural as well as built environments are constantly in a phase of transition along the Victorian coast.

Coastal Transition

Although humans have an affinity with the coast, the coastal zone is a dynamic place. It can also be a dangerous place to live. The coastal zone and its natural attributes make it susceptible to stresses and changes in a number of ways. It is the coast where the land interacts with the sea, experiences the forceful action of the wind, waves, tides, and currents that not only erode the shore, but also expand it with sedimentary deposits. Storm systems gather energy from the ocean and intensify natural coastal forces with wind, waves, and rain, powerful enough to severely damage natural and built assets with hastened erosive processes (GORCC, 2012).

Another element that will impact the coast and result in a coastal transition is the changes in the climate and rising sea levels. These impacts make the coast more vulnerable to these natural dynamic forces (IPCC, 2007). Adding to the coastal transition is the social and economic forces that bring stresses to coastal areas. Population growth with a shift from main metropolitan areas to coastal towns requires more land development along the coast (Green, 2010).

The growth of these towns often follows a distinctive growth pattern, sprawling along the coastline in a linear fashion, with properties that demand ocean views (DSE, 2004). This coastline sprawl has devastating effects on the natural coastal environment, biodiversity and habitat loss, degradation of water quality in coastal waters, damage to wetlands, coastal erosion, loss of indigenous vegetation, introduction of pest animals and plants and the loss of cultural heritage (VCC, 2008). Additional to environmental impact, local communities of these coastal towns raised concerns that the value of character are lost due to new developments and existing neighbourhoods are degraded. The major catalyst for this change is the replacement of older, traditional and smaller buildings with out of scale and standardized forms of building materials and architecture (Green, 2010).



Figure 7: Transition of place character from the 1st house in Torquay to current house typologies (Source: Melbourne Museum & Surf Coast Shire).

The growth patterns predominantly are driven by new housing, large blocks that result in residential areas with homes that have no character, built to the cheapest standard allowed to local planning schemes and building codes, a difference in past character and new homes is clearly evident, as indicated in Figure 7. This trend has a devastating effect on the once unique place character of the coastal towns of the Victorian West Coast.

The transformation of place character from a coastal town character to a suburban character dominated by block housing and suburban sprawl is obvious. How can this non-sustainable practice of suburban sprawl be stopped, and the transition to a future sustainable community be achieved in the coastal settlements? The author argues that this transition can have a positive outcome if the history as well as local perceptions of communities is considered, and the natural environment as well as the requirements of a sustainable built environment, are developed in harmony with the whole, acknowledging place character.

Wholeness, sense of place and place character go hand in hand. Christopher Alexander explores this phenomenon in his theory of architecture and settlement planning, and proposes a method of 'Pattern Language' that the inherent patterns of the landscape, the morphological growth of a place provides life, gives it character and wholeness only when the development and design of the built form are integrated and connected with nature (Alexander, 2006). Similarly Raymond Green identifies the place character of Victorian coastal towns somehow unique, different, unusual, special and rare given its locality and engagement with the natural environment (Green, 2010). This wholeness is connected back to deep sustainability, true place character, where the integrated connections with nature and a place support the future sustainability of the place (Alexander, 1977; Roos, 2013a).

Adaptation of Place Character

The place character of these Victorian towns along the coast is what most Australians consider an important value and an attribute, so why can we not protect these heritage attributes and the cultural significance from Aboriginal sites to early unique European heritage and architecture of these coastal town settlements? Under the pressure of migration to coastal settlements, as well as the potential impacts of environmental change, these coastal towns can adopt a process to consider their local character, adaptation considerations, as well as contribute to a sustainable future for the coast. The local communities can own this process, and the perceptions of change of future place character can be planned, designed and implemented by the people that live and work in these settlements.

In the face of development pressures relevant government bodies in Victoria have introduced forms of 'character legislations', such as the *Siting and Design Guidelines for Structures on the Victorian Coast, 1998*. Other recent examples such as the *ResCode*, introduced by the Australian State of Victoria in 2001, provides a set of planning provisions that direct municipal governments' to assess the impact of residential developments in terms of likely impact to 'neighbourhood character' (VDI, 2001). While local communities applaud these efforts to preserve place character, unfortunately these legislations often fail to meet their objectives. The reason for failure are that they seldom are based on a solid understanding of how the local people experience their environment, how the place come to be, how the heritage and history influences the organic growth and shape of spaces, and

mostly they ignore how local people actually conceptualise and experience place character as well as transformation (Green, 2010).

The use of a Generative Plan based on the principles of a pattern language could assist in creating the place character of a coastal settlement and adaptation to changes. The 'Generative Codes', a further step of the Pattern Language Theory, developed by Architect and Planner Christopher Alexander in the 1970's, identifies an unfolding that lock in each step of neighbourhood design (CES, 2006; Alexander, 1977). Alexander developed 'generative sequences' in town planning and urban design, focusing on the principle of centres and the wholeness of nature. Using these principles of generative codes as an input to a new 'generative plan', considering the twenty first century context of climate change and contemporary genius loci, or place character, the author adapts the pattern language of Alexander to a new language that considers the changes of the environment, both built and natural. The process of the generative plan also includes the heritage and history of place to be able to keep the towns' local identity in future growth. The following steps are proposed to be used to write the Generative Plan, allowing the community of the coastal town to own the process (the unfolding) and to provide local perceptions of establishing the potential positive adaptation of place character:

1) Town diagnosis

- Finding special places
 - Most inspiring place, creating sense of place, living structure, spiritual and cultural place, natural magnetism, alive
 - Find the sacred places
 - Special Indigenous cultural sites. What was the purpose of these sites? Identify the connection between the environment and the functions of the Indigenous site
 - Places of worship
 - What can make this place active, strengthen the place as to becoming the natural centre of the town
 - What are the characteristics of this special place, form, architecture, size, height, orientation, views. If it is a natural object - what is the best way to improve its character through a holistic integration of built and natural environment?
- Views
 - Identify view corridors, connections, beautiful views, distant views, focal points
 - Views for orientation, way finding and identification
- Access, in and out
 - Identify the most easy and natural way in and out of the town, pedestrian routes as well as vehicular routes, connections and pathways between special places
- Places to heal
 - Identify areas that need repair, the most derelict space, odd corners and street ends of town
 - Natural slopes and parkland that needs to be repaired, places where trees need to be replaced, and landscape to reinstate
- Large scale positive space

- Inspect the town and identify the large scale positive space, the way the land is shaped, buildings placement, and the capture of the attributes of looking out of the positive space
- Identify the balance of closure and openings in this large-scale positive space

2) Heritage and History

- Heritage elements
 - Identify the heritage elements of the town, special attributes that are acknowledged by local communities as their heritage and culture values
- History elements
 - Establish the history of the place, how was it established, why did the settlement attract permanent residents, how does the history influence the current uses of the town, and what is the relationship of future growth to the attributes of the towns' past history

3) Boundaries

- Settlement boundary
 - Establish the outer settlement boundary, fix this boundary to constraint further development
- Settlement interior
 - Identify pieces of land that will form a continuous land of different use
 - Types of buildings, and cultural boundaries, and functions cluster together
- Natural boundaries
 - Identify the natural boundaries of the landscape, including ecological corridors, green belts and water
 - Establish the size of green belts and ecological corridors; fix them on the outside perimeters and inside interiors of the settlement boundaries
- Neighbourhood boundaries
 - Identify and establish pockets of neighbourhoods, with neighbourhood character and cultural boundaries
 - Establish rights of way, connections and pathways between each neighbourhood
 - Identify the centre – the 'heart' of the neighbourhood, and link connections between different centres
- Public land
 - Identify and establish places that can be used as public land, meeting places between neighbourhoods, in-between spaces, and gateways
 - Establish areas that cannot be built on, or developed

4) Place character features

- Identify the specific type of character features of the settlement
- Natural and vegetation features
- Built features, out-of-character and in-character buildings

5) Change

- Identify risks due to change
- Identify social, economic and environmental impacts and change
- Identify vulnerability to hazards such as bush fire, flooding, inundation, and natural disasters.
- Establish patterns of impact by change

6) Adaptation

- Identify the physical attributes of the place that can adapt with time
- Establish values that is at risk for not be able to adapt to change. Identify places that are vulnerable to changes such as inundation due to flooding and sea level rise as well as bushfires
- Identify element's that could stop the adaptation process
- Establish the adaptation capacity of the built environment
- Establish the adaptive capacity of the natural environment
- Resilience features of the place, and timeless characteristics

The Generative Plan

The Generative plan includes a system of unfolding steps that will help the local community to create a place that considers place character as well as the potential opportunities to adapt the current as well as future built and natural environments to change. The coastal settlement will be able to consider the whole, following a similar process than the rules of nature when nature unfolds an organism or a natural landscape. This unfolding is based on the pattern language model (Alexander, 2006).

In this paper these rules of natural unfolding are applied to the further development of the built and natural environment, place character and adaptation. Coastal settlements provide opportunities to enhance and keep place character, if the settlement development is planned according to the above steps one to six, selecting harmony with the geography of the site and consider natural elements as boundaries. These elements of consideration for a generative plan are clearly visible in Figure 8, indicating the relationship of the built environment and the natural environment characteristics.



Figure 8: Torquay beach, indicating characteristics for applying the Generative Plan (Source: Author - Adapted from Surf Coast Shire).

Discussion

This preliminary research analysis considers the transition of coastal communities along the Great Ocean Road region, taking into account local perceptions of place character, resulting in the following conclusions:

- 1) The coastal region is experiencing the largest population growth in Australia.
- 2) The migration to the coast is due to the 'Sea Change' phenomenon, closely link to the perceptions of place character, the attributes and values that the coast can offer.
- 3) Specific Place Character types of coastal settlements draw more migrants than others, and the aspects of small rural communities, small to medium sized towns within 3 hour drive from a major city, and towns located close enough to major cities for daily commuting are experiencing the highest growth.
- 4) The local heritage and cultural character of coastal areas are under threat due to suburban sprawl along the coastline, impacted by population growth, influx of holidaymakers, as well as impacts of climate change.
- 5) Indigenous knowledge can assist in identifying sacred places and developing place character.
- 6) Coastal transition is happening due to new developments, and place character is getting lost, resulting in a non-sustainable growth. Current legislations often fail to meet the objectives of conserving place character, and the considerations of local communities need to be included in an alternative process.
- 7) The organic growth and unfolding steps of a Generative Plan can be the method for local residents in the coastal towns, assisting to applying local knowledge and aspirations to the protection and enhancement of place character.
- 8) Local government and planning agencies should be considerate of the place character process of the Generative Plan, applying these principles to planning provisions to protect and enhance place.

Thus, the use of the proposed Generative Plan can assist in the adaptation of place character, providing solutions for the values that need to be kept in place of these coastal settlements that in the first place draw people to settle there. The Generative Plan includes the interrelationships of nature and people as fundamental to forming place character. The inherent patterns of the landscape, the morphological growth of a place provides life, gives it character and wholeness only when the development and design of the built form are integrated and connected with nature.

The importance of this conclusion, in terms of the current growth and suburban development destroying of what were once unique coastal towns, acknowledging heritage and history with place character and sense of place, is that the Generative Plan offers a systematic approach to implement solutions to keep the place character of these towns, as well as helping the adaptation of coastal settlements to still continue to result in communities with 'sense of place'.

“Our concept of home can be extended beyond the dwelling to our community, city or nation. The identity of these places depends on its character. We develop a sense of what this character is intuitively; it is the identity of place. When alien characteristics invade it we experience a sense of loss”. (Appleyard, 1979)

Further work

It is clear from the above conclusions of this preliminary discussion paper that the Generative Plan potentially provides opportunities for the community of a coastal town to create a place that considers place character as well as adapting the built and natural environments to change. The six steps of establishing the Generative Plan needs to be further developed and tested on the coastal settlements along the Great Ocean road and involve both local community and planning agencies, securing a plan that can turn aspirational aims of the local community into real protection measures against the impacts of ad hoc developments along the Victorian coast.

Acknowledgements: The author wants to acknowledge the assistance from Professor David Jones, and Associate Professor Geoffrey Wescott, Deakin University, Geelong, Victoria, Australia.

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Infill Development

Planning for a sustainable suburbia

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Low density suburban development characterises many New Zealand towns and cities. Often described as 'sprawl', suburban development is decried as being unsustainable on several grounds. In response to this, many district plans promote a more compact urban form. For decades many local authorities have been actively encouraging infill development as a means of achieving this. Drawing on international literature, this paper explores the complexity of suburbs, with a particular focus on the environmental benefits that they offer, to show that in some respects suburbs have been miscast as unsustainable. Suburban infill development in a provincial New Zealand city is then used to quantify the changes in a suburban environment as a result of infill development.

A spatial analysis comparing the layout of a suburban area between 1956 and 2010 shows how urban morphology in this location has changed over time. The potential effects of these changes are identified, particularly as they relate to the literature describing the benefits of suburban development. The planning policy affecting this suburb, as contained in the present and previous district plans, shows how policy has contributed to the current suburban form. The paper concludes by suggesting the challenge for planning is considering how to configure future suburban spaces to achieve the benefits of infill development, while at the same time avoiding any unintended or possibly overlooked adverse environmental effects that are occurring through the loss of private open space.

Keywords: infill, backyards, planning, private open space, suburbs, urban morphology

Introduction

Considering the future spatial arrangements of an urban area is part of the purpose of planning, and is required in order to ensure that the benefits of a particular land use can be realised whilst any adverse effects thereof are avoided (March, 2012). This paper explores how infill development has changed the morphology of a suburban environment over the past 60 years. It highlights a challenge for planning, being how to configure future suburban spaces to achieve the benefits of infill development, while at the same time avoiding any unintended, or possibly overlooked, adverse environmental effects that are occurring through the loss of private open space (backyards).

This paper begins by defining infill development and highlighting the societal preference for suburban living. The notion of a compact city as an 'antidote' to suburban sprawl is then discussed, in which the relevance of the use of the term 'sprawl' in the New Zealand context is questioned. Drawing on international literature the effects of infill development, as a response to the compact city agenda, are then identified.

A spatial analysis of a typical suburban area, in a provincial New Zealand city between the late 1950s and 2010, explores the degree of change over this time. An analysis of the planning policy over time examines how the provisions for urban consolidation and more particularly, infill development, contributed to this change.

This paper explores the growing acceptance of the need for residential intensification within planning policy, and considers whether this has effectively closed down the discussion on what might constitute a sustainable suburban environment.

The paper concludes by suggesting there is a gap in urban consolidation and infill policy that, as this longitudinal study demonstrates, reflects a lack of value being placed on the intrinsic benefits of suburban private open space. When considering future suburban spatial arrangements an opportunity exists to build on the benefits of infill development through more critical consideration of the planning controls in order that the potential of the suburbs can be realised.

Infill development

Infill development is defined as the creation of new lots within established residential areas on vacant or underused sites (PNCC, 2000; Steiner & Butler, 2007). Commonly infill development occurs in the form of 'battle-axe block' development, where a new house is built at the rear of an existing house (Brunner & Cozens, 2012). More intensive infill development can involve the construction of two or more medium density dwellings on sites that were previously occupied by detached housing (Phan, Peterson, & Chandra, 2008). This more intensive form of infill development has also been described as '6-pack' development, where a single house is replaced 'by the maximum number of units possible without the expense of going above two or three storeys' (Hall, 2010, p. 77). Hall (2010) comments that such developments are the product of 'a low level, if not non-existent, level of planning control' (p. 77).

Internationally suburban environments, and the form thereof, continue to be important given that the vast majority of people want to live there (Carmona, Carmona, & Gallent, 2003; MJP Architects,

2005), as it the case in New Zealand. NZ has a long history of low-density residential development and it has been long known as the 'quarter acre pavlova paradise', where 'owning a home in the suburbs with a garden was a common aspiration' (Howden-Chapman, et al., 2010, p. 34). This aspiration is not unique to NZ, and owes its origin to the upper and middle classes in Britain in the late 18th Century, who escaped to residential havens on the outskirts of a city from the ill effects of urbanization and capitalism including noise, crime, immorality, pollution, factories, poverty, and a mass working class (Nicolaidis & Wiese, 2006).

The notion of pavlova paradise continued to grow after the second world war when, internationally, suburbia was seen 'as a welcome reward' after years of hardship – depression and war (Nicolaidis & Wiese, 2006, p. 4). In America suburbia was defined as being 'the site of promises, dreams, and fantasies', 'a landscape of the imagination where Americans situate ambitions for upward mobility and economic security, ideals about freedom and private property, and longings for social harmony and spiritual uplift' (Hayden, 2003, p. 3), and arguably it could defined as such within a New Zealand context.

Infill development can contribute to this societal desire. A significant benefit of infill development includes that higher densities can be accommodated within an environment that has an existing and established level of residential amenity and the capacity to absorb additional dwellings (Newton, Pears, Whiteman, & Astle, 2012). It is an environment with access to public transport and it can also have access to employment destinations (Newton, et al., 2012). However, higher densities cannot be achieved simply by raising the ratio of dwellings per hectare or by packing and stacking volumes in ever-tighter configurations (Chow, 2002). This would result in backyards like fishbowls, and an overall finer, denser grain of wasted outdoor space (Chow, 2002). These are the very effects that the history of the district plan has been seeking to avoid.

Residential intensification (including infill development), although often unpopular with the existing resident population (Vallance, Perkins, & Moore, 2005), if introduced sensitively and respecting the local resident's views, need not be seen to be a bad scenario for the residents (Schmidt-Thomé, Haybatollahi, Kytä, & Korpi, 2013, p. 9). However infill development, particularly of the battle-axe or six-pack variety, may not constitute 'a sensitive manner' of development, and may potentially pose a threat to the sustainability of suburban environments.

Low-density suburban 'sprawl' versus a compact city

Infill development is often promoted within district plan policy as a means of repairing 'sprawl'. The term sprawl is often associated with low densities, ribbon developments, or unplanned, single use, automobile-dependent developments (Bruegmann, 2005; Hiller, Melotte, & Hiller, 2013; Rogers, 2010). It is a term fraught with negative implications and is the subject of much debate (Hiller, et al., 2013; Tachieva, 2010). 'Sprawl' typically occurs at the periphery of urban areas and is described as ugly, awkward, inefficient, inequitable, environmentally damaging, and unsustainable' (Bruegmann, 2006; Hayden, 2006). Rogers (2010) suggests the word 'sprawl' denotes decline, in comparison with 'compact' which implies control, and found the use of words such as 'sprawl' closed down policy discussions because of these preconceived interpretations of 'sprawl'.

Troy (1996) raises his concern in relation to the use of the term 'sprawl' in the Australian context, noting that the term sprawl and comparisons with American studies are inappropriate given the role of development control and infrastructure development that has been in place since the early post-war period. This is also true for New Zealand and in this context as we talk about suburbs, policy discussions should not be closed down through references to 'sprawl' per se as the release of land for suburban development in New Zealand has been planned, and is largely in response to societal preferences. The lesson for planning policy should be to use the term 'sprawl' with caution.

In contrast to the reality of low density suburban developments compact cities are seen as being 'ideal' (Gordon & Richardson, 1997). With their higher population densities and mixed uses, compact cities have become synonymous with 'sustainable' urban form (Williams, 1999). Proponents of compact cities see them as an antidote to unsustainable traditional low-density suburban developments which erode the countryside, isolate residents causing car dependence which then contributes to higher levels of air pollution and traffic congestion (Frey, Ferguson, Bagaeen, & Woods, 2006).

The concept of the compact city is also a contested view, with some researchers questioning their sustainability given the lack of, or contradicting, empirical evidence to support the claim (Echenique, Hargreaves, Mitchell, & Namdeo, 2012; B Gleeson, 2012; Neuman, 2005; Vale & Vale, 2010; Williams, 1999). However, as Ghosh and Head (2009) suggest, it is difficult to ignore the wide acceptance of urban intensification as a means of improving sustainability. That a compact city can improve sustainability is a shared understanding but there is a lack of agreement about how best this can be done (Rice, 2010; Rogers, 2010).

Sustainable suburbs

At the same time as this growing acceptance of urban intensification and policy directing land use towards compact cities, there is a growing amount of research highlighting the positives of more traditional suburban layouts, and in particular the contribution of private open space (backyards) in achieving a sustainable urban form. Gleeson (2010) suggests that suburbs have been miscast as anti-environmental. In particular, suburban backyards contribute to a landscape-dominated environment with associated ecological, climatic and aesthetic benefits (Hall, 2010). These benefits include increased biodiversity; increased aesthetic values; the potential for microclimates; storm drainage, carbon sequestration, and other benefits including those related to rainwater collection, composting, laundry drying (Hall, 2010). Low density cities (suburban areas) also have the potential advantage of being able to collect energy for home use, and to grow food (Vale & Vale, 2010). As Gleeson (2010) comments, 'suburbia is a low-density landscape with a lot of disorganised but potentially productive land' (p. 2).

The social benefits of private open space also cannot be overlooked. Hall (2010) describes the role of the backyard in providing an area for supervised, active, children's play as being one of its most important. The immense social benefits of private open space are encapsulated by Stretton (1996) who writes,

if you are poor and car-less in an upstairs flat in a neighbourhood without much open space – especially if you are a child, or bringing up children – you can do a

good deal less for yourself than you can do with a house and garden and shed in a suburb, with the parks and playgrounds and school grounds that Australian densities allow' (p. 49).

So suburban environments, those complete with back yards, tick a number of the sustainability boxes – environmental, social, and cultural. They do not necessarily merit negative perception (Hiller, et al., 2013), particularly if growth and/or infill development is planned appropriately.

Planning policy that promotes infill development for the sake of a more compact city, is changing the morphology of suburban environments, and what becomes important to ascertain is 'at what cost' do these policies come. While intensification of suburbs is an ongoing process there is the potential that this may worsen already unsustainable conditions, and these, together with issues of potential inequality for poorer households, as highlighted by Stretton (1996), require consideration.

A particular unintended outcome of infill development is the loss of urban vegetation and trees, and the subsequent implications for biodiversity, ecology, and climate change (Brunner & Cozens, 2012; B Gleeson, 2012; Hall, 2010). Brunner & Cozens (2012) suggest that the loss of this resource will have significant consequences if it is not protected. In the New Zealand context, where the sustainable management of natural and physical resources should be the basis of all planning provisions (at least since 1991), the uncritical acceptance of the compact city, with what Gleeson (2012) refers to as widening cracks in its empirical base, should not continue. Instead, critical consideration should equally be given to the changing morphology of a suburb, with a focus on what is being lost, and how this could be more sustainably managed.

Spatial Analysis

Using spatial analysis on a 'typical' suburban area the changes in suburban morphology over the last 60 years is explored, focussing particularly on changes to private open space. The study site is a residentially zoned block in Hokowhitu, Palmerston North; a provincial New Zealand city. It was first purchased from Maori ownership in 1893, and then subdivided into blocks of varying sizes ranging from less than 1 acre to 75 acres (Mather cited in O'Neill, 2012). By 1920 O'Neill (2012) describes Hokowhitu as having been 'more closely settled', and notes that large plant nurseries, orchards and market gardens had been established on the rich soils of the area, which remained until after World War Two. It was after this time that more subdivision occurred, particularly following flood protection works (O'Neill, 2012). This paper explores the degree of change in a portion of this suburb between the late 1950's when suburban development was well underway, through to 2010. The subject area could now be described as being a middle ring suburb, given its relatively close proximity to the city centre. The study area is surrounded on each side by a collector or arterial road, and has a high degree of permeability within.

In order to understand how the suburban morphology has changed, historic aerial photographs were uploaded as a layer into ArcGIS 10 and aligned with the 2010 digital aerial imagery. Dwelling footprints were manually digitised for 1956 and 2010. Property boundaries on an historic cadastral map were also manually digitised, and then aligned with a GIS layer containing the digital property boundaries in 2010. It is noted that the 1956 aerial photographs for this area, having been scanned and uploaded were slightly distorted after rectification. This potential limitation of the dataset was

overcome primarily through comparing the data with the 2010 dwelling footprints, many of which remained to this day (although often extended). Additionally, historic maps can be inaccurate in terms of scale (Laycock, Brown, Laycock, & Day, 2011), and this was overcome through matching features on the original cadastral map to modern vector data. Other limitations exist in this process with regard to resolution of the scanned 1956 aerial photographs. The original black and white photographs had a ground resolution of 0.1m once rectified. This means that fine detail of building roof features could be missed, or ground features could be interpreted as building footprint, due to similarity of apparent colour with the surrounding roofline or interaction with shadow. The 2010 building footprint layer was much easier to digitise as we were supplied orthorectified, high resolution, and colour imagery.



Figure 1: Degree of change to suburban morphology through infill development between 1956 and 2010.

Figure 1 compares the number of infill sections in 2010, with the 1956 sections. In 1956 there were approximately 639 parcels within the study area. By 2010 this had increased by 63%. Not surprisingly, given the presence of plant nurseries, orchards and market gardens in the late 1950s, some of the older lots have been subdivided into 10 or more additional lots by way of infill development. The study area also exhibits both battle-axe and 'six-pack' infill development (refer figures 2 and 3), which accounts for 25% and 10% of infill development respectively. 62% of the sections which existed in the late 1950s have remained unchanged.

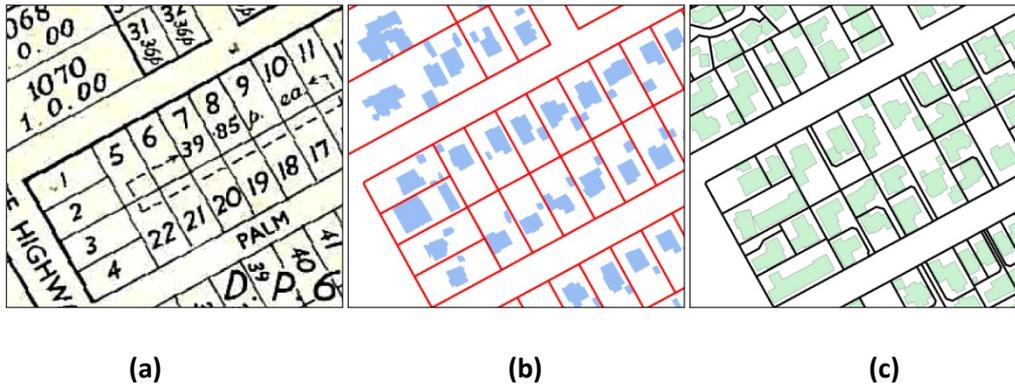


Figure 1: A partial plan of the study – showing ‘battle-axe’ type infill (a) 1960 Cadastral Map (b) Existing Dwellings in late 1950s (c) Evidence of battle-axe subdivision and increased building density in 2010

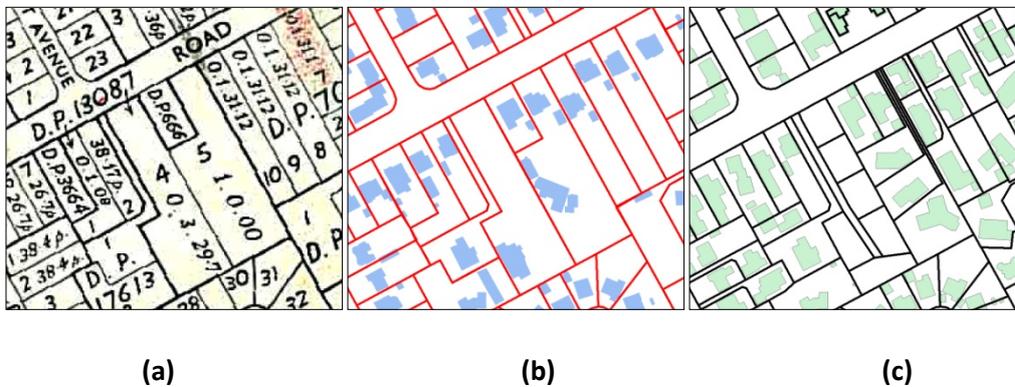


Figure 2: A partial plan of the study – showing ‘six-pack’ type infill (a) 1960 Cadastral Map (b) Existing Dwellings in late 1950s (c) Evidence of ‘six-pack’ infill subdivision and increased building density in 2010

The median and average lot size in 1956 was 1,276m² and 920M² respectively. By 2010 this had changed to 757 m² and 567 m². The average dwelling footprint size in this location has also changed over time, going from approximately 163m² in 1956 to approximately 210m² in 2010, consistent with the phenomenon elsewhere of larger dwellings on smaller lots. This smaller lot phenomenon is also reflected in Figure 4 which shows a significant increase in the number of lots that are 700m² or smaller. Together with the larger footprint statistics, this suggests reduced private open space.

In light of the literature which suggests that loss of private open space is a significant effect of infill development, and in order to avoid the data being skewed by those areas previously used for horticultural purposes, a smaller portion of the study area (sub-area A as shown in Figure 1) was examined to determine the degree of change to the curtilage per dwelling. This curtilage space (which excludes outbuildings) has halved in this sub-area going from 871m² in 1956 to 429m² in 2010.

This spatial analysis of a fairly typical suburban area in a provincial city has shown significant changes to its form between the late 1950s and 2010 (refer Figure 5). Many of the sections (62%) remain

unchanged over the last sixty years – although the dwelling footprints have often been extended. Where infill has occurred there has been a significant change in the morphology of suburban space – particularly as it relates to private open space. On this basis the planning policy over the same time frame is explored to find out why.

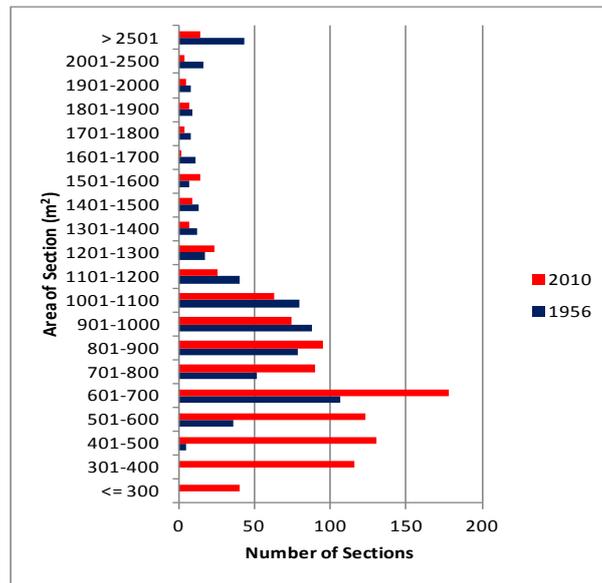


Figure 3: A comparison of section sizes



Figure 4: Degree of change in building density between 1956 and 2010

A brief history of planning policy in Palmerston North

A document analysis looking at the District Plans (formerly Schemes) was undertaken to look at how the city of Palmerston North has managed urban form. As infill development is often a response to sprawl, or an attempt to create a more compact city, references to these terms were specifically sought. In addition to these references, the document analysis looked for indicators of the level of protection put on private open space, to determine whether the policy acknowledges its value, or whether the loss thereof could be deemed an unintended effect.

In 1959, the operative District Scheme, prepared under the Town and Country Planning Act, 1953, was adopted. Under this Scheme, containing the footprint of the city and limiting residential zoning was primarily for the purpose of avoiding uneconomic extensions to the city's services (Scheme Statement, Section (2), Clause (1)(c)). At this time there were two residential zones; Residential A, which envisaged low density and included the study area, and Residential B, which envisaged higher densities. The code of ordinances included bulk and location standards which required yard space, and which also required that this space should be left 'unoccupied and unobstructed from the ground level up', although in particular circumstances, council could make exceptions if the written consent of owners of adjoining land was obtained, and this provision essentially still exists.

An additional residential zone was included in 1968, after the first review of this Scheme. Although not referring specifically to 'sprawl' the Council's policy at this time reflected a need to direct development so as to avoid the indiscriminate mixture of incompatible uses, to economise the servicing of the District, to maintain the stability of individual property prices, to maintain and provide amenities appropriate to every locality and, so far as practicable, to avoid the encroachment of urban uses upon land of high actual or potential value for the production of food (Clause(3), sub-clause(1)). It was at this time that the compact city 'driver' started to emerge in council policy. This Scheme made specific mention of urban consolidation in its zoning policy, requiring that urban development be consolidated and confined, so far as practicable to areas that are already urban in character in preference to permitting expansion beyond present urban limits (Clause(3), sub-clause(2)).

Private open space and yard space was required under the Code of Ordinances for reasons associated with visual amenity, protection of privacy and the penetration of daylight and sunlight.

By 1973, a number of changes to the Scheme had been approved by Council, resulting in five Residential Zones. These changes allowed residential development of all kinds 'so that new concepts in housing can take place to meet the changing needs of the City' (Clause 5(1)(a)(3)). Those residential areas considered 'stable' were to be maintained at their present density 'to prevent premature change and detract from existing amenities' (Clause 5(1)(a)(4)). The renewal of older residential areas was to be encouraged through either active participation 'or by encouragement through the studying of permitted densities and permitting a range of densities' (Clause 5(1)(a)(5)).

At this time the study area was predominantly zoned R1, which catered specifically for low density development, and allowed a maximum density of two household units on any site less than 50 perches (approximately 1265 m²). A portion in the north-west corner was zoned R2, which allowed medium density housing as a predominant (permitted) use. The other three zones provided for

higher densities, and even restricted the development of standalone dwellings. The next review of the Scheme saw a major u-turn in relation to this policy.

The enactment of the 1977 TCPA saw a major review of the District Scheme. The overriding goal of the 1981 District Scheme was the efficient management of the City's future growth in order to provide the best possible environment for the people of Palmerston North. Specific planning aims echoed previous aims, including the need to maintain and enhance existing residential environments by allowing new residential development that was compatible with existing.

In relation to infill development the 1981 Scheme stated that 'one of the main reasons for encouraging urban renewal has been a continuing concern to at least maintain, and, if possible, increase residential densities in existing built-up areas' (PNCC District Scheme, 1981, p. 49). This scheme notes that land suitable for urban development is in relatively short supply on the perimeter of the city, and that it is highly desirable for land in the existing build-up area to be used as efficiently as possible.

A significant change in the 1981 Scheme was the provision of a single residential zone, as a means to increase residential opportunities (PNCC District Scheme, 1981, p. 45), the aim of which was to encourage infill development. Council's objective was to encourage subdivision of existing large sites and undeveloped back land by introducing a system of subdivision control based on a relationship between site boundaries, buildings and degree of amenities rather than area and dimension (Objective 18.5). To achieve this objective, it was Council's policy to approve any subdivision which creates a site on which it is possible to erect a dwelling that complies with the bulk and location requirements of that zone in which it is situated, and it was expected that 25% of residential development would be infill (PNCC District Scheme, 1981).

To provide for additional dwelling units this Scheme had, what it described as, flexible subdivision standards and reduced yard requirements. Allowing more than one residential building on a site was seen as a feature of this Scheme.

This Scheme, and its focus on infill development arguably of the battle-axe variety, reflects a deliberate move away from higher density forms of housing. Council 'recognised' the need to provide for better land utilisation, but sought to achieve this with a 'minimum of disruption' to existing residents. In particular they were concerned about the long rows of flats, commonly known as 'sausage flats', as they detracted from amenity, and 'failed to provide satisfactory living conditions' (PNCC District Scheme, 1981, p. 83).

In light of this, there can be no doubt that a stand-alone dwelling was highly valued, but the reduced yard requirements and flexible subdivision standards would indicate that private open space (i.e. the suburban backyard, with all its positive attributes), was less valued.

Of most significance to this paper, was the change to the Rear Yard standard (which is essentially the requirement for the largest area of private open space). This was reduced from 25 ft (7.6m) under both the 1959 Scheme and the 1968 Scheme (in all their Residential Zones) to 3 metres in the 1981 District Plan. Despite this permitted reduction in backyard space by over 50% of what was formerly

required, the Scheme still included reference to the importance of private open space, not only for use by its residents, but also to provide visual amenity for the site.

In 1991, with the enactment of the Resource Management Act, the Scheme was again reviewed. Transitional provisions remained in place until December 2000 when the first PNCC District Plan was made operative.

Under this Plan the Council notes,

If development of the “City is to be managed in a sustainable manner it is important that this compactness is maintained and that excessive sprawl on the fringe of urban areas is avoided. For this reason, well managed infill development is important as it makes good use of existing infrastructure such as roads, water pipes etc, and avoids excessive development on the fringe of the City (PNCC District Plan, 2010; p. 10-3).

Under this District Plan ‘infill’ is identified as a specific resource management issue, and is justified on the grounds that it makes ‘very good use’ of existing urban services and infrastructure and is an important element in slowing the peripheral growth of the City. However the Plan also recognises that infill sites do not always ‘blend harmoniously’ with the existing character of residential areas, and can give rise to adverse effects such as overshadowing, or loss of privacy.

This District Plan, through its objectives, policies and methods for the Residential Zone, strongly advocates for a compact city through the continuation of managed infill development. The encouragement of infill development, where it can make use of existing services, is a specific policy. In seeking to secure and maintain a high standard of amenity within the Residential Zone, Council continues to have bulk and location requirements to ensure on-site amenity, access to sunlight and daylight, open space, to protect privacy, and to require residential developments through design standards to avoid, remedy or mitigate any adverse environmental effects. This Plan refers to ‘well-managed infill development, as being important as it makes good use of existing infrastructure, and as a means of slowing peripheral growth of the city, but it does not specifically recognise the actual intrinsic values and environmental benefits of private open space.

Discussion

Incremental changes to individual houses and lots begins when a residential area is created and can be expected to continue (Whitehand, Morton, & Carr, 1999). In light of this it is important to consider the cumulative effect of infill development. In the New Zealand context the incremental potential effects of infill are exacerbated by the resource consent process, which, since the late 1950s has provided for district plan infringements subject to obtaining the written consent of adjoining land owners. Yet, arguably there is a mandate for the consideration of the contribution of private open space to environmental and social sustainability under the Resource Management Act 1991, where planners are tasked with sustainably managing natural and physical resources. Although not touched upon within this paper, others suggest that there is also an economic value of open space (Brunner & Cozens, 2012) which, as planning moves towards a system that is basing planning decisions on cost-benefit analysis, needs to be a critical consideration in urban development decisions. Infill development should be looked at more holistically, looking both at the

cumulative effects particularly as a result of the incremental loss of private open space. The building density resulting from infill development should not be able to be described as being 'a low level, if not non-existent, level of planning control' (Hall, 2010, p. 77), the unplanned outcome of a series of bulk and location development controls, but rather as an element of planning that 'must be considered in terms of the configuration of urban form – that is, a product rather than a determinant of design' (Carmona, Heath, Oc, & Tiesdell, 2003, p. 185).

This brief history of the PNCC District Scheme/Plan provisions shows that avoiding 'sprawl' and accepting urban consolidation has a long history within the city. In striving for a compact city the messages in the various District Schemes/Plan have echoed the rhetoric suggested by Rogers (2010), where 'sprawl' is portrayed as negative and 'compact' as good and sustainable. This is most notable in the operative District Plan which refers to maintaining the City's 'compactness' and avoiding 'excessive' sprawl on the fringe urban areas.

In the same way that sprawl erodes the countryside, it can be argued that infill development, particularly the battle axe and six-pack variety, is incrementally eroding the suburban environment, potentially robbing it of all its intangible benefits. In particular, reduced rear yard setbacks have the potential for adverse environmental effects. Gleeson (2010) refers to the potential advantages associated with lower density development in the age of climate adaption and social resilience, and in particular the benefits of suburban space, with its soils, climate, solar access, and the water (via tanks) to be used for food production. In the case of this research, although there is a substantial number of sections that have not been affected by infill development, if the trend of development continues as seen in the smaller portion of Hokowhitu examined, this advantage will be lost.

Gleeson (2010) also suggests that leadership is lacking and that 'inflexible visions of the compact city, freighted with much impotent anxiety about the 'sprawling' suburbs' overwhelms the food bowls of old' (p.4). This could be extended to include the loss of other benefits of private open space. Rather than being wedded to the notion of a detached dwelling on a site, with its ever decreasing backyard space, planners need to critically rethink the role and benefits of suburbs, before those very characteristics that contribute to a sustainable environment are lost.

How to do this is not the subject of this paper, however many of the authors debating the benefits of a suburban environment consider suggest a variety of options. These include reconsideration of the traditional bulk and location requirements for new dwellings to include more specific requirements such as regulating for the protection of urban tree canopy (Mincey, Schmitt-Harsha, & Thurauc, 2013), or the inclusion of a minimum back-to-back distance between dwellings (Hall, 2010). Others refer to the need for bigger picture objectives for residential zones, suggesting a more reflexive role is required (Cook, Taylor, & Hurley, 2013).

This paper does not intend to suggest that suburbs remain unchanged, or that infill development as a means of efficiently using a city's infrastructure or making a city more compact should be avoided. Rather, it suggests that how sustainable suburban environments are depends, in part, on how they are designed, and in particular how the backyard is protected.

Conclusions

The compact city is not necessarily the panacea to urban sustainability that has been claimed. Understandably though, given its potential benefits, there has been a long acceptance of urban consolidation and, as has been shown in the case study, the use of infill development is seen as a means of achieving this. The policy documents reviewed showed urban consolidation was included as a policy goal in the late 1950s and that this has continued through to today. Although at first its primary focus was on the efficient use of services, by 2010 this had changed to include reference to the need to avoid excessive sprawl.

Sprawl is a similarly contested term, which some would argue is not applicable in the New Zealand context (given that urban form has long been planned), and which has been described as a negatively loaded term. Legitimising infill development on the grounds that it will avoid 'sprawl', and therefore create a more sustainable form, is therefore ambiguous. Indeed, a growing number of researchers are suggesting there are numerous benefits of low density development that are yet to be realised.

Considering how to configure future suburban spaces so as to avoid the creation of a finer, denser grain of wasted outdoor space as a result of insensitive infill development, whilst at the same time achieving the benefits of infill development, is therefore the challenge for planning. There is an apparent gap in existing and historical planning policy that reflects a lack of value being placed on the benefits of suburban private open space. In order to ensure that the potential of suburbia is not eroded this gap needs to be filled, which will require that discussions about the future suburban form are not closed down by the uncritical acceptance of urban consolidation or by references to verbs with negative connotations such as sprawl.

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Haptic Experiences of the Perth Foreshore

Case studies in sensory history

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Urban waterfronts are liminal zones of heightened sensory experience, particularly haptic experiences: the immediate bodily experiences of touch, proprioception and kinaesthesia (body position and movement). Such experiences are generated through direct contact with natural and built environments, strongly mediated by cultural and historical meanings, and they are crucial to forming physical and emotional understandings of the body and the environment. Research on haptic experiences is part of broader interests in 'sensory history' as an alternative form of cultural and environmental analysis that has been garnering interest from a range of disciplines over the past several decades (see for example the work of Constance Classen, Alain Corbin, David Howes and Mark M. Smith). The potential value of 'sensory history' to studies of the built environment lies in drawing attention away from the overweening and potentially generalizing dominance of 'the visual' as a critical category in humanities research. This paper aims to highlight the latent value of the senses of touch, balance and movement, sensations so strongly a part of everyday experience as to often remain largely unnoticed. The heightened sensory environment of cities at the water's edge makes them ideal locations to explore the history of such ephemeral experiences. Case studies focus on the Perth City Baths and the Water Chute, two early 20th century features of the Perth foreshore, exploring how technological and cultural change shaped haptic experiences of the river and the foreshore at the turn of the century. The case studies focus on the themes of novelty, pleasure, thrill and risk and consider how changing forms of recreation allowed for broadly sensuous rather than primarily visual experiences of the foreshore.

Keywords: sensory history, haptic sense, Perth foreshore, Perth City Baths, Water Chute

Introduction

On the Perth foreshore at the turn of the 20th century key sites along the Swan River became places of novel sensory engagement with the river and the foreshore. A number of distinctive structures provided decidedly haptic experiences of place, focused on bodily touch, movement and position. The Perth City Baths (1898-1914) and the Water Chute (1905-unknown) facilitated activities that offered modern, inventive sensory experiences centred on the body and its immediate surroundings. The sensory history of the City Baths and the Water Chute explores how technological developments and cultural change facilitated the rise of new aquatic leisure practices which, rather than being primarily visual or observer-based, were bodily, participatory experiences. These new experiences engaged both spectators and participants, and were appealing specifically because they were novel, pleasurable, thrilling and potentially risky. These case studies are part of a larger body of research that seeks to 'make sense' of the Perth foreshore, and more broadly Australian urban waterfronts, as sites of varied and evolving sensory experience.

Haptic experiences are generally subtly infused in daily life, while the visual is often dominant, consciously noticed, and purposefully enhanced. In these case studies the haptic sense is actively engaged, along with other senses that are often overpowered by the visual. The haptic system encompasses touch along with proprioception and kinaesthesia in a perceptual system that provides information about the surrounding environment and the position, movement and tactile encounters of the body (Gibson, 1966). For designers such as Malnar and Vodvarka (2004), Moore (1977), and Pallasmaa (2005) the haptic sense is crucial (if not central) to the experience of the built environment. The haptic sense provides detailed information about both the condition of the body and its immediate surrounds, including dimension, climate, material, movement and a range of other bodily and environmental knowledge.

Sensory History

The burgeoning field of 'sensory history' seeks to reveal through historical inquiry the informative, exploratory and expressive nature of the senses, many of which, despite being an enduring and pervasive component of everyday experience, remain largely unnoticed. The increasing number of publications and scholars from diverse fields undertaking research on sensory history in recent decades is evidence of expanding interest in the field. In *Empire of the Senses* Howes writes that "the sensual revolution in cultural studies has precipitated an intense new focus on the senses as mediators of experience, eclipsing the role formerly played by 'discourse', 'text' and 'picture'" (2005:399). Additional recent publications on the subject include *The Sensory Formation Series* of monographs (Berg), the journal *Senses & Society* (since 2006), and a wide range of books and articles focused on specific aspects of sensory history.

Sensory history, according to Smith,

"tends towards the ecumenical, considering not only the history of a given sense but its social and cultural construction and its role in texturing the past. At its most powerful, sensory history is also explanatory, allowing historians to elucidate by reference to both visual and non-visual senses something that makes little or less sense if understood simply as a scopic phenomenon" (2007:842).

The history of the dominance of the visual in Western culture is a subject beyond the scope of this paper, however this research aims to look beyond the dominant and overweening nature of the visual sense and consider the complex and inter-related nature of sensory experiences. The senses do not operate in isolation and every experience is an amalgamation of a variety of sensory inputs. Closer scrutiny of the non-visual components of sensory experiences can enhance understanding of places, bodies and environments.

At the core of the study of sensory history is the fact that the senses are culturally constructed, a notion that clashes with more conventional understandings of the senses as biological features which are perceived as universal and pre-cultural (Classen, 1997:402). The cultural construction of the senses results in what Corbin refers to as the 'transience of the evidence', a central concern when undertaking sensory history (2005:131). Many sensory experiences of past environments, including some odours, tastes, sounds and tactile sensations can be reproduced or still exist today. Corbin believes the 'transient' evidence is not such features per se, but the manner in which the senses were used to experience them, how their significance was perceived and how they were divided, ordered and valued (2005:131). Despite the ephemeral nature of this 'evidence', it can be derived from sources such as newspapers, journals, treatises on hygienic practices and other written or visual records which reveal the practices and understandings of the senses at work in a particular social milieu at a specific point in time (Corbin, 2005:131). For the purposes of this research, a range of sources, particularly newspapers and visual materials (plans and photographs), have been used to explore the haptic experiences of the City Baths and the Water Chute. This research proceeds by adopting a perspective on the haptic focused on, like the work of Classen, the 'social life and personal experience' of the senses (2005:5). While awareness of the scientific, philosophical and historical aspects of the senses is integral, the overall focus remains grounded on collective cultural and individual haptic experiences and their role in broader perceptions of the Perth foreshore.

The Perth Foreshore

In Perth the edge of the Swan River between East Perth and Crawley is a place of not only iconic and defining visual appeal; moreover it is a liminal zone that at the turn of the 20th century became a site for bodily encounters with the river. Physical alterations to the foreshore at this time enlarged the open grassy space between the city and the river ('Public Recreation' in Figure 1) to meet functional and aesthetic objectives and facilitate foreshore activities including walking, sports, parades and exhibitions. This wide, flat expanse of grass opened up views out across Perth Water, as well as back towards the city itself. The construction of riverside walls at the turn of the century along large portions of the foreshore created a boundary between the river's edge, roads and the recreation grounds, limiting opportunities for physical contact with the river to designated locations.

The Perth City Baths (1898-1914) and the Water Chute (1905-unknown) were facilities that provided physical access to the river and offered modern, inventive bodily experiences of the water and the foreshore environment. It can be argued that these structures arose as part of technological developments and cultural shifts in understandings of bodily and behavioural propriety, which resulted in the gradual transformation of some aquatic leisure practices from primarily visual experiences to bodily experiences. These facilities highlighted novel, pleasurable, thrilling and potentially risky ways of experiencing the river brought about by technology and cultural change.



Figure 1: Partial image of the Plan of the City of Perth, 1910. The Perth City Baths are sketched lightly in red below the recreation grounds. To the west of Mt. Eliza is Point Lewis, where the Water Chute was located. (State Records Office of Western Australia, series 2168, cons 5698, item 1385).

The Perth City Baths

The Perth City Baths, designed by Mr. G.E. Johnson, opened in March 1898 after decades of calls for public bathing facilities to address issues of hygiene, public propriety and leisure. The baths were perched at the end of a wide jetty extending 91 metres into the river, attempting to avoid the shallow mudflats edging the foreshore. Constructed of Jarrah timber and described as ‘Moorish’ in architectural style, the building had four cupola-topped towers framing a promenade facing the foreshore. The jetty led to two entry vestibules where bathers were segregated by gender, and featured walking platforms that extended the full length of the building on either side. There were 62 change rooms that catered to two spatially and visually separated bathing facilities, each providing river bathing, private hot water bath chambers, and showers.



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Figure 2: Perth City Baths c.1900 (Batty Library, State Library of Western Australia 001739D).

The baths were situated between the terminus of Barrack St. and William St., a site intended to be convenient and visually appealing. The site allowed the somewhat exotic building to be viewed from the city across the wide expanse of the foreshore recreation grounds, and it was said to form a “pretty backdrop to the Esplanade” (1898). The baths proved popular and were well patronized soon after opening; however, there were early hints that its tenancy on the foreshore would be tenuous owing to negative haptic and olfactory experiences of the site caused by the fetid mud lining the foreshore and riverbed. The preferencing of aesthetics and convenience over haptic and olfactory concerns when selecting the site proved problematic shortly after the opening of the baths.

The Perth foreshore at the turn of the 20th century had its own particular ‘smellscape’ (Classen et al., 1994:97). Natural river smells (including brine, tannin, and decaying riverine flora and fauna) were significantly altered by human waste generated over seven decades of settlement and a rapidly expanding urban population. Sources causing the odours were manifold, including sewerage, runoff, refuse, animal waste and fertilizers. The waste was malodorous in its own right and over time had altered the biological and chemical balances of the river. While the natural odours of the mudflats may never have been aromatic by the local standards of the time, human habitation increased their pungency and repugnance. The site on the northern side of Perth water also tended to accumulate

windblown waste, and overall conditions were strongly dependent on the season, tide, and climatic conditions.

There were many who found the pleasures of a bath sufficient to disregard the foul-smelling conditions of the site, but there were some who believed that the foreshore was not merely malodorous, but emanated a vaporous threat to human health, an idea consistent with long standing beliefs associated with the miasmatic theory of disease (see Alain Corbin, *The Foul and the Fragrant*, 1986). It was only after the baths were constructed and well patronized that the physical experiences of the muddy water were combined with concerns about odours and vapours to generate widespread concerns about health, leading to debates about the baths' location and environment. An article from the Sunday Times in 1903 declared that "when one emerges from the sewer (mistakenly called a bath) a shower is absolutely essential in the interests of cleanliness" (1903b). At a 1904 City Council meeting Cr. Haynes described the baths as "a duck pond, and they provided work enough for two or three doctors in the city. If they were removed, it would be better for the people and worse for the doctors" (1904a). Many perceived the baths to be operating in opposition to one of its original intentions and detracting from the overall health of the population. Notwithstanding, the need for enclosed bathing spaces to maintain propriety and prevent open bathing in the river (a prohibited and contested practice), and the necessity of a venue to facilitate an increasing number of swimmers and competitions, kept the baths in operation.

Swimming, as both a competitive sport and recreational pastime, was an active, decidedly haptic form of engagement with the river that was garnering increasing interest and participation at the turn of the century. West Australian enthusiasts promoted swimming as an activity that was "manly and delightful" (1905f), and a form of exercise "which improves the health, physique, and cleanliness of the community and the individual" (1905f). The physical lifesaving skills frequently learned alongside swimming, and the associated moral mindset, were cited as reasons that the sport could "act as a legitimate counter attraction to gambling on horses and other demoralising habits" (1905f).

Swimming as a hobby and a sport was legitimized in part by association with an appropriate venue (as opposed to taking place in the often restricted or contested river), and increasing participation resulted in demands for larger, cleaner facilities. The swimming clubs put forward a petition calling for "the removal of the baths from the present mud-hole to a spot where immersion is calculated to produce cleanliness and not increased dirtiness" (1905j). The petition demanded new facilities "at the nearest spot at which clear and deep water can be found or formed, with a clean and sloping bottom" (1905f). The strongly haptic nature of swimming meant that the bodily condition of being clean, and encounters with clean water, surfaces and materials, was a central concern for the swimming clubs.

The increasing popularity of swimming resulted in more people actively encountering the river, and a partial refashioning of the manner in which they engaged with it. Local swimming clubs (part of a hierarchy of regional and national clubs) organized regular competitive carnivals and exhibitions during hot summer months which featured contests, music, water plays, and displays which exhibited and inspired the evolution of new swimming, diving and lifesaving techniques. Displays aimed to be both entertaining and informative, and 1899 exhibition at the City Baths by Captain Gore's professional swimming and diving troupe included:

"ornamental swimming, imitations of the whale and porpoise, swimming with the hands and feet tied. The best methods of rescuing the drowning, the Monte Cristo feat, a long dive, and a laughable water sketch entitled 'Angling; or, a bite at last.' The final item is a sensational high dive" (1899).

Displays exhibited aquatic practices that were diverse and evolving, exploring new relationships between the body and water. Ornamental swimming had links to forms of dance, with the physical challenge of simulating the fluidity and tempo of dance against the resistance and buoyancy of water. Techniques such as 'Swimming Like a Porpoise' drew on nature to formulate new ways of moving through water, and actively engaged participant's bodies with the characteristics of the water and the immediate environment. New diving techniques allowing participants to experiment with height, distance and the moment of aerial suspense before the sudden plunge into the water. Diving would have provided vivid contrasts; the weightlessness and relative lack of haptic sensations in air, followed by the powerful moment of impact and immersion. Escape acts such as 'the Monte Cristo' feat aimed to provide spectators with excitement and suspense, playing on the 'risk' associated with water. In opposition to such risky feats, lifesaving displays demonstrated the potential to mediate the risks and dangers of water.



Figure 3: First Lifesaving class at Barrack Street Jetty, c.1907. (Battye Library, State Library of WA [3045B/334]).

Exhibitions were both visually and haptically stimulating, with spectators able to see and imagine the haptic experiences of participants, and participants physically interacting with the water whilst both watching and being watched by the crowd. The novelty of the physical feats being exhibited as dramatic spectacle placed a visual emphasis on haptic activity, and drew some spectators to engage in such aquatic activities themselves through participation in swimming, diving and lifesaving.

Swimming at the City Baths provided a participatory, kinaesthetic experience of the river, and swimmers both touched and were touched by the water. They were subject to the conditions of the

river inside the baths and conscious of its impact on their sensory experiences and physical performance:

“Though the temperature of late has been more akin to winter than to summer conditions, the swimmers did not find the water too cold for the sport, though several complained that the stream had rather too much ‘body’ in it to permit of record-breaking performances” (1905i).

Repeated visual and haptic experiences of the river generated stronger individual awareness of its daily and seasonal patterns and characteristics. Haptic experiences provided information such as temperature and current that could not be attained through visual experience alone. Swimming at the baths generated place specific environmental knowledge that could only be acquired through direct physical contact with the river.

Increasing participation in aquatic activities at the baths occurred alongside continuing complaints about odours and mud, and within a few years of opening demands for larger, cleaner facilities resulted in a proposal for the bath’s relocation to a site west of the Narrows below Kings Park (on the shoreline south-west of Mt. Eliza in Figure 1). There was concern about the visual and auditory experiences of park visitors, and the Kings Park Board “desired that there should be no chance of persons on the high grounds of the Park, the terraces, for example, looking into the baths” (1905d). They insisted that the baths be located “out of ear shot of the frequented parts of the Park. For some reason or other when boys and youths were in the swimming baths not alone shouts, but bad language as well, were heard” (1905d). The objections addressed the already inflammatory issues of the bodily and linguistic propriety of public bathing and bathhouses. The President of the Western Australian Amateur Swimming Association responded that “one of the rules of the Association most stringently enforced is that relating to the use of obscene language, and that it is the exception to at any time hear bad language in any of our public swimming baths” (Mitchell, 1905). The swimming clubs tried to promote their sport as physically and morally principled, while others viewed the physical and moral activities at the baths as questionable, and placed concerns about sensory experiences of those external to the baths over the sensory experiences of those using the baths.

The potential visual and auditory objections of park users caused the proposed site to be shifted further west towards the local breweries, a site which was objectionable to swimmers from a haptic and olfactory perspective: “bad enough in all conscience to have to swim in practically mud, without having the refuse from two breweries as well” (1905e). The focus on physical and olfactory experiences of mud and brewery wastes (rather than views, built form or distance from the city) suggests that the haptic sensations were central to the pleasurable aspects of swimming. For patrons of the baths there was a prevailing concern to insure that the new baths did not provide the same negative sensory experiences as the City Baths, and that haptic, olfactory and health concerns were preferenced over visual appeal and convenience, the issues that had determined the site of the original City Baths.

In February 1914, after delays due to bureaucracy, finance and disputes over location the long awaited Crawley Baths opened along the shoreline west of the city. The new baths were less conveniently located (nearly 2 km from city), but were favourably received for the haptic and visual experiences they provided: “the site of the baths is an exceptionally good one, the water being

beautifully clean, and the sand bottom hard and white. The situation is picturesque, and the handsome buildings are an improvement to the foreshore" (1914). The perception of 'clean' water may have come through a combination of visual, olfactory and haptic experiences; the absence of commentary on odour in descriptions of the new baths may indicate that the odours present were inoffensive or expected. The specific mention of the material and texture of the riverbed indicates that haptic aspects of the new baths received significant scrutiny.

A marked difference between the City Baths and the Crawley Baths was the use of social behaviours rather than physical and visual barriers to demarcate men's and women's bathing areas: "for the present it is not intended to divide the swimming enclosure into hard and fast division for the different sexes - men will be expected to keep to the left of the central block, except round the extreme outside near the back fence" (1914). Along with increased physical participation in swimming and bathing came a loosening of social codes, allowing for more extensive visual encounters with other bathers, but maintaining physical gender separation.

The opening of the Crawley baths initiated a decline in the patronage and upkeep of the City Baths, which closed a number of years later when aesthetic appreciation for the building had dwindled and it was regarded as an "eyesore to be removed" (1918). Following the removal of the baths there were limited opportunities to haptically encounter the river on the immediate foreshore, which became a place of primarily visual and terrestrial sensory experiences.

The Perth Water Chute

At the turn of the 20th Century mechanical amusements including merry-go-rounds, swinging boats and water chutes were gaining considerable popularity as part of amusement parks, first in America and then globally. Amusement parks, such as Luna Park, Steeplechase and Dreamland on Coney Island, arose through developments in technology, transport and cultural changes. Studies of the sensorial experiences of amusement parks are particularly relevant to this discussion as water chutes were central features of most amusement parks. Referring to Coney Island at the turn of the century, Sally states that "the Island had become a beacon of technological innovation that reconfigured the consumption of leisure as participatory and kinaesthetic. Spectacle became not solely a visual experience but a corporeal one, an experience that catapulted pleasure seekers out of their everyday experiences into unexpected and fantastic circumstances" (2006:300). This transformation of leisure from visual to haptic experience occurred on a grand scale in places such as Coney Island, but it also occurred gradually on a smaller scale in innumerable other locations globally. In the case of the Perth Water Chute, 'shooting the chutes' created strong sensory and bodily experiences of the river and the foreshore.

Water chutes were one of the first forms of mechanical amusement to arrive in Australia and the first chute opened in Manly in 1903. Others quickly followed, constructed on rivers, lakes and man-made lagoons in St. Kilda, Bendigo, Brisbane, Perth and elsewhere. Modern mechanical innovations were combined with natural and man-made aquatic features to provide novel and highly experimental entertainment based around haptic experiences of aquatic environments. The Perth Water Chute, like the City Baths, focused strongly on the haptic component of the experience, however, unlike the baths, modern technology was used to highlight and intensify the novel, pleasurable, thrilling and potentially risky experience of 'shooting the chutes'.



A NEW PERTH DIVERSION—POINT LEWIS WATER CHUTE.

Figure 4: The Point Lewis Water Chute. *Western Mail*, 4 Feb, p.26 (1905h).

In early 1905 the Perth Water Chute was erected at Point Lewis, modelled on the highly successful Bendigo chute (1905g). Stairs leading up a 3-story (11mt) Jarrah tower brought participants to the start of the chute, which consisted of two sets of slide rails angled down at 26 degrees, with a slight upward shift at the end to increase the trajectory of the boats. Boats holding 8-12 people were launched down one set of rails and pulled to the top on the other by an electric motor. The chute was a new form entertainment for Perth, and prior to its opening the newspapers described not only the structure and how it operated, but what was enjoyable about it: “the fun, which is described as exciting and exhilarating, is derived by descending the chute in specially built boats at great speed, and dashing into the water at the foot of the incline” (1905i).

The opening ceremony and inaugural launch were staged as a spectacle containing moments of excitement and dramatic tension. Hints that it was the first time the boats had been trialled (though this seems unlikely) added an element of potential danger, exacerbated by delays and ‘extra’ safety checks.

“The word was given, the cradle tilted, and the boat slid with the velocity of an infant avalanche down the slippery rails. In a second she struck the water, flinging off a huge shower of spray on either side, and rose gracefully several feet above the surface; dropping again,

again she jumped, and flitted out into the river as neatly as a skipping pebble. A sigh and a cheer from the crowd on shore hailed the successful launch” (1905g).

The second launch, containing a group of dapper young men, overturned due to the boisterous behaviour of the occupants, providing great amusement and some consternation from the crowd. The day after its opening the sensation of the chute remained generally unfamiliar, and the West Australian wrote that “to the uninitiated it is not easy to convey an adequate idea of the feelings excited by a descent in a chute. Those who tried it at Point Lewis yesterday seemed to enjoy the whole performance fully” (1905g).

A month after opening the chute was a great success, “the novelty has ‘taken on’” and “the sensation of a ride...doubtless would not be appreciated by many: yet there are scores who enjoy the fun” (1905h). It was promoted as an “exhilarating enjoyment “ (1905a), a “great novelty to Perth in the way of amusements” (1905b), “the subject of much curious speculation” (1905b), and “something very new and very amusing in water sports” (1905g). The appeal of the chute lay in the combination of new technology and new ideas about leisure that came together to provide surprising and thrilling bodily experiences. In Perth the sensory experiences of the water chute were strongly linked to the river and the immediate surrounding environment. Unlike the Manly, Bendigo or St. Kilda water chutes, which terminated in man made pools, the Perth Water Chute released into the Swan River, providing a range of sensory experiences of the river itself.

Sensational Chutes

Unfamiliar bodily sensations were central to the appeal of the chutes, and at the opening of a new chute many Australian newspapers attempted to describe the experience of ‘shooting the chutes’: “The slide and plunge are attended by a sensation somewhat similar to that experienced on a switchback railway, but the difference is that the final plunge into the water lends exhilaration and incident to the ride” (1904d). The emphasis on the body as the locus of exhilaration and excitement was a shift from more traditional understandings of excitement as an emotion often associated with visual or auditory experiences (as a spectator), or even experiences of taste and smell. The repeated descriptions of the function of the amusement, the sensory experience it provided, and its novelty is strong testament to the innovative and unfamiliar bodily experiences created by the chutes. Sally argues that “mechanical amusements celebrated and fostered thrill seekers as sensuous beings who experienced leisure not just through their eyes, but with and through their entire bodies” (2006:294).

Many descriptions of water chutes cite speed and trajectory as the physically appealing aspects of the experience: “It is evident that the rapid and exhilarating descent possesses great attractions for the public”(1904b). The emotional experience of the chute was generated through such powerful sensory experiences: “The water-chute is one of the latest devices to minister to the needs of those who enjoy physical emotions of the kind formerly found in the giddy flight of merry-go-rounds, ‘ocean-waves,’ and swinging boats” (1905h).

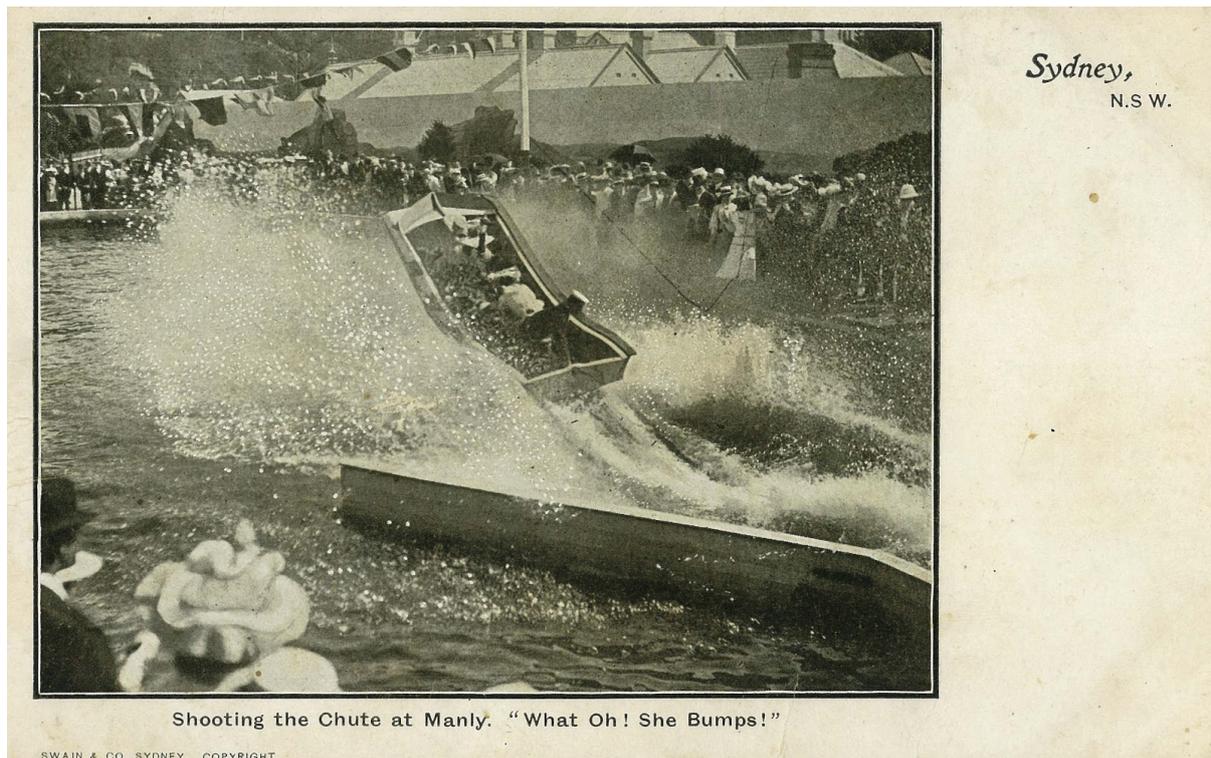


Figure 5: Shooting the Chute at Manly (Manly Library).

The boats would “rush with lightning speed” (1903a), and they would be “travelling with great velocity when they strike the water, and consequently they leap four or five feet into the air, repeating the leaps until they lose their impetus”(1903a). The boat’s decent and trajectory and the body’s movement as part of the boat’s inertial frame of reference resulted in novel experiences of proprioception and kinaesthesia, potentially enhanced by momentary sensations of weightlessness. Newspapers wrote that that ‘shooting the shoots’ “affects passengers in various ways”, and for some it was “like the first symptoms of ‘mal de mer’” (1904c), but for many others it was novel and thrilling.

The visual, olfactory and auditory experiences of both spectators and participants were also crucial components of ‘shooting the chutes’. Water chutes were a site of spectacle, which was consumed physically by participants, and visually by spectators. The amusement parks of Coney Island during the same time period were “an invitation to spectators to become corporeally engaged in the manufacture and consumption of spectacle, spectacle that was not solely visual but that appealed to all of the senses” (Sally, 2006:299). For spectators, the sight of the boats descending, shouts and screams of the riders, and smells of the river were the central features of the experience. For the riders, the sounds of the crowd and the machinery, the visual experience of the descent and the smells of the river as the boat splashed down augmented the powerful and thrilling bodily sensations they were experiencing. For the owners of the chute, the sensory spectacle of the chutes and accounts of the riders were the primary means of promoting and capitalizing on the experience, encouraging spectators to imagine the bodily sensation and then choose to experience it

themselves. Both spectators and riders experienced the sights, sounds and smells of the chute, but the haptic experience, central to the chutes, was only available to riders.

Thrills and Risks

The bodily sensations of speed and trajectory, the potential for disaster, and the lack of personal control over the situation generated ‘thrills’ or a domesticated sense of terror, and technology played a central role in the provision of such experiences. Sally observes that “the kinaesthetic thrill of mechanical amusements was bound up in their recreation of dangerous situations” (2006:301). Rabinovitz argues that mechanical rides “reversed the usual relations between the body and machinery in which the person controls and masters the machine: the person surrendered to the machine which, in turn, liberated the body in some fashion from its normal limitations of placement and movement in daily life” (Rabinovitz, 2001:89). Highly publicized accidents at the chutes also highlighted the element of real corporeal risk associated with such entertainments and the links between risk, technology, novelty, sensory pleasure and emotional thrill. Accidents and even deaths were ultimately blamed on human ignorance, miscalculation, or poor decision-making rather than technological malfunction.

Less than a fortnight after the opening of Australia’s first water chute in Manly an accident on Christmas Eve 1903 claimed the life of an employee struck by a descending boat as he attempted to untangle a fouled chain. The accident received extensive coverage in national papers, which also published the coroner’s inquest into the incident, containing vivid and detailed description of the sequence of events: “the boat struck him on the right upper arm and he fell, and the boat struck him again. His head came in contact with the edge of the breakwater at the bottom of the track, and as he fell into the water the boat went over him” (1903c). The article also provided a comprehensive description of the deadly injuries incurred: “an injury to the brain, fractures of a number of ribs on the right side, fracture of the right upper arm, and contusions about the body” (1903c). Graphic descriptions of accidents in newspapers enhanced and promoted the aura of danger surrounding the chutes.

The potential for disaster added an emotional layer to the bodily thrill associated with the ride itself. Periodically boats capsized, and the primary cause was cited to be movements of the passengers that disturbed the balance of the vessel, rather than technological or design failure. After a capsizing in the early days of the Perth chute modifications were made and *The Daily News* declared that “the chute is now in good working order, and that the improvements recently effected make the boats safe, so far as everything but the conduct of the passengers is concerned” (1905b).

Technological failure was another risk associated with the chutes. In Perth a winch hauling the boats broke and “large pieces of metal shot in all directions” and the young man operating the machinery “suffered several injuries of a more or less serious nature, and others had lucky escapes” (1905c). The blame was placed firmly on the young operator, who was unaccustomed to the technology and “the accident was caused by his ignorance” (1905c). The technology of water chute’s was considered to operate by “means of ingenious mechanism” (1903a), and it was not necessarily familiar or safe, but accidents and malfunctions were placed firmly in the realm of human error. This served to reinforce for the public the supposed safety of the technology, and mask the economic imperatives of the chutes.

Sensationalized accidents in newspapers, countered by assurances from proprietors that human error was to blame, facilitated perceptions of the chutes as a risk whose benefits, in the form of novel and pleasurable bodily sensation, were worthwhile. Rabinovitz refers to the role of imagination, and states that the “fantasy of seeing technology go out of control” (Rabinovitz, 2001:90) was a significant part of the experience. Imagining disaster was linked to the surrender of the body to the control of mechanical technology (Sally, 2006:301). Media coverage of accidents and visual observation of the expressions and sounds of participants may have created an exaggerated or imagined sense of risk that was significantly larger than the actual chance of bodily harm, but added to the overall thrill of the experience.

There were also concerns relating to behavioural propriety, as “rapid-motion mechanical rides had explicitly sexual overtones: couples (or complete strangers!) were thrown together from the movement of the rides” (Sally, 2006:301). Shortly after the Perth chute opened a gossip column wrote: “the water chute is the most thrilling invention that has yet struck Perth. That the girls hang grimly on to the nearest man when the boats strike water. That seasoned shootists agree that this is the most satisfying thrill of the show” (1905k). Sally notes that at the turn of the century such active, public physical encounters between men and women were a profound shift away from traditional Victorian understandings of public bodily propriety. They were also evidence of the way technology and mechanized entertainment were beginning re-shape social expectations relating to behavioural propriety (Sally, 2006:301).

Conclusion

Recreational pleasure in Perth took on new forms at the turn of the century, gradually through the transformation and expansion of swimming practices at the baths, and more powerfully in the encompassing bodily experiences of the water chute. These two features of the foreshore are distinctive as they are both activities that were primarily valued and actively sought as entertainments inducing pleasurable and exciting haptic experiences. The quest for pleasure and thrills, whether through bodily immersion or the corporeal rush of the chute, was often satisfied through novel experiences that in some instances also incorporated elements of risk and fear. Mechanical amusements like the water chute used new technology to allow participants to experience thrills and terror in a domesticated form. Sally suggests that “the consumption of mass culture was bound up in corporeal experience that radically transformed pleasure seekers’ relationship to their bodies and to the bodies of others in the public sphere” (2006:296). While such swimming techniques and bodily thrills may seem pedestrian a century on, and it is impossible to understand fully an early 20th century thrill-seekers experience, accounts from the time suggest that such sensory experiences partially transformed peoples experiences of the environment and their own bodies.

Today the foreshore remains a place of primarily visual rather than active physical experiences of the river, though this is changing as the Elizabeth Quay waterfront development proceeds. It remains to be seen what sensory experiences the new development will offer, and what kinds of environmental and bodily knowledge those sensory encounters provide. Detailed sensory histories of specific time periods such as the turn of the 20th century can reveal the sensory norms at work in particular social milieu at a specific point in time. Such histories can then be compared with further studies of the same location at different points in time to reveal broader shifts in sensory experiences and

expectations and changing understandings of place. In such directions lies the future of this research and these case studies are a portion of a larger body of research that seeks to 'make sense' of the Perth foreshore, and more broadly Australian urban waterfronts, as sites of varied and evolving sensory experience.

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Cranks, Caves and Campfires

Ellis Stones' utopian vision for a suburban landscape architecture

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The profession of landscape architecture in Australia started to take shape from 1966 under the Australian Institute of Landscape Architects (AILA). Its emergence during a period of heightened environmental concern saw a range of disciplines unite with a mood of euphoria that was coupled with utopian visions. The profession's battle for territory invariably hinged on the mantra that decades of landscape abuse post-World War II could be reversed. Appreciation for the visual qualities of the Australian indigenous landscape was a major theme and underpinned practically every mode of practice including; landscape reclamation, site planning and design, landscape assessment, landscape planning and urban design. Experimentation with indigenous plants was common, as were attempts to create facsimiles of the Australian landscape. Today, many of these early attempts are symptomatic of a design approach that essentially experimented with a domestic 'bush garden' design language 'gone public'.

One of the more outspoken founders of the AILA was Ellis Stones and this paper will analyse his contribution to landscape architecture via two sources; first, the ideas and attitudes as expressed in his writing on landscape and conservation, and second, his design ideas as identified in a small selection of his work dating from the early 1970s. The discussion will focus on the broader tensions that exist between idealism, the pragmatics of designing landscapes inspired by the experience of the Australian bush, and the contemporary situation including conservation, management and the historiography of landscape architecture.

Keywords: Landscape architecture profession, Ellis Stones, conservation, Australian bush gardens.

Introduction

The emergence of landscape architecture in Australia in the post-World War II years is often gauged by way of its institutionalisation under the Australian Institute of Landscape Architects (AILA). In August 1966 a group of individuals, some of whom were outspoken in opposition to environmentally destructive development activities that occurred during Australia's development boom of the 1950s and 1960s, mobilised to form an organisation that would represent, and give power to, a profession they believed would be able to compete with those professions that had held sway. Sociologist Andrew Abbott in *The System of Professions* (1988) explained that professions operate in a system, each attempting to claim territory from another and using a variety of techniques ranging from the objective to the subjective in order to achieve control (pp35-40). He explains that objective techniques are more easily established and include such things as new technologies or new organisations (like local or state government departments) that, once introduced, provide the need for individuals in a particular professional field. Public authorities afforded power to landscape architects decades prior to institutionalisation, with practitioners such as Hugh Linaker (1872-1938) in Australia and Fred Tschopp (1905-1980) in New Zealand, both taking up design and management roles in local and state government in the first half of the twentieth century. In the 1960s, unprecedented public organisations such as the National Capital Development Commission (NCDC) in the Australian Capital Territory, which was formed in 1958, played a key role in delivering landscape architects standing among other built environment professions.

Subjective techniques, Abbott (1988) explains, include three important processes; to classify, to reason (or infer), and to take action on the problems that society deems important (p40). In the case of landscape architecture in Australia, it is these subjective means, including the use of highly abstract and emotive ideas, which were pivotal in arguing the profession's territorial control. A significant factor in defining the profession was the expression of somewhat utopian visions. These filtered through debates about what landscape architecture was, and why the profession had some relevance amidst its competitors that in the main included horticulture (and landscape management), planning and architecture. The aim of this paper is to analyse and discuss the literary and design contribution of Ellis Stones to determine tangible evidence of activism and utopianism in his writing and in the landscapes he designed.

Priority: Landscaping

Ellis (Rocky) Stones (1895-1975) was a doyen of the profession in Australia, with a career that was influenced by an unconventional mix of experiences. He had grown up in the Melbourne suburb of Essendon and spent much time exploring semi-rural lands just beyond the northern edge of metropolitan Melbourne where the landscape consisted of basalt field stones strewn amidst open eucalypt forests and pasture. Land and country, its materials and processes, thus marked him indelibly and gave rise to his unshakable design ethos and conviction that the Australian landscape was at once the nation's most precious resource and also its' most squandered opportunity. So crucial was his personal experience of two world wars that in his assessment of conservation in Australia he referred to war metaphorically, stating: "...we are engaged in a World War on Pollution, which may prove more serious than any previous wars (Stones c1970, p11)." His assessment of the contemporary suburban condition included lifestyles that were; "...an erosion of community living, with families going their own way and pursuing their own interests, out in their cars at the

weekends, making their friends other than in their own street” (Stones 1976, pp13-14). For Stones, Australian suburbia, in the state that it was in, represented a form of vandalism, the one antidote for which he believed to be the somewhat utopian aim of reconnecting people to natural landscapes, or, the ‘bush’, within their neighbourhoods in the city. A complicit objective was the related project of campaigning for the conservation of semi-natural areas within metropolitan Melbourne.

Stones’ life and work as documented by Anne Latreille (1990) is characterised by an unerring will to engage in conservation battles particularly in the face of the status quo of architecture and engineering of that time. The post-World War II years saw a period of rapid and expansive development in Australia. Stones viewed the introduction of the bulldozer as “man’s new weapon of destruction” (Stones c1970, p5). Stones brought up his family in the suburb of Ivanhoe, a short distance from the centre of Melbourne and close by that city’s main tributary, the Yarra River. It was the fight for the Yarra’s protection against the engineers and planners who believed that concrete barreling was the best form of flood mitigation that played a crucial role in Stones’ career trajectory. In 1959, the Save the Yarra League, of which Stones was a key member, produced a plan (via Stones’ office) titled ‘Paradise Lost’ showing the areas of land once rural but that were being lost to residential or other development (Latreille 1990, p118). In the shadow of the dominant government bureaucracies of the time, the title of this plan is a clear suggestion of the sense of idealism that prevailed in the League’s propositions. Within a couple of decades large portions of the Yarra Valley were indeed preserved within a system of metropolitan parks extending to the outer suburbs of Melbourne, however, the initial setbacks the League experienced were reputedly deflating for Stones.

To Stones, and others he inspired, the most important way forward in conservation was to develop a degree of professional clout that could stand in opposition to those who held power, largely the engineers and planners and others entrenched in bureaucracies (Saniga 2012, p179). The most direct evidence of his bid to achieve this is to be found within a thirty-one page unpublished manuscript written by Stones titled ‘Priority: Landscaping’ (c1970) which both Latreille (1990) and Saniga (2012) briefly explore and that will be further described and analysed here. The manuscript is structured under the sub-headings of ‘My Country’, ‘Air and Water’, and ‘Trees’ and it is laden with an array of personal anecdotes that stem from a self-professed ‘crank’ (Stones c1970, p3). The term ‘crank’, was one which Stones often referred to because it at once suggested those who criticised his standpoint as being eccentric, oddball and nonconformist whilst at the same time communicating his own act of rebellion. At its core, ‘Priority: Landscaping’ heralded Australian identity. It commenced with the claim for Australia’s distinctive landscape and the uninspiring way in which planning and design up until that point in history in Stones’ mind had not responded to the Australian landscape. For Stones, landscape was the great desideratum, a missed opportunity for the city to the extent that “...a city without a landscape is dead” (Stones c1970, p2). A careful reading of this manuscript provides evidence of the utopian dimensions that underpinned his plea for conservation and how these utopian visions were reflective of the social and political condition of 1960s Australia in the years when the conservation movement was undergoing a radical transformation in relation to the key professions of the time (Robin 1998, p146; Hutton and Connors 1999, p108). The historical significance of Stones’ utopianism was that it helped form an important part of the motivation to establish a profession of landscape architecture.



Figure 1: Playground designed in Wilson Reserve on the Yarra River close by the residence of Ellis Stones (undated). Source: photographer Ellis Stones, image courtesy Liz Anderson (nee Stones) and Steve Junghenn.

In 'Priority: Landscaping' Stones wrote: "It is amazing how many people will be silenced by that magic word 'expert' when common sense suggests that the expert is wrong." (Stones c1970, p10). He stated that in order to achieve landscape preservation, the condition required would need "...one authority responsible for our environment [that] has the power to pursue a ruthless policy of controlling our landscape. That is why I stress Priority Landscape. [edited hand-written note] The Landscape Authority must have power to act against official vandalism." (Stones c1970, p4). Here Stones is decrying a lack of representation of landscape values and inferring corruption of power (vandals) and a parallel attack on the conservationist by way of the pejorative, 'crank'. Although he does not cite exactly the names of his critics at that time, one gets a sense from reading his accounts that his critics were pervasive and that perhaps they were the public servants or consultants responsible for civic infrastructure, its engineering and planning. In a later publication he wrote: "The people who fight the more philistine decisions of their local councils and who speak up in the effort to preserve or improve the environment are not all cranks, by any means." (Stones 1976, p16). The action to be taken was to challenge those in power, and importantly for landscape architecture, Stones believed that a new form of expert was needed who could infiltrate public decision-making bodies and influence the outcomes of decisions that impacted on landscape values.

The notion of seeding an individual or a profession within public bureaucracies was not necessarily new for the time. Architect and landscape architect John Oldham in Western Australia was from the late 1950s operating in the Public Works Department (WA) whilst at the same time being engaged in conservation groups in that state. In some senses this was a somewhat contradictory position because the PWD WA was involved in some of the largest infrastructure projects of the time and the corresponding destruction of landscape that this entailed was significant. Contemporaries who were also highly influential included Bruce Mackenzie (NSW), Marion Blackwell (WA), Allan Correy (SA and NSW) to name a few. All these practitioners found justifications for a role for landscape architecture in association with infrastructure whilst juggling the often competing interests of conservation and development. But less frequently were such practitioners involved in activism per se, because activism often operates outside formal structures of professions and institutions, instead favoring the anti-establishment and subversive activities. It was Stones' activist role that cast him in the realm of utopia and his vision was that the profession of landscape architecture could be inclusive of activism when required. This would be optimistic in any situation, but it was particularly so given that landscape architecture was in its nascent years and invariably practitioners had to compromise if commissions were to be scored and if territory was to be won.

Stones and landscapes for housing in Australia

Activism aside, Ellis Stones also expressed his utopian ideas within the designed landscapes he advocated and had built. The landscapes he designed were underpinned by attempts to evoke a particular image of the Australian natural environment within an urban context. He stated that as a result of being injured during World War I and thus not being able to venture into natural environments as readily as he would have liked, it was necessary to try and bring nature into the city so that he could fulfill such contact (Stones c1970, p4). Ellis Stones attempted to express the sensorial qualities of the Australian bush via the materiality of such places. For example, in his designs he directed contractors to bury underground a considerable portion of natural stone boulders so as to aid the perception that the boulder had always been situated in that location. Of his abilities to craft in stone famed garden designer Edna Walling (1895-1973) in 1938 was moved to write: "It is a rare thing, this gift for placing stones, and strange that a man possessing it should bear the name Stones – it should be easy to memorise" (Walling 2000, p76).

Stones was emphatic about appropriateness of design and the sometimes 'understated' character of his work as exemplified in his writing in his book *Australian Garden Design* (Stones 1971). The design documentation for many of his landscape projects was not always extensively completed, instead favoring the personal direction of works on site. However, due to a short partnership with architect and landscape architect Ronald Rayment that lasted about 18 months around 1970-71, there exists a small collection of landscape projects, the plans for which contain relatively extensive documentation. Drawn by landscape architects employed within the office of Stones and Rayment Landscape Architects such as Nell Rickard, these plans are worthy of examination for determining evidence of the firm's utopian thinking.

Some of the most important work by Ellis Stones came in association with the expansion of the project housing market in the 1960s. Project housing, as a concept, had emerged earlier in the 1950s with established architecture firms such as Grounds, Romberg & Boyd's work for Contemporary Homes Pty Ltd but as the boom years rolled into the 1960s firms like A V Jennings and Lend Lease

Homes saw a more rapid expansion (O'Callaghan and Pickett 2012, p72&85). As competition in project housing intensified firms like Pettit and Sevitt in New South Wales entered the market and sensitivity to 'landscape' formed a part of the sales pitch. They used landscape architect Bruce Mackenzie to ensure the protection of existing vegetation and the sympathetic introduction of new plant materials. In Victoria, it was the project-house builders Merchant Builders who took a lead role in the alternative housing market and they proved to be a crucial influence on Ellis Stones as he became their landscape architect. Their cluster housing schemes, Winter Park (1970-1974), Elliston (from 1970) and Vermont Park (from 1977 with TRACT Consultants) revolutionised planning and design in the housing industry in the state of Victoria (Latreille 1990, p213-221; Saniga 2012, pp109-114 & pp243-246; O'Callaghan and Pickett 2012, pp130-145) and it was the corresponding landscape ethos of Ellis Stones that helped give shape and form to a new ideology.

In 1976, a book co-authored by John Paterson, David Yencken and Graeme Gunn titled *A Mansion, or no house* (1976) made a significant contribution to discussion and debate about the state of the art in residential subdivision. Yencken and Gunn were associated by way of Merchant Builders – Yencken was co-owner of the firm with John Ridge, and Gunn was one of the company's most important architects. It is in the discussion of open space that we see a serious attempt to think through the impact of planning regulations on the quantity and quality in the provision of open space particularly in regard to cluster subdivisions; ideas for multi-use, community spaces, new models for walkways, landscape buffers and play spaces (Paterson, Yencken and Gunn 1976, pp69-79). Ultimately, it is the propositions that this book provides that indicate how seamlessly the stand point of Ellis Stones was in responding to this new approach to suburban housing. A key argument put forward was that it was not the quantity of open space, but the quality that was important, hence the concerted attempts by Merchant Builders to have their open spaces carefully and thoughtfully designed (by Stones). The basis of the new approach was that the provision of open space should be "viewed more broadly and flexibly" (Paterson, Yencken and Gunn 1976, p74). In parks and new subdivision and their related open spaces, landscape was to become the unifying element heralding a new appreciation for its importance (Stones 1971, p192). Stones emphasised the usefulness of trees and how in working around existing trees in residential subdivisions a minimal amount of expenditure was thus required to landscape the development (Stones 1971, p147).

Ellis Stones was community-spirited and his designs were often low key and contained a sense of honesty and appreciation for usefulness and design simplicity. The incorporation of a 'ride' at the back of the first houses at Elliston saw the creation of a narrow linear open space at the rear boundary of groups of approximately ten houses, effectively eliminating rear property boundary fences in the process. The ride provided pedestrian access to a larger open space connected to an adjacent creek, but it also provided the opportunity to engender a sense of community in the subdivision. The ride is long since gone, but an existing plan of the ride by 'Stones and Rayment, Landscape Architects' for client Merchant Builders Pty Ltd bears essential information on its detailing which is correspondingly substantiated in photographic evidence (plan Stones and Rayment 19.10.1970; see photograph Latreille 1990, p201). It consisted of a garden easement of variable width ranging from approximately 3 to 10 metres. The ride was largely defined by a narrow course of pebbles under a metre in width and these pebbles were intended to imitate a dry creek bed. Across the 'Pebbled Dry Creek Bed' were three slabs of timber at various positions which appear to have

been intended as mock river crossing points. Most of the surface treatment was proposed as wood chip or tan bark, with two patches of lawn in total occupying only a quarter of the site. A barbeque and seating area at the lowest point, adjacent the point at which the ride spilled out onto the larger adjacent park, functioned as a place for informal congregation and picnicking. Throughout the ride provision was made for childrens' play in an informal manner; timber climbing piles, log stiles, a see saw, and a grassed mound, all low-key interventions but nonetheless firmly communal in their intended effect.



Figure 2: The Ride, Elliston, no date, source: Latreille 1990, p201. courtesy David Yencken.

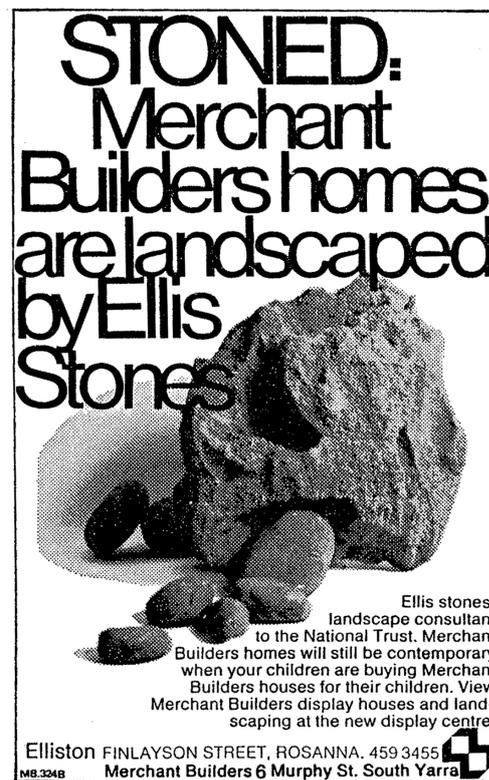


Figure 3: Merchant Builders advertisement, source: Latreille 1990, p201, courtesy David Yencken.

Stones believed that children should play in spaces that were disorganised and thus able to be shaped by people. Failure to provide such flexible, informal and open-ended play opportunities he believed would deprive youth of an essential need and ultimately produce the next generation of the city's vandals (Ford 1999 interview). His proposals for high rise housing commission flats in Melbourne challenged the State Housing Commission of Victoria when he proposed the 'cave', a space that was a communal pseudo-shed, enabling young people the space to build or fix bikes (Dexter in Latreille 1990, p198). His 'bush playgrounds' around Melbourne, especially Wilson Reserve, Ivanhoe (1968), were progressive in the context of the 1960s and 1970s preference for steel swings and steel slides for it included timber climbing structures and extensive timber climbing stumps throughout (Stones [no date] "Proposed Landscaping For Wilson Reserve 'Detail of Children's (sic) Playground'"). By way of family circumstances Stones found himself designing and building playgrounds within the grounds of the Waihopai School, Invercargill, in 1969, along with a small ornamental pool and other playgrounds such as the Gladstone Scout Den also 1969 (Latreille 1990,

pp195-196). Within the space of two decades his approach to designing play areas that were aimed at a closer union of people and Australian landscape, of malleable and flexible play spaces, and importantly, of empowering the public to use public space in a manner that was somewhat utopian for the time, became state of the art in landscape management (Jeavons and Hitchmough 1994, p525) and a model to which others, such as Sydney landscape architect Bruce Mackenzie, aspired (Mackenzie 2011, pp39-53; Mackenzie 2012 pers com). Ultimately, the expanding landscape architecture profession of the 1970s was championed by the likes of Mackenzie who argued for 'alternative parkland' (Mackenzie 1979, pp19-27) as recompense for over a century of landscape design that had been European inspired.

Beyond these ideas for public and semi-public open space, Stones attempted to design many private gardens (and particularly those within Merchant Builder projects) with similar intent of tactility, immersion, and contact with natural elements. The initial set of houses at Elliston were designed by various architects including Graeme Gunn, Charles Duncan, Jackson and Walker and McGlashan and Everist and of the 250 houses planned for the subdivision an initial 70 were constructed. The landscape design for many of these houses was completed by Stones and Rayment, Landscape Architects and a small number of plans provide evidence of the design approach (plan Stones and Rayment 26.08.1970). The planting palette consisted almost entirely of Australian native plant species often placed within generous garden beds but also providing for eucalypts and pittosporum set within lawn. In courtyard spaces there was the occasional use of non-Australian plants such as pear species and these provided deciduous plants close to the house presumably to admit winter sunlight to internal spaces while also providing contrast. Paving was a mix of consolidated aggregate and concrete or brick pavers. Timber steps and retaining walls were often hinged to outcrops of field stone. Importantly, there was provision for timber seats constructed of railway sleepers and arranged around courtyards or alongside paths extending into the garden. The relatively simple device of providing a seat was perhaps a self-conscious device imploring the future residents to take time to sit in and to enjoy the garden.

Commercial and institutional work

In the early 1970s the Stones and Rayment partnership resulted in commissions at commercial and institutional levels. The fact that Stones had become associated with Rayment was a significant factor in Stones' career, allowing him to expand into more complex designs involving drainage, level changes, and constructed and engineered elements in general. Prior to this association, Ellis Stones had predominantly directed contractors on site and had figured-out construction detailing as work progressed. In addition to Elliston, Stones and Rayment, were landscape architects for significantly larger commissions such as the Zoological Gardens, Melbourne including the Refreshments Area (November 1971), Gibbon Island (January 1972), and the Kangaroo and Wallaby Enclosure (April 1973). They also completed various private and semi-private housing and commercial projects including a private hospital in Camberwell (1970) and a new warehouse and office laboratory in Preston (1970). Three projects, of varying type and scale, warrant particular attention for the tangible evidence of Stones' ideas and methods for attempting to bring people in direct contact with natural materials.

In June 1970 Stones and Rayment Landscape Architects prepared plans for a roof-top garden at 81 Collins Street Melbourne for a 'B Adler'. It is not clear the extent to which this project was

constructed as it does not exist in 2013 but the design as drawn (plan Stones and Rayment 02.06.1970) consisted of large stone boulders (volcanic or quartz field stone was the office's preferred choice) rising to approximately a metre in height above the floor level of the roof. Masonry walls retained soil in places and the plants included *Juniperus sabina*, and bamboo among ground cover plants. The intended effect is not unlike that of a garden constructed firmly on ground level, yet as a garden proposed atop the roof of a 6-story brick building, one ponders the fate of such a scheme had it indeed been built given issues of loading and drainage. Setting practicalities aside, the design as a hypothetical case in point demonstrates a kind of belligerent approach to naturalism which in a sense reflects what Goad coined as 'artless naturalism' (Goad 2002, p239) denoting practitioners from this era who went to great lengths to attempt designs that were facsimiles of nature in pursuit of the ideal of putting people 'back in touch' with nature.



Figure 4: Ellis Stones on site photographing the constructed garden that attempted to bury the South Lawn underground car park at the University of Melbourne, circa 1972. Source: image courtesy Liz Anderson (nee Stones) and Steve Junghenn, photographer unknown.

At the South Lawn landscape at the University of Melbourne, which is documented extensively in *Making Landscape Architecture in Australia* (2012, pp262-267) Stones designed an even larger scaled version of the proposed landscape for 81 Collins Street. It was constructed in 1972-73 in an attempt to conceal a 3 metre concrete wall of an underground car park. An image of Stones photographing this project is not only telling in terms of the scale and quality of the design, but an important

photographic record of him in contact with his own creative output (Saniga 2012, p265). The design incorporates massive quartz boulders, bedded into the earth and interlaced with Australian native plants. Timber slab seating was perched on the sloped surface with aromatic plants alongside, an approach Stones roundly promoted in both public and private gardens alike (Stones 1976, pp67-73). The rawness in Stones' approach in effectively burying a massive concrete structure in soil, rock and plants suggests an aesthetic approach that was unerringly combative in response to the onset of infrastructure and what is often a corresponding net loss of natural environments.



Figure 5: The site of the 'Campfire circle clearing' near Croydon Municipal Offices, Croydon. Source: photographer Andrew Saniga, 2013.

In April 1970, Stones and Rayment, Landscape Architects were commissioned to prepare a master plan and landscape design for the Croydon Town Park at the Shire of Croydon Municipal Offices in the outer eastern suburbs of Melbourne. The design includes extensive planting, paths, car park, seating and lawn, but they also designed a 'Campfire Circle Clearing' (Stones and Rayment 20.04.1970) in the southern-most part of the scheme adjacent to the boundary of an industrial estate. This location was perhaps the furthest from the official municipal buildings and was on the periphery of the parklands and adjacent a football oval. As drawn in plan, the campfire site was a

circular area of approximately 15 metres in diameter and was tucked into a sizeable earth mound thus forming a kind of nature-inspired amphitheater along the northern side of the space. Adjacent the site of the campfire area and directly opposite the amphitheater was a 'Wilderness Nature Area' consisting of a mown clearing surrounded by clumps of Australian native plant material and pedestrian paths still in existence today. A likely scenario might have included adults and children, perhaps even footballers, sitting around a fire and being surrounded by native plantings and a bush-like setting.

Inspection of the site today reveals the campfire may never have eventuated. Regardless, the design as drawn demonstrates Rayment and Stones Landscape Architects' community-inspired landscape architecture in the civic context. Stones' belief that youth needed to be able to have access to public spaces and landscapes in a manner that the individual could interact with nature was beyond more traditional forms of passive recreation. It was reflective of an attempt to design particular kinds of social spaces in typical suburban settings. This kind of space was one based on another time and place, linked to Stones' own experiences of war, camaraderie, camping and direct experience with the Australian rural. In the suburban context of Croydon, the notion of sitting around an open fire is indicative of aspirations for a space within which people can share ideas and develop bonds. This is suggestive of a raw expression of the utopian ideals that underpinned Stones' aspirations to alter the trajectories common to civic life at that time.

Conclusion

Ellis Stones died in 1975 having inspired a generation of landscape architects and helped forge a profession upon grounds which included highly experimental and ideologically driven design philosophies. Landscapes designed as Australian 'bush gardens' have not always stood up well from the point of view of change over time largely due to the lack of rigorous management regimes in the public realm. However, the groundswell in environmental design thinking that can be linked to the founding of a profession of landscape architecture has precipitated a fundamental acceptance that the designed landscape has a key role to play in planning and designing environment for Australian suburbia. For example, the contemporary 'master-planned estate' is inclusive of the 'master-planned community', an important precedent for which was the cluster subdivisions of the firm Merchant Builders. Their ideas for public open space played a key role in advancing social and community engineering. In a contemporary sense, the rawness in approach and the utopian visions for community open spaces that Stones and other key founders of the AILA brought to landscape design may seem timid or naïve in the context of contemporary design and the evolving styles associated with new subdivisions. However it is also worth considering that much of the infrastructure that underpins contemporary design is constructed from materials that have previously not been put to the test. One ponders the likelihood that a humble basalt boulder or remnant native planting, mauled and depleted as it may be over time, may actually still offer a landscape experience in the decades to come when more elaborate devices may have been replaced, removed or simply deteriorated.

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Lessons Learned or Still Learning?

A historical overview of how planning for natural hazards in New Zealand has influenced urban development

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New Zealand has a rich history of natural hazard events, including flooding, coastal erosion, tsunami, volcanic eruption, earthquakes, and landslides. In many instances, these natural hazards have determined the location of our towns and cities, including relocating our towns when the risk becomes intolerable.

Our planning history provides the opportunity to learn from past events, and ensure future planning remains sustainable by not increasing risks to people and property. Historic planning decisions have led to 'legacy' planning, where many councils are having to balance the relationship between protecting existing development that has occurred over the previous decades - and century - and managing the risks posed by natural hazards to these developments. However, have we learnt anything from our planning history in terms of where and how we develop our towns and cities? Or are we continuing to provide 'legacy planning' for the future?

Examples will be provided of historical natural hazard planning, highlighting how planning for natural hazards has determined how New Zealand's towns and cities have developed. Several historical planning decisions will be explored including:

- The 1840 European settlement of Britannia, located on the banks of the Hutt River, and the subsequent relocation to Wellington;
- The gazettement of the major active volcanoes in the North Island as national parks in 1887, which exemplifies avoidance planning;
- The Totara Park subdivision in Upper Hutt, planned in the 1960s just as plate tectonic theory was emerging, which avoids the Wellington Fault;

- The Tahunanui slump in Nelson, which was developed in the 1970s and is monitored for ground movement; and
- The lessons that are currently being learnt from Christchurch from the 2010-2011 earthquake sequence.

Using these and other modern day examples, we will explore whether we have learnt any lessons regarding how we plan our town and cities around natural hazards, or whether we are repeating previous mistakes and creating a new generation of “legacy planning”.

Keywords: Relocation, avoidance, reduction, land use planning, flood, volcanic, landslide, earthquake

Introduction

New Zealand is a geologically and meteorologically active country, with a history of natural hazard events including flooding, coastal erosion, tsunami, volcanic eruption, earthquakes, and landslides. These natural hazard events have provided many challenges for how we have designed urban areas, and in many instances, have determined the location of our communities, towns and cities - including relocating when the risk becomes intolerable.

We have an opportunity to learn from our planning history. We need to learn, to ensure future planning remains sustainable by managing the risks to people and property (Nathan, 2011). Historic planning decisions have led to poor ‘legacy’ planning, where many councils are balancing the relationship between protecting existing development that has occurred, and managing the risks posed by natural hazards to these developments. As such, two questions are posed: Have we learnt anything from our planning history in terms of where and how we develop our towns and cities? Or are we continuing to make poor planning decisions that is creating a poor legacy for future generations?

To assist in answering these questions, Section 2 provides examples of historical natural hazard planning, the locations of which are shown in Figure 1. These examples are based around the mitigation measures of avoidance, relocation, and risk reduction:

Avoidance

- Gazetting of the major active volcanoes in the North Island as national parks in 1887, which had the long-term benefit of avoiding development in a volcanic hazard area;
- Totara Park subdivision in Upper Hutt, planned in the 1960s, which avoids the Wellington Fault.

Relocation

- The 1840 European settlement of Britannia, located on the banks of the Hutt River, Petone, was relocated to Wellington due to flooding;

- The relocation of areas of Christchurch due to liquefaction from the 2010-11 earthquake sequence.

Reduction

- Tahunanui slump in Nelson, developed in the 1970s, now has land use controls to reduce future risks; and
- Lower Wairarapa Valley Development Scheme, one of the largest flood schemes in New Zealand, and took 20 years to construct.

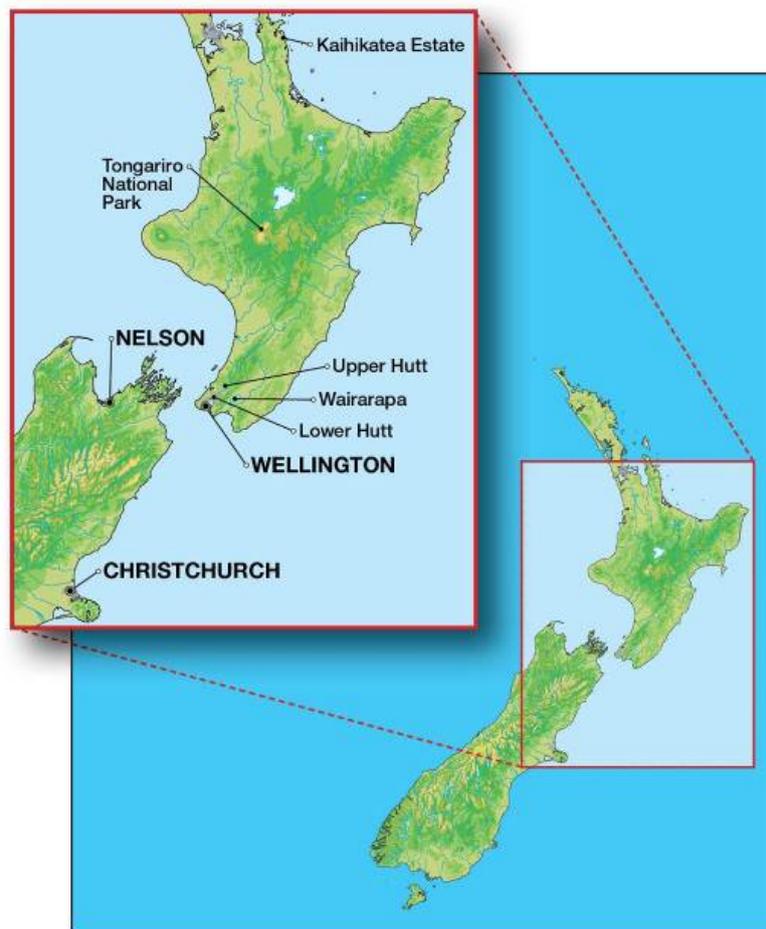


Figure 1: Location of historical examples of hazard planning outlined in this paper.

These examples highlight how planning for natural hazards has determined how New Zealand's towns and cities have developed. Using these examples, in Section 3 we provide two examples of modern day planning decisions, to explore whether we have learnt any lessons regarding how we plan our town and cities around natural hazards, or whether we are repeating previous mistakes and creating a poor legacy for future generations. Section 4 explores a selection of influences on whether we are learning – or not.

Examples of historical natural hazards planning

This section provides two examples each of avoidance, relocation, and reduction, from early European settlement in 1840 to recent-day land use changes in Christchurch.

Avoidance

Tongariro National Park, 1887

In 1887, the sacred peaks of Tongariro, Ngauruhoe, and part of Ruapehu, were gifted to the people of New Zealand by the paramount chief of Ngati Tuwharetoa. This was primarily to prevent the land being divided up, to ensure the mana of the Tuwharetoa people was preserved. Tongariro was the first national park to be established in New Zealand, and the fourth in the world. The original deed of gift made an area of 2640 hectare (ha) consisting of the immediate area around Ruapehu, Ngauruhoe and Tongariro. Over the years that followed, large-scale purchases of land were made by the Crown, so that when the Tongariro National Park Act was passed in 1894, its area had increased to some 25,000 ha. A survey report in 1904 recommended that the area should be more than doubled, and today the Park's boundaries enclose over 79,000 ha (<http://www.doc.govt.nz/parks-and-recreation/national-parks/tongariro/features/> - see Figure 2).

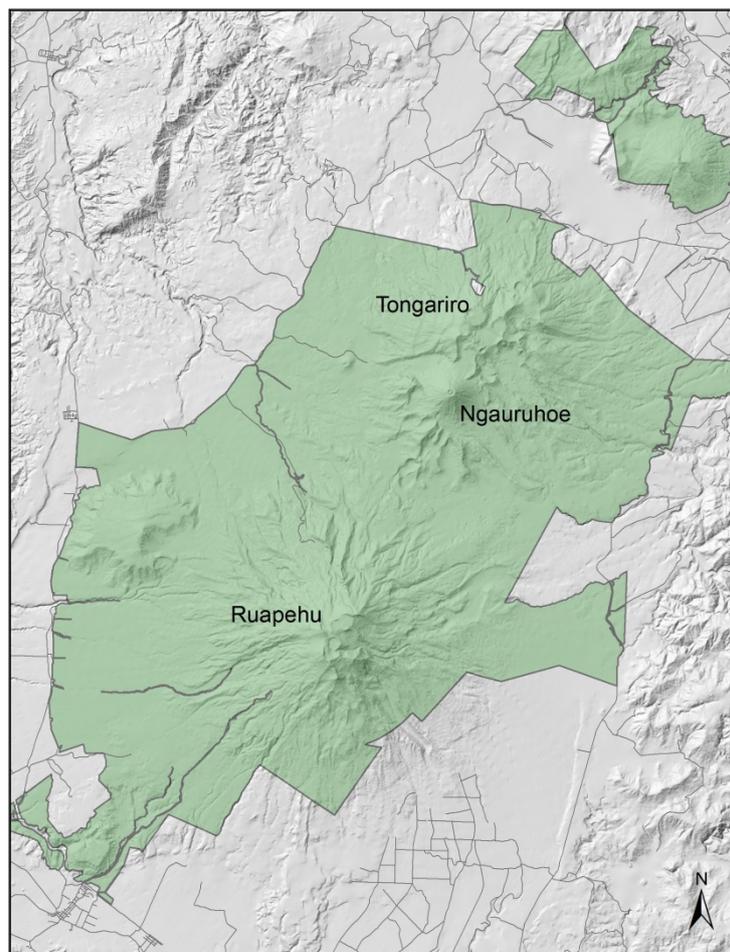


Figure 2: Tongariro National Park and volcanic peaks.

Being a national park, an indirect benefit is that development within the confines of the park boundary is restricted. While the park was established to protect the volcanic cones and for cultural and aesthetic reasons, it has subsequently reduced the risks to people from volcanic activity. The parks are primarily used for recreational and scientific purposes and are not able to be developed. This reduces the duration of time that people spend on the mountains, and limits the development and infrastructure that could be affected by an event (Becker, Saunders, Robertson, Leonard, & Johnston, 2010).

The gifting of Tongariro National Park provides an example of avoidance planning, as no development can occur within the park as of right. The ski areas of Turoa and Whakapapa, along with mountain lodges, have concessions from the Department of Conservation to operate. There is also a Tongariro National Park Management Plan to manage land use, conservation, and hazards (primarily volcanic; avalanche and erosion; and fire (Department of Conservation, 2006)). This management approach has allowed the immediate 'danger' zone from volcanic eruptions (including lahars, bombs, and flows) to remain relatively clear of development. Where there is development, such as the ski fields, lahar maps are distributed, a warning system has been installed, and annual testing of sirens and evacuation of the ski field is undertaken (Becker, et al., 2010).

Totara Park, Upper Hutt, 1960's

Totara Park is a suburb located 2km to the north east of Upper Hutt, Wellington. During the 1950's and 1960's the towns of Lower Hutt and Upper Hutt extended into land that was formerly covered in native vegetation or used for farming and market gardens purposes. In the 1960's, an urban development was planned for a large block of farm land (now known as Totara Park). This subdivision originally incorporated housing, a hospital, a school and an industrial estate (Stevens, 2005). The Wellington Fault bisected this suburb and was clearly identifiable by the fault scarplet located along the western side of the Hutt Valley (Lensen, 1958). The subdivision design of Totara Park did not take into account the Wellington Fault, which was clearly identified by the scarplet that passed through this area (Stevens, 2005).

The application for the plan change to allow the subdivision was considered under the Town and Country Planning Act 1953. The plan change was objected to by the Ministry of Works on the basis that the active fault was not taken into account when designing the subdivision. The Local Body Planning Tribunal was convened and the Geological Survey was asked by the Ministry of Works to provide evidence on the fault. In the hearing alternative subdivision designs were presented which took into account the Wellington Fault. However, the Planning Tribunal decision ruled in favour of the applicant and approval was given to the plan change and subdivision as submitted. The objections were dismissed not on the case of the scientific expertise (i.e. they didn't believe the science), but because the Hutt City County was expressing its displeasure as what they perceived as unwarranted interference from central government (Stevens, 2005).

After obtaining dispensation for the development, the applicant redesigned the subdivision taking into account the Wellington Fault. A segment of one of the main roads (California Drive) was aligned with the fault scarp. The width of this roadway was sufficient to ensure that future dwellings would be located more than 20m from the fault. Non-return valves were also installed on the pipelines which crossed the Wellington Fault. Furthermore, the hospital and industrial park (which were to be

located on or close to the fault) were removed from the, development and the proposed school was repositioned well away from the fault line (Stevens, 2005).

Guidance around planning for active faults is not new – the first guidance was released by the Ministry of Works in 1965 (Ministry of Works, 1965). However, it was not until 2003 when guidance was issued by MFE (Kerr et al., 2003) that many councils improved their land use planning practices in relation to active faults. The Totara Park development shows that for over 50 years there has been an awareness of the risks that active faults can present to development. It also demonstrates that it is possible to take into account active faults when their location is able to be ascertained, when designing developments.

Relocation

Britannia, Lower Hutt, 1840

Lower Hutt was first settled by Europeans in the early 1840's, with the first immigrant ship, the Aurora, arriving on 22 January 1840. Upon arriving, the settlers formed two distinct settlements, one being on Pito-one (now called Petone) Beach, the second being further inland from the beach. This township was named Britannia, located on the Hutt River (see Figure 3). Britannia's population peaked at 1,000 inhabitants, was two miles in length with a boulevard, two churches, several taverns, major warehouses, an established police force, a jail, several hotels, a wharf, a riverside boulevard, a shipwright, a blacksmith, timber merchants, a bank and its own newspaper (Johnston, 2007) .

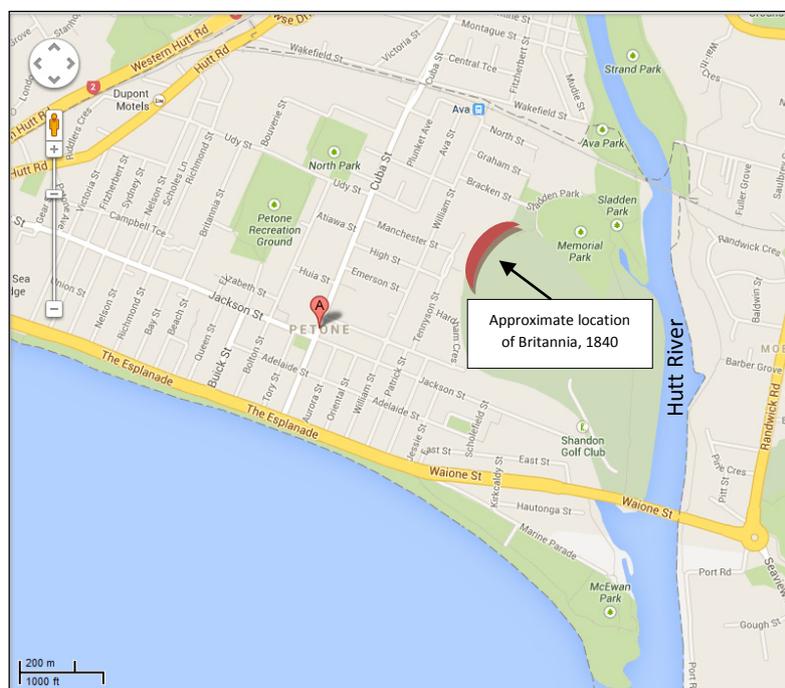


Figure 3: Location of Britannia township, 1840 (adapted from Johnston, 2007, p35). Originally the township was on the banks of the Hutt River.

In March 1840, floods hit the fledging town. After 10 days of rain, the Hutt River burst its banks and flooded the town with ankle deep mud and water. Days later another flood hit after torrential rain. These events, coupled with a night-time fire, cumulated in the settlers moving from Britannia to Thorndon in Wellington (Johnston, 1999). Rather ironically, however, the settlers relocated from a flood hazard to an active fault hazard, with Thorndon being located on the Wellington Fault. The consequences of this hazard, and the nearby Wairarapa Fault, is well documented in Grapes (Grapes, 2000, 2011).

The relocation of Britannia provides one of the first examples of community-led relocation from the flood hazard. Within a very short period of time, flooding from the Hutt River instigated the relocation of the township, in order to avoid future flood losses. In contrast, modern day Hutt Valley has a network of stopbanks and bank protection works. This has allowed the Hutt Valley to become one of the most densely populated floodplains in New Zealand, with approximately 70,000 people living on the floodplain, and assets worth \$6 billion at risk (Wellington Regional Council, 2004).

Christchurch – a modern day example of relocation

Christchurch, New Zealand's second largest city, experienced a sequence of large earthquakes in 2010 and 2011 that resulted in extensive liquefaction in its eastern suburbs, including Bexley South (St.Clair & McMahan, 2011). The liquefaction resulted in extensive damage to land, local infrastructure (e.g roads, sewer, stormwater and water connections), and buildings, the outcome of which was the Government retiring some areas, and residents being relocated elsewhere. Unlike many of the other suburbs that experienced significant liquefaction damage, Bexley South was developed in relatively recent times. A review of the planning history of the site was undertaken in 2011 (ref). This review found that up to 1972, Bexley South was within the Rural Zone. In 1972, under the first review of the District Scheme, Bexley South was designated for filling purposes, with an underlying zoning Residential 1 and Rural. In the proposed District Scheme that was notified in 1979, the site was rezoned to Employment 1. This purpose of this zone was to provide increased employment opportunities to residents in the eastern suburbs. In 1990, a plan change was notified, which split the Employment 1 zone into two. The northern half was rezoned Residential 1 and the southern half Recreation 5. This plan change became operative in September 1992. This plan change did not consider either liquefaction or lateral spreading, however land drainage was an issue that was raised by submitters (St.Clair & McMahan, 2011).

The proposed District Plan was notified in 1995 and retained the Residential 1 and Recreation 5 zones, but were renamed to Living 1 and Conservation 5. These zones became operative in 2005 and no rules were developed to address liquefaction and lateral spreading hazards (St.Clair & McMahan, 2011).

In 1992, a 1:25,000 geological map of Christchurch was produced by GNS Science. This map included a liquefaction hazard map, and this map showed Bexley South as having soils susceptible to liquefaction (Brown and Weeber 1992). However, this information does not appear to be used to inform the proposed District Plan.

Bexley South, like many of the areas that experienced liquefaction were 'red zoned' by the Government due to their area-wide land and infrastructure damage, and an engineering solution to

repair the land would be uncertain, costly, and is likely to be highly disruptive (Canterbury Earthquake Recovery Authority, 2013). This zoning process has been by partnered with government offer to buy the properties that have been red zoned. This process is allowing for people to sell their properties and to relocated away from areas that are susceptible to liquefaction damage. This ensures that as part of the recovery process, redevelopment is not undertaken in these high risk areas, thereby reducing the risk to Christchurch if another large earthquake was to occur.

The planning history of Bexley is not unusual in the New Zealand setting. Many developments have proceeded in locations that are subject to natural hazards with little or no consideration of that hazard. However, the Christchurch earthquake sequence visually demonstrated to New Zealand, the consequences that can result from a natural hazard event, particularly when areas have been developed with little or no consideration of natural hazards. The question remains whether we have learnt from the Christchurch earthquake sequence or whether we have already started to forget the lessons resulting from these earthquakes, before we have a chance to fully understand and learn from them?

Reduction

Lower Wairarapa Valley Development Scheme

Constructed between 1963 and 1983, the Lower Wairarapa Valley Development Scheme is one of New Zealand's largest and most ambitious flood protection projects. Prior to the scheme being developed, a major flood could affect up to 20,000ha of land, with some areas being flooded eight times a year. Roads were blocked for days on end, communication lines damaged, and fences destroyed. And despite an efficient flood warning service which began in the 1950s, stock losses at times were severe. The scheme now benefits a total land area of 31,500 ha (Wellington Regional Council), creating a large reduction in risk from flooding for the local community.

Constructed over 20 years, the scheme covers the section of the Ruamahanga River from the Waiohine confluence downstream to the Lake Onoke outlet into Palliser Bay, the Tauherenikau River from the rail bridge downstream to Lake Wairarapa, and all the eastern and western tributary streams (see Figure 4). The Ruamahanga River was diverted from its direct course into Lake Wairarapa, across the Kumenga Peninsula and into the Lower Ruamahanga. The barrage control gates largely prevent all normal flows of the Ruamahanga from entering Lake Wairarapa. The barrage has also enabled levels of Lake Onoke to be raised quickly to either overcome impending blockage of the outlet or to aid in the formation of a new opening. This also means that the lake can be kept at a low level, ready to accept any flows from the Oporua Floodway. Such flows are the result of the overflow of flood discharges from the Ruamahanga River at various points further upstream. Flow size is dependent on the size of the flood event and cannot be controlled. The ability to be able to maintain an efficient and ever-lasting outlet from Lake Onoke to the sea has been of great worth since it is the key to preventing flooding in the Lower Wairarapa Valley. Subsequently, the scheme has produced much of the expected benefit. The flood protection works were tested in the major floods of 2004 and they held up well despite the extreme conditions (Wellington Regional Council).

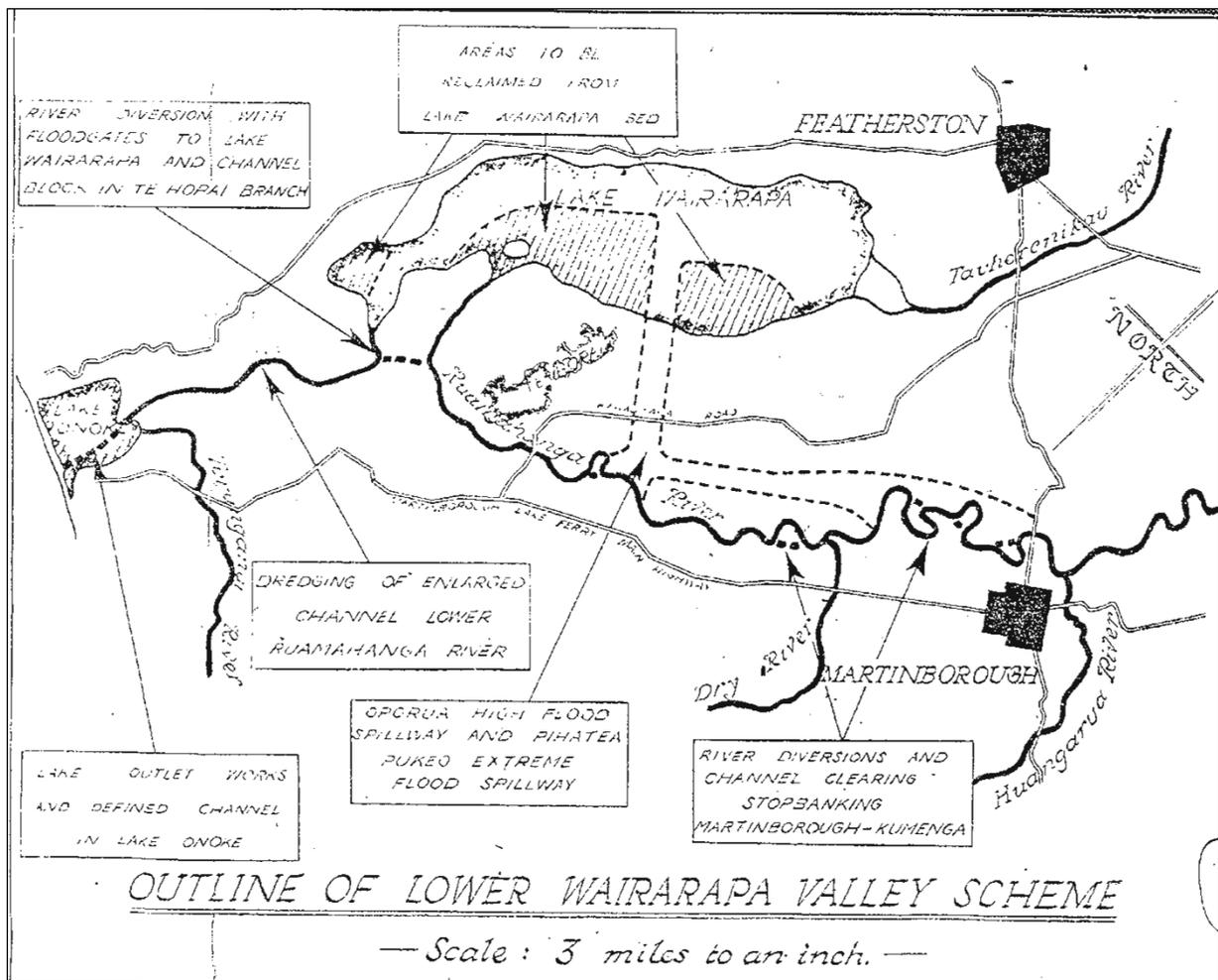


Figure 4: Outline of Lower Wairarapa Valley Scheme (*Wairarapa Times-Age*, 3 March 1955).

In total, the scheme involves a total of 65km of Ruamahanga River channel, 190km of stopbanks, 12 drainage schemes, and a present day value of \$86 million. It has a flood protection standard for the 20-year frequency in upper reaches, and 100-year frequency in lower reaches. As a result of the scheme, the land-use patterns and environment of the Lower Wairarapa Valley are now well-established, reflected by the increase in annual production generated by the scheme being \$19.8 million (Wellington Regional Council).

The Lower Wairarapa Valley Development Scheme provides an example of how risk reduction was achieved through substantial engineering design and construction. The scheme has reduced the severity of flooding, enabling the surrounding (mostly rural) land to be utilised to its full potential, without putting livestock at risk. At the time of the design and construction, the environmental effects may not of been acceptable by today's standards, and it is questionable as to whether a similar large scale scheme would be constructed today. From a 'modern day' perspective, the challenge is to work *with* nature, rather than to *change* nature.

Tahunanui, Nelson

Located in Nelson, the active Tahunanui Slump is 700m wide and covers a total area of approximately 26ha of hillside. Overlooking the popular local beach, bay and ranges, the active slump is 'home' to 120 houses (Denton & Johnston, 1996), as shown in Figure 5.



Figure 5: Approximately 120 houses are located on the Tahunanui slump in Nelson <http://www.teara.govt.nz/en/photograph/8805/tahunanui-slump>.

However, the movement of the slump area is not a new phenomenon. Significant, extensive movements and related damage are documented within the Tahunanui Slump in the 1890s, 1929 and 1962, involving roads and houses (see Figure 6). While on-going resurveys of the area confirm that less damaging movements are continuing, these are at different rates in different areas of the slump (Denton & Johnston, 1996).

Residential development, which commenced in the 1920s, has been restricted since 1985 by the Nelson City Council (Denton & Johnston, 1996). To manage the risks to people and property, the Nelson Resource Management Plan requires resource consent for earthworks as a Discretionary Activity and heavy structures, such as pools, which may detrimentally surcharge the landslide, are a Restricted Discretionary Activity. Subdivision, other than for such things as boundary adjustments, is not allowed and to build new dwellings on existing lots is a Non-Complying Activity. Except for minor alterations or additions, building consents are granted under Section 72 of the Building Act 2004 and the title of the lot is endorsed accordingly (Saunders & Glassey, 2007). All applications for resource or building consent must be accompanied by a geotechnical assessment from a Chartered Professional Engineer practising in geotechnical engineering or an experienced engineering geologist and recognised as such by the Nelson City Council. The assessment must list any mitigation

measures that should be implemented as part of the consent, such as designing the house so that it can be re-levelled and/or the use of light weight cladding, installation of additional drainage with readily accessible inspection points or removal of material equal to the weight of the structure to be built (Saunders & Glassey, 2007).



Figure 6: Road damaged by earthquake and flood, Tahuna Hillside, Nelson, 1929. Photograph taken by Frederick Nelson Jones (Alexander Turnbull Library, 1929).

Lessons learned or still learning?

As Mileti (1999,155-156) states,

'No single approach to bringing sustainable hazard mitigation into existence shows more promise ... than increased use of sound and equitable land-use management ... by planning for and managing land use to accomplish sustainable hazards mitigation, disasters – though not wholly eliminated – can be reduced ...'.

So are we learning lessons from the past and putting that knowledge into land use planning – a powerful tool in reducing risks to communities?

As demonstrated in Section 2, there are a number of examples historically where decisions have been made to reduce the risks from natural hazards. The science and understanding that has resulted in these historical changes has been easily available for many years, yet as demonstrated below, we are still making poor land use planning decisions that is resulting in a significant increase in risk to people's lives and property. Following these examples, we will explore the potential reasons why we continue to make poor land use planning decisions in regards to natural hazards.

Kaihikatea Estate

In 2005 an application was received by the Thames-Coromandel District Council for a gated community development. Located on the Tairua River floodplain, the site is tidally influenced and had been flooded from the river five times during the previous 12 years. As such, the site is expected to flood on average every two to five years (Tonkin & Taylor, 2005). The site is deemed a high hazard site by the regional council (Waikato Regional Council), as the depth of flow in the main floodway is greater than one metre and/or speed of flow is greater than one metre per second. Rather than avoiding the risk altogether, this hazard was addressed by the applicants with mitigation options, their philosophy being to "recognise the risk of flooding that exists and to take measures to overcome the hazard risks, without endeavouring to impede the natural flow patterns of floodwater through the site" (Bhana, 2005, p7).

In May 2008 the Environment Court issued a consent notice which included the following conditions on the consent holder (Judge Dwyer, 2008):

- A detailed emergency management plan (approved by the Thames-Coromandel District Council) detailing the provisions to be made to ensure the safety of occupants of the subdivided lots in the event of inundation of the site;
- The upgrade of an existing river gauge, and the installation and on-going maintenance of a new river level recorder;
- The installation and on-going maintenance of a 24 hour a day river level monitoring system, connected to all residential buildings and the Regional Council.
- An evacuation plan, developed and maintained by the Residents Association of Kahikatea Estate, around different responses corresponding to onsite water levels;
- Members of the residents association receive has annual training in compliance with the provisions of the plan;
- Culverts under the internal driveway are regularly maintained including at least annually the clearance of any accumulated debris, and rectifying any visible signs of erosion;
- On-going maintenance of the building platforms for flood defence purposes for each of the residential lots;
- The area defined as 'Restricted Planting Area' is managed so its primary purpose as a floodway is not compromised; and

- Provide Council with an annual report demonstrating on-going compliance with the plan. This is to be prepared by an independent certifier appointed by the Association and acceptable to the Council's Monitoring Officer.

These conditions offer a form of warning for prospective buyers, as these are considered rather extreme measures, yet still put property at risk from flooding. The website for the development states that:

'Sites will have a high standard of amenities including a gravelled driveway to improve water dispersal ... The development exceeds local body resource consent standards, preventing any possible risk of flooding to platforms or homes: so your house is safe as ... well, houses' (Kahikatea Estate).

This statement provides an example of the developer bearing the risk until properties are sold. Local body resource consent standards are exceeded due to the risk of flooding; it is still possible that platforms and homes can be flooded (hence the requirement for a warning system and evacuation plan).

This case highlights the multi-faceted issues involved in developments of this nature (of which there are many). It provides an example of the wider implications for risk reduction, including the importance of qualifying and/or quantifying the levels of risk for natural hazards to ascertain and clarify what is acceptable, tolerable and intolerable; who accepts the short- and long-term risks i.e. the developer versus a future purchaser; and the paradoxical relationship between mitigation and risk reduction (i.e. mitigation does not necessarily result in a reduction of risk). In this case, risks to property are still potentially problematic for those dwelling in these properties. While the developer was willing to accept the risk, future owners/generations (and council) will have a legacy of flood risk to live with and manage if they choose to. The mitigation measures proposed lead to an increase in risk from the original land use, otherwise the consent conditions would not be required. To date, the development has not commenced due to the 2009-10 economic recession.

Petone Plan Change 29, Lower Hutt

In June 2012, Hutt City Council notified a plan change (proposed Plan Change 29) for the south-western corner of Petone, Lower Hutt. The purpose of this plan change was to create a mixed use area in this area of Lower Hutt. In particular, this plan change sought to introduce the ability for residential, childcare, visitor accommodation and retail activities to be established as a Permitted Activity (Hutt City Council, 2012)

The area of Petone is however subject to a number of hazards. The Wellington Fault passes through the area. This fault is expected to produce an earthquake with a magnitude of 7.5 once every 880 years (Rhoades, Van Dissen et al. 2011). The soils under Petone are also highly susceptible to liquefaction, which may also result in subsidence (ref). It is also expected that this area of Petone would subside between 1.1m and 1.2m in a Wellington Fault earthquake (ref) and is also located in a tsunami evacuation zone. Finally, the area is susceptible to flooding from the Korokoro Stream and experienced significant flooding in 1976. Furthermore, due to the low lying nature of the suburb, it is susceptible to sea level rise as a result of climate change.

The existing natural hazard rules for the south-western corner of Petone only relates to the Wellington Fault Special Study Area. In this area, all new buildings require resource consent as a Restricted Discretionary Activity. There are no rules pertaining to liquefaction, flooding, tsunami, or climate change.

When Proposed Plan Change 29 was notified, no additional rules were proposed to address the risk from the natural hazards to future development. At the close of the submission period, approximately 250 submissions on the plan change were received, with the majority of these raising concerns regarding natural hazards and seeking further measures to reduce the associated risks. In the report prepared by the Council for the hearing it stated:

'We are of the view that the plan change increases the risk of property and persons to damage from natural hazards as a result of providing for the intensification of the area. Existing provisions in the Operative District Plan will not adequately manage the range of natural hazards and the increased risk..... It is recommended that additional natural hazard provisions be introduced within the plan change area which:

- 1. Limits the location of high intensity and particularly vulnerable types of development within the Wellington Fault Special Study Area (WFSSA);*
- 2. Require geotechnical investigation as a matter of consideration for new buildings within the plan change area; and*
- 3. Inclusion of additional information which communicates the level of natural hazard risks within the plan change area' (Tindale, Wesley, & Baily, 2013a).*

During the hearing, submitters expressed concern that the proposed rules to address the natural hazard risk did not go far enough. As a result, in the Officers right of reply, further rules were proposed to address the natural hazard risk as well as the introduction of an objective and policies which were specific to natural hazards (Tindale, Wesley, & Baily, 2013b).

Plan Change 29 demonstrates that even after Christchurch, councils are still considering intensifying development in areas that are at high risk from natural hazards. In the case of this plan change, the community played an important role in changing the content of the plan change. The large community response can in part be contributed to the high level of media and national interest in the recent Christchurch earthquakes. This was reflected by a number of submitters referring to these earthquakes and the desire to prevent a corresponding level of damage in Petone.

What are the influences on lessons learned or still to learn?

While human occupation in New Zealand has been short, we have experienced a significant number of natural hazard events. The examples of natural hazard planning presented are only but a few of a number across the country regarding reducing the risks from natural hazards to current and future developments. However, while there are numerous examples, we still allow for inappropriate development in natural hazard zones. Glavovic et al (2010) provide four burning issues that require action to improve land use planning for natural hazards. One of these is to prioritise risk reduction measures – so why we have not taken the opportunity to learn from natural hazard events to reduce the risk to current and future development? Potential influences, include experience and knowledge

of events, turn-over of council staff; planning for hazards rather than risks; and economic benefits. These influences and tensions are examined below.

Experience and knowledge of events

On the 1st September 1888, a magnitude 7 – 7.3 earthquake struck North Canterbury, with heavy shaking lasting up to 50 seconds in Christchurch (GeoNet, 2013; McSaveney, 2012; Nathan, 2011). Many buildings in the region were destroyed, and the Christchurch Cathedral lost 7.8 metres of its spire – which was subsequently rebuilt - and collapsed again in an earthquake in 1901 (GeoNet, 2013; McSaveney, 2012; Nathan, 2011). This proved to be last rebuilding required from earthquake damage – until 2011.

So is generational experience and knowledge of events required to learn lessons? Do we need to personally experience an event, to gain important first-hand knowledge on its consequences, and plan for them? Knowledge, experience, values, attitudes and feelings all influence the thinking and judgement of people about the seriousness and acceptability of risks. People may feel so connected to a particular place that the risk forms part of their identity. In some cases, not only do people accept and coexist with the hazard, but they may also develop an emotional link to it, which downplays its potential risks (Wachinger & Renn, 2010). It is therefore essential to involve the community and decision makers in any conversations of hazards and risks.

Within the context of volcanic hazards, Paton *et al* (2008), found that an important aspect of any risk management strategy involves community participation – and decision makers - when discussing hazard issues. If agencies do not engage with communities that reinforce the complementary actions, required by both community and agency to reduce risks, those communities may overestimate the effectiveness of structural mitigation, reduce their efforts to manage their risk, and pass the responsibility of their safety back to the agency. While this research was undertaken in a volcanic context, the findings are applicable to other hazards. It is therefore crucial that the experience and knowledge of scientists, planners, decision makers, and communities are actively sort, lessons learned documented, then implemented (Mercer, 2012).

Turnover of planning staff

Duties undertaken by a council planning officer are not limited to the preparation of resource consent decisions. They are often also responsible for public enquiries, responding to official information requests, undertaking pre-application meetings and assessing new applications. These various demands, combined with the 20 working day statutory processing time under the Resource Management Act 1991 (RMA), means that there are a significant pressures on council planners. Consequently, anecdotal evidence suggests that the turnover in council planning staff is high. This turnover of staff reduces the opportunity for the development of institution knowledge around natural hazards. Furthermore, inexperienced planners may be unaware of areas that are susceptible to natural hazards or how to address the risks associated with natural hazards.

Planning for hazards verses planning for risk

Under the RMA framework, *natural hazards* are planned for, rather than the *risk* of natural hazards (i.e. risk = consequence x likelihood). This subtle difference may have contributed to the

consequences of hazard events not being fully assessed. The Government has recognised this shortfall, particularly in light of the Christchurch earthquake sequence and subsequent consequences of developing in liquefaction susceptible areas and in the Port Hills, an area subject to land instability. As such, part of the RMA reforms include the addition of risk as a Section 6 matter, where decision makers would be required to “recognise and provide for” natural hazard risks (Ministry for the Environment, 2013). Saunders & Beban (2012) have outlined the implications of this, and encourage the inclusion of ‘risk’, and its priority being raised.

The economic benefit argument

While a specific location may generate a particular risk, the same context may also provide economic benefits. Hence, the balance between risks and benefits as estimated by the individual can be a determining factor that influences risk perceptions (Wachinger & Renn, 2010). Part II of the RMA, specifically requires the economic well-being of communities to be considered, when land use planning decisions are made. Often hazard mitigation works are viewed as an immediate cost, whose benefits are uncertain and may not be realised over the life of the development (Beatley, 1998). These additional costs can be seen to be discouraging development, and hence it is argued that the economic costs gained from undertaking these works, are disproportionately greater than the resulting benefits associated with their undertaking. Furthermore, it can also be argued that by allowing for development in areas subject low probability, high consequence natural hazards, allows for the community to provide for their economic well-being, through increased employment or improved housing, as it is unlikely that the area will experience the natural hazard during the life of the development. These economic arguments often gain traction, as in New Zealand, decisions on large developments are mainly made by Commissioners, who are often local politicians. This creates a natural tension as politicians often want increased development and the benefits it brings. However, they may have to decline an application based on an event that may have a low probability of occurring over the life of the development. Given this tension, the economic benefits argument often trumps the argument pertaining to natural hazard risk.

Summary and conclusion

New Zealand’s has a long history of planning for natural hazards. As this paper has demonstrated, there are a number of examples of where land use planning has taken into account the risks presented by natural hazards, and development has been planned accordingly. However, there are still many examples of poor planning practice in relation to natural hazards, and developments proceeding which increase the risk to both property and lives. As New Zealand’s population increases, the demand for additional development will increase. This demand will continue to place pressure on local government authorities to open up new areas for development, some of which may be at risk from a variety of natural hazards. It is important that planning practices change across the country to ensure that future development appropriately takes into account the risks from natural hazards.

The RMA, currently does not directly identify natural hazards as a matter the must be considered under Part II. All land use planning decisions are required to be consistent with Part II in order to proceed. In order to improve the consideration of natural hazards during the land use planning process it is important that natural hazards become a Part II matter. This was raised in a recent

government technical advisory group document (Technical Advisory Group, 2012) on changes required to the RMA to ensure that natural hazards are better recognised. This recommendation followed through into a discussion document released by the Ministry for the Environment (Ministry for the Environment, 2013) and into the proposed reforms (Ministry for the Environment 2013b).

The proposed reforms to the RMA would identify the management of significant risks from natural hazards (Ministry for the Environment 2013b) as a (s) 6 matter (Matter of National Importance). This is an important change as it introduces the concept of risk for the first time into the RMA. The inclusion of risk as a (s) 6 matter mandates land use planners to consider both the consequences and the likelihood of a natural hazard event. This will allow planners to make an informed decision around the level of risk that they are willing to accept and will expand the consideration of natural hazards away from the current approach of just considering the likelihood of an event.

Equally important as a change of legislation outlined above, is the need for land use planners in the country to be educated regarding risk and natural hazards (Saunders & Beban, 2012). Unless land use planners understand natural hazard risk and ways in which this risk can be reduced, New Zealand future development will continue to increase the risk to people and property.

Land use planning in New Zealand is a complex system involving politics, economic development, the management of risks from natural hazards and human behaviour. Every day, councils across the country are making a number of decisions on developments. After a natural hazard event, our awareness of the hazard increases and we adjust our land use planning response accordingly. However, as time passes, new issues arise and this can be to the detriment of planning for natural hazards. While mistakes have been made, it is hoped that the lessons from Christchurch and the changes to the RMA will result in future developments better addressing the risks from natural hazards. Planners are the custodians of the environment, which future generations will receive. To ensure that future generations live in sustainable cities, planners need to look to the examples of good practices in the past to address the future risks from natural hazards.

Acknowledgements: The authors would like to thank Simon Nathan for reviewing an early version of this paper; Maureen Coomer for finding a figure for the Lower Wairarapa Valley Development Scheme; David Johnston and Maureen Coomer for their review.

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The Origins of Urban Sprawl in New Zealand

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This paper locates the origins of New Zealand's low-density urban settlement pattern or sprawl in capitalist social relations and the cultural practices of the first settlers during the 1840s and 1850s. While the grid plans of towns conveyed notions of order and regularity, the commercial imperative to maximise the profit-making potential of urban land created an uneven and sprawling settlement pattern. Settlers' ambition for homeownership and preference for a stand-alone dwelling on its own section further reinforced the low-density urbanism and challenged metropolitan conventions about what constituted a town. Meanwhile, the primacy given to private property rights created an aesthetically diverse built environment that reflected the individualist ethos of settler society. These three attributes: low-density settlement, the stand-alone dwelling, and an eclectic built environment have defined New Zealand's cities ever since. The paper suggests that present urban consolidation debates need to be better historically contextualised to acknowledge that urban sprawl has long been central to most New Zealanders' sense of place and wellbeing. Future cities can be denser but still reference the best aspects of sprawl.

Introduction

During early 2010s urban planning assumed an importance in Auckland public discourse not seen since its council's proposal to pump the city's untreated sewerage straight into the Hauraki Gulf in the 1950s. (Bush, 1971, pp434-37) This time the issue was the City Council's Draft Unitary Plan and its proposal to limit urban sprawl by promoting urban consolidation, specifically by allowing higher housing densities within existing boundaries and restricting new suburbs at the city's edge. Many Aucklanders were alarmed by the proposal and feared if it went ahead medium- or high-rise apartment blocks would overshadow their suburban villas and bungalows. Critics argued urban consolidation was unnecessary. 'It's not what Aucklanders want,' asserted planning consultant Phil McDermott. There was still plenty of space for the city to expand towards the north and south, he

claimed. But Mayor Len Brown was unrepentant. He said he had no time for urban sprawl and 'all the global data' showed urban consolidation was the best way forward for Auckland. (ONE News, 2013)

What has been striking about the debate so far is the extent to which it is has been devoid of historical context. There was general recognition of the importance of the stand-alone house on a quarter-acre suburban section in defining New Zealand urban life, but little discussion about why this is the case or how it came to pass. Whereas the urban consolidationists argue this ideal has had its day and its time more city dwellers embraced modern European- and Asian-style apartment living, their opponents argue the ideal continues to resonate with most New Zealanders and is still how they want to live. This paper is an attempt to fill in some of the missing context and so begin to explain why is low-density living is so deeply embedded in the New Zealand psyche.

A capitalist enterprise

As in most other 19th century settler societies New Zealand towns were products of capitalist social relations. The Edward Gibbon Wakefield-backed New Zealand Company founded four (Wellington, Nelson, Christchurch, Dunedin) of New Zealand's five colonial cities. The Company's primary motivation was to expand its business interests and turn a profit. (Broad, 1892, p3) The fundamental commodity was land: buying it cheaply from its Maori owners and selling it at an inflated price to investors and colonists, the difference being used to fund settlements and deliver a return. As with other British colonising ventures since the 17th century land was sold as a package comprising a small town allotment and a large country allotment. The scheme's "bait", as historian Michael Turnbull idiomatically put it, was the town plot. (Turnbull, 1959, p18) Urban land was more densely settled than rural land and so commanded higher prices; early buyers could therefore expect to make substantial gains on the unearned increment. This prospect attracted both settlers and absentee investors to buy into Wakefield's ventures. Accordingly, all the land packages for the Company's first settlement (Wellington) went on the London market in mid-1839 were quickly picked up. (Burns, 1989, pp106-07) Buyers were more than willing to gamble on unbought and unseen plots of land on the basis of a potential huge return on an imaginary city; the Company came away with a very tangible £100,000 return. In contrast, land in Auckland was sold on-site rather than in London and at auction rather than for a fixed price. The sales process followed the Australian pattern where town and country lands were sold separately to limit supply and inflate prices. The first 116 town allotments were sold in April 1841, attracting speculators from around the country and Australia. The expectation had been that land would sell for between £120-£250 per acre, but in the end the sales total reached £24,275 17 s 9 d, or an average of £595 per acre, putting Auckland's land prices on par with those in London and Liverpool. (Terry, 1843, pp131-39) Governor Hobson was delighted.

The Grid Plan

A pivotal tool in the capitalist production of colonial space was the grid plan. All of New Zealand's colonial towns were laid out on grids of various combinations. The grid had many abstract attributes that commended it to town founders. It was simple to survey and lay out; imposed instant order on the landscape (turning 'topography into geometry'); could be extended at a future date (it was future-orientated), and enabled space to be easily commodified (a rectangular plot could be subdivided exactly in two, and two again). (Short, 2006, p10) Moreover, as Giselle Byrnes has pointed

out, the grid 'was useful in translating the land into a blueprint for colonisation'. (Byrnes, 2001, p57) Once the land was geometrically configured those living on it, including indigenous populations, could be brought into line too. On the other hand, the grid was criticised for its monotonous form and ignoring the contours of the land; survey lines ran over hills rather than around them, making for some very steep streets. (Brown-May, 1998, pp9-10).

It is worth briefly examining the grid plans of three cities –Wellington, Auckland, and Christchurch – because they underscore, to employ Lefebvrian spatial theory, how conceived spaces of planners resulted in perceived spaces that privileged capitalist social relations. Wellington was the first town to be laid out, in 1840. The New Zealand Company surveyor, William Mein Smith, had been told to

make ample reserves for all public purposes; such as a cemetery, a market-place, wharfage, and probable public buildings, a botanical garden, a park and extensive boulevards. It is, indeed, desirable that the whole outside of the town, inland, should be separated from the country sections by a broad belt of land which you will declare that the company intends to public property, on condition that no buildings be ever erected upon it. (*New Zealand Gazette and Wellington Spectator*, 21 Aug 1839, p3)

The brief providing for public infrastructure like buildings, boulevards and parks was typical of the British Grand Model. More unusual was the inclusion of a green- or town-belt. (Home, 1997, p14) It had first been implemented in Colonel William Light's 1837 plan for Adelaide, where parklands for public recreation encircled the town. In an age where modern cities lacked recreational space and pollutants often cast a poisonous pall, the reserves were intended as places of healthy retreat and reinvigoration. A further motivation was to maintain town land values by creating a barrier to urban sprawl. Smith's plan comprised a matrix of small, interconnected grids so placed to maximise the use of level land. (Wakefield, 1955, p149) Missing was the promised public space. As with their counterparts in other settler societies, Wellington's settler capitalists thought giving prime urban land over to public use was a waste of a profit-making resource; the marketplace, park and extensive boulevards were never built.

Surveyor General Felton Mathew was the creator of Auckland's plan. Mathew made some attempt to accommodate the lie of the land by placing a circus on the summit of Rangipuke (Albert Park), from which ran a series of quadrants and crescents. (These elements had become fashionable in the 18th century Neo-Renaissance town planning tradition, of which John Wood the Elder's plan for Bath was an exemplar.) Over the rest of the town he applied a standard grid plan, its uniformity relieved only by the provision of two public squares on Hobson Street. Accordingly, the plan shows a town of two halves: a curvilinear eastern half and a linear western half. It is an awkward arrangement that makes little attempt to link the government and commercial sides of the town. We can only surmise this was deliberate. In referencing the gracious circuses and crescents of Bath, the government side carried a cultural cache that the other side lacked; it was probably Mathew's way of signalling the primacy of government over commerce in the settlement. Reaction to the plan ranged from bemusement to outright hostility. Alexander Majoribanks explained how it 'was designed apparently for a magnificent metropolis, one fourth of it being covered with what appears to be a spider's web, consisting of circular streets, circuses, crescents, and an infinite number of radiations.' (Majoribanks, 1846, p41) Critics lambasted it for departing from the proven economic benefits of the grid. In the end Mathew's grand design was undone by commercial imperatives which, as in Wellington, had no

tolerance for amenities like public squares (the Hobson Street squares came to nought) let alone artifices like circuses and crescents. When the navvies began their work only a few threads of Mathew's cobweb were etched into the landscape.

Joseph Thomas laid down Christchurch's grid in 1850. Its unrelenting geometry is relieved only by the meander of the Otakaro River and two diagonal streets, which were to connect the town to Ferry Road and Papanui Bush respectively. Still, the plan had generous provision for public reserves and squares. This included the 165-hectare Hagley Park, a large central square (Cathedral Square), two smaller squares (Cranmer and Latimer Squares), and a spacious market place (Victoria Square). Collective sentiment was ostensibly stronger in Christchurch than in the other towns because all its reserves were realized; its city builders were apparently willing forgo short-term capital gain for long-term public benefit. There was at least one unexpected element to the plan: it was half its promised 1,000-acre size. This was because land orders were undersubscribed and demand could be met within a reduced footprint. (*Lyttelton Times*, 11 Nov 1854, p2) To make up the difference another 500 acres of town reserve land was laid out in a belt surrounding three sides of the settlement – the fourth side was Hagley Park. This became a land bank the Association could progressively sell, at urban prices, as Christchurch expanded and demand for new town sections increased. (Morrison, 1948, pp13-14) Thomas still delivered the requisite 1,000 allotments by cutting their size from a half to a quarter-acre. The quarter-acre section was to become the archetypal residential allotment in New Zealand towns and cities.

The three examples underscore how town plans were central to the production of urban space. Although planners included ample provision for public space like squares and parks, these were sacrificed to commercial imperatives. Only Christchurch succeeded in bucking the trend in a significant way. The legacy of this beginning was that Auckland and Wellington, in particular, lacked organized public space to foster civic life – a deficit late 20th century planners tried to overcome through council provision of little urban parks and civic squares

These were not the only consequences. The tendency of absentee and long-term investors to sit on their land and wait for its value to rise meant the task of developing urban infrastructure fell on settler communities. As early as 1842 the unfairness of this burden led Wellington capitalists to call for absentee landowners to contribute to its cost. 'You absentees', protested one landowner, 'are content to sit by the fire-side and speculate upon the advance which will take place ... at our expense.' (*Letters*, 1843, pp23-24) The complainant suggested British absentees form a loan and trust company to help fund public infrastructure – as had happened in Adelaide – but the proposal found no sponsor, leaving the settler community to continue to shoulder the expense. Settler capitalists in Nelson considered absenteeism 'the evil of new settlements.' (*Nelson Examiner*, 7 May 1842, p34) Essentially the absentee landowners were sleeping investors, who provided start up capital but played no active role, mirroring the arrangements in other capitalist enterprises. Still, the alternative of a highly centralised town-founding model in the Grand Manner would have placed constraints on private property rights and hence individual wealth creation. Settlers might grumble about sacrifices they made that benefitted others, but few doubted the capitalist model was the best way to deliver prosperity.

An ill-defined sprawl

The prevalence of speculators in New Zealand towns helped to shape its early urbanism. This included an irregular and dispersed settlement pattern. Rather than a continuous line of buildings along uniform streets, townscapes were characterised by single or clusters of buildings with intervening empty spaces. The order promised by the grid was missing; instead towns had a muddled, haphazard appearance. (Terry, 1843, p143) Conversely, the necessity of short-term speculators for quick capital gain encouraged the subdivision of land into tiny allotments serviced by narrow lanes. These were then sold or leased to mechanics and labourers. Having observed this process in Auckland, one critic warned in 1842 of future slums. 'Miserable lanes will usurp the place of streets, blind alleys will be as common as Deptford ... and hovels will be packed as closely as St Giles.' ('Land', 1842, p1) It proved prophetic. Only 25 years later the congested Chancery Lane and neighbouring alleys had become the city's slum.

Colonial urbanism

Even so, low-density urbanism remained the norm. This is highlighted in a panoramic view of Christchurch taken by Dr Alfred Barker from the tower of the new completed Canterbury Provincial Council Buildings, circa 1859. It shows the extent of the town and highlights the low-density and sprawling nature of early New Zealand urbanism, characterised by built-up areas – in this case along Colombo Street between Armagh and Gloucester streets and at the western end of High Street – with either empty space or small groups of buildings in between. Some condemned the settlement pattern. In 1853 the travel writer Warren Adams described Christchurch's 'straggling and irregular' appearance as 'decidedly ugly' and proclaimed the more compact Lyttelton far prettier. Adams, 1853, p33) Others were more complimentary. William Parr told his brother that Christchurch was 'well laid out with good wide streets, some of them without any houses in. But you must not think it a small town. There are somewhere about 400 houses and some of them very nice ones too.' (Parr, 1859) Yet the straggling nature of towns raised logistical issues, not least of which was their defence. A government official examining how towns might be secured against Maori attack concluded that that the manner in which they had been built made their 'defence impossible'. He continued: 'Houses, generally of weatherboards, are as built as wide apart, and scattered over as great an extent of open land, as is compatible with their being considered collection of dwellings (in other words, a town or village) at all.' ('Further', 1863, p. 8) Whereas European towns were usually tightly built up, and traditionally contained within defensive walls, the sprawling, haphazard expanse of New Zealand urbanism defied traditional expectations of what a town constituted.

New Zealand's sprawling urbanism followed that of Australia's. In laying out Sydney in 1788 Governor Phillip promoted the stand-alone house on an individual section and a cultivated garden. The garden was often an important element in household economies, allowing families to self-provision with fresh vegetables and fruit and so gain a degree of independence. Hobart too was characterised by single houses on their own plots with gardens. As one historian has observed, 'Australia's founders anticipated a sprawl of homes and gardens rather than a clumping of terraces and alleys.' (Davison, 1995, p43) New Zealand was quick to follow the same path. In 1842 a Wellington printer recorded how '[e]very person seems to have an inclination to build houses and fence in their ground ... Brick and wooden houses are springing up on ground that appeared deserted; gardens fenced in and cultivated.' (*Letters*, 1842, p8) Historians have located the origins of

this settlement pattern in the countryside. Erik Olssen has written: 'The ubiquity of the owner-occupied single-unit house on its own often quite large section transposed into the urban environment the possibilities for independence once assumed to be the exclusive preserve of yeoman farmers.' (Olssen, 2011, p253) Within this paradigm the colonial town can be viewed as a web of small smallholdings and an overt expression of anti-urban sentiment. It was certainly a refutation of the cheek by jowl urbanism that characterised large European towns and cities, where most buildings were packed together and sections or plots were either non-existent or small. It was also a rebuff to the class-defined housing typology of urban Britain: row and tenement housing for workers, terrace or semi-detached housing for the middle classes, and stand-alone villas on suburban plots for the capitalist elite. (Toomath, 1996, p73) Further, by the time of New Zealand's colonisation row and tenement housing was becoming associated with the overcrowding and squalor of industrial city slums, giving them an Old World taint that few wanted replicated in the New. Aside from a few examples of row and terrace housing in Christchurch and Dunedin, medium-density housing was virtually unknown in New Zealand until the early 20th century. This aspect was to differentiate New Zealand's cities from their Australian counterparts, whose larger populations and the need to be within walking distance of city workplaces generated higher inner city housing densities, leading to streets of terrace housing in places like Sydney and Melbourne. Yet opposition to aspects of metropolitan urbanism did not necessarily make colonial society anti-urban. Rather it signalled an ambition to create more spacious and modern cities that would offer most settlers a better quality of life than in Britain. Understood this way, the single-unit house on its own section referenced the suburban villas, in parkland settings, of London and Manchester's emerging capitalist elite.

The reality was that New Zealand developed a hybrid urbanism, incorporating both country and city elements. The large section with a fecund garden referenced the self-provisioning smallholder; the higher population density suggested the propinquity and the sociability of big city life. We would now refer to this morphology as suburban, but in New Zealand the term originally referred to smallholding size allotments on town peripheries, as in Nelson and Dunedin. Urban was the town. Yet the sprawling and shapeless nature of colonial towns showed that 'urban' had different meanings in colonial New Zealand from what it had in Britain.

Homeownership

This included homeownership. Official data on city housing tenure was not collected in New Zealand until the 1916 *Census* so it's difficult to ascertain the extent to which city dwellers owned their own home. But qualitative evidence suggests the proportion was significantly higher than in Britain where less than ten per cent of homes were owner occupied. (Olssen, 2011, p.312 and Dennis, 1986, p142) Within Victorian society homeownership was equated with greater level of independence and respectability than renting. Before universal male suffrage house ownership conferred the right to vote, increasing the owner's social status and self-respect and lessening the obligation of deference. As historians have noted the prospect of homeownership was a strong factor in the decision of working people to emigrate. Graeme Davison has written: "the only real prospect of freehold ownership for most British working men was in the colonies." He notes that Australian immigrant letters home often spoke of the desire for homeownership, its association with independence, and to their success in realising it. (Davison, 2000, p9) This was true for many New Zealand immigrants

too, among them Dunedin resident J. F. Blackwood, his wife Elizabeth and their four children. In a letter home to his parents in 1861 the general hand spoke of his success in building his Maitland Street home:

We have now got into our own new house. It has been a struggle [*sic*] to get it up but we are now into it at a cost of upwards of Seventy £. That is one of the great comforts of a Colonist that altho [*sic*] the life be a little rugged you have your own dwelling and piece of Ground a thing almost out of the power of any working man in the home country. (Blackwood, 1861)

Blackwood acknowledges it had taken some effort to get his house up, but this was outweighed by his sense of achievement of owning his own home and section, something he recognises was beyond him back in Scotland. That he and his family moved into his own home only four years after arriving in New Zealand highlights the importance some working class settlers placed on becoming owner-occupiers. If the pervasiveness of homeownership and the move to a common housing type in New Zealand was a nod in the direction of New World egalitarianism it did not negate the importance of class-consciousness. Working people might rightly luxuriate in the fact they lived in a stand-alone house on its own plot with a garden, but they also knew the larger house with the more spacious garden further up the street usually belonged to people who were above them in the social hierarchy. It was a feature of colonial urbanism that rich and poor often lived in the same streets. Spatial segregation became more pronounced in the 20th century with increased suburbanisation.

Eclecticism

The last defining feature of colonial urbanism was its eclecticism. Rather than streets of buildings of a similar design and/or scale, as was common in European cities, buildings in New Zealand's streets were a hotchpotch of different heights and designs. As early as 1842 Wellington was described as a scattered village of 1,100 town acres 'on which everyone has built as suited his tastes and means.' (*Sydney Gazette and New South Wales Advertiser*, 12 Jul 1842, p. 2) A decade later, George Earp observed of Auckland that '[u]niformity in the town has been set at defiance, every one building according to his means or fancy.' (Earp, 1852, p48) William Swainson agreed and asserted 'the only approach to uniformity is in the material: with a few exceptions, all are of wood.' (*New Zealander*, 12 May 1852, p3) The eclecticism was a result of the laissez-faire political economy of New World societies, which promoted individualism and the primacy of private property rights. Accordingly, property owners were largely free to construct what they liked, the size and style of buildings reflecting their wealth, power and aesthetic taste. So in contrast to the standardized British row house or the common building style of cities like Bath, which conveyed collective urban identities, the divergent sizes and designs of houses and buildings in urban New Zealand expressed the diverse identities of their owners. Even in residential streets, houses of a common style were often distinguished by different architectural treatments or additions. Few were exactly alike. Twentieth century critics were to condemn this aspect of New Zealand's urbanism. For instance, in 1947 the Modernist architect Ernst Plischke characterised the New Zealand town as 'a haphazard collection of all sorts of buildings and most of the styles of the last two thousand years...strung along a road, without regard to the size or character of the neighbouring buildings or the appearance of the street.' (Plischke, 1947, p. 52) Such criticism eventually led to controls on the size and bulk of buildings but largely stopping short of regulating for style. To restrict property owners from constructing a building of their own image would have rubbed against the cultural grain.

Interestingly, in 2012 the government Productivity Commission identified the predominance of bespoke houses as an important element in making New Zealand houses among the most expensive to build in the world. Even new homebuyers who chose a dwelling from a building company pattern book often made changes to the design to reflect their individual needs and taste. (*Dominion Post*, 27 Oct 2012, p. A2)

Conclusion

From this brief survey, we can see that capitalist social relations and settlers' cultural practices were instrumental in shaping New Zealand's early urbanism. It was characterised by three main elements: a sprawling, ill-defined settlement pattern, stand-alone cottages on their own sections (many of which were owner-occupied), and a stylistically eclectic built environment. This template became ubiquitous in New Zealand's colonial towns and cities thereafter, underscoring how 'being urban' was redefined in the colonial context.

So if sprawl characterised New Zealand urbanism from the beginning is urban consolidation too great a change to be accepted by most New Zealanders? I don't want to debate the merits or otherwise of urban consolidation other than to say I'm generally supportive of it, but it seems to me that proponents of consolidation have often underestimated how far sprawl is embedded in the national psyche. The opportunity to live in a stand-alone house on its own plot of ground has long been central to New Zealanders' sense of place and wellbeing. In fact, a 2011 international survey about the hopes and fears of people aged 18-35 revealed the greatest fear among the New Zealand cohort was the prospect of living in a city apartment. The reason given for the fear was that it would limit their access to outdoor pursuits. New Zealand was unique among the 20 countries in the survey in raising apartment living as a fear, underscoring the cultural importance of low-density living arrangements to most New Zealanders. (Hallet, 2011) There is a degree of arrogance in the argument that city dwellers will flock to apartment living because 'all the global data' supports it and what is good for the city is ultimately good for them. While many of them will take to high- or low-rise apartment living, many more will want to remain grounded and connected to the soil. Developing a new urbanism that allows for this while also reigning in the worst effects of sprawl is a pivotal challenge for city builders in the 21st century.

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Contemporary Aboriginal Art and the Cultural Landscapes of Urban Australia

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Place identity in Australia is currently in a state of flux, owing to the decentralization of cultural landscapes through urbanization. Indigenous caring for landscape has always been associated with the originary condition of Australian wilderness. This paper argues that an understanding of place identity in Australia can arrive from a reassessment of national cultural landscapes, both wild and urban, when we take seriously the imbrications of colonial and Indigenous landscape practices. It does this through an investigation of contemporary Indigenous art, focusing in particular on the work of artist Michael Jagamara Nelson. His work allowed Indigenous art to become recognized as significant in regards to place identity, referencing the alternate cultural markings within the landscape. The argument also draws on Bill Gammage's observation that Australian wilderness landscapes are not 'pristine' but have already been manipulated by Indigenous people for many millennia, having created clearings, green belts, forests and edges, through the acts and rituals of marking and designing landscape. Aboriginal art is expressive of land practice, which is not purely farming, but a way of life: it is spiritual, human and natural.

Through the reading of Michael Jagamara Nelson's artworks as expressive of the figures spatial identity within the Australian landscape, the paper demonstrates the need for a shift from a technological to a cultural reading of landscape. The paper proceeds to demonstrate that contemporary urban landscapes can be read in a similar fashion to Indigenous cultural landscapes. Inscribed by humans and the choreography of their gestures. Journeys within the urban grid, between its edges, making markings and patterns, making up the rituals of movement implicates the cultural landscapes of urban Australia.

Introduction

A cultural dichotomy exists in the application of or intervention through Indigenous art in urban spaces, not just within Australia but globally. The inclusion of artwork so expressive of a country which Bill Gammage (2011) prescribes to be 'originary'¹ (pp102-122) as a landscape inclusive of human intervention and nurture, within a cultural landscape so shaped by colonized space can be argued to cause seeming discrepancies in readings of cultural landscapes. However, new ways of attending to cultural landscapes has the potential to move understandings of actual landscapes away from technological readings.² Through recognizing the place of the figure and the gestures and resultant markings that it inscribes throughout the cultural layers of the ancient, colonized and industrial urban landscapes.

The application of Australian Indigenous artist Lena Nyadbi's painting, *Dayiwul Lirlim Ngarrangami*, onto the roof of the Musee de Quai Branly in Paris is a case in point of such a duality between cultural and technological landscapes. The symbolism in her work is both local and global. The metaphor within *Dayiwul Lirlim Ngarrangami* (Barramundi Scales Dreaming) is linked to her ancestral totem of the Gija people, from Walmanjikulum in the East Kimberley region of Australia. The Dreaming story that is being expressed is of three women chasing the barramundi to the headwaters of a river in the hope of catching it, only for it to escape from the spinifex netting. It's scales, scattered all over the country that became the site of the world's largest diamond mine.

Nyadbi emphasizes the connection between the scales of the barramundi and the diamonds in the land.³ This expression and reading of landscape that Nyadbi marks with her work is a contemporary reading of country, acknowledging the shifts within the Australian cultural landscape through the layers of alternate land practices, from the ancient to the colonial and industrial. Through the collaboration with the directors and architect of Musee de Quai Branly Jean Nouvell, Nyadbi's work *Dayiwul Lirlim Ngarrangami* has been made to present a global narrative: the painting on an architectural scale in one of the world's most urbane cities represents a key shift in the understanding of global cultural landscapes, acknowledging the inextricable connections between the nature of industrialized and cultural landscapes within urban environments.

This rethinking of the urban landscape enacted by the application of contemporary Australian Indigenous art as one cultural landscape within another more dominant landscape can be seen to have a precedent in Australia in the work of Indigenous artist Michael Jagamara Nelson. Nelson's painting *Possum and Wallaby Dreaming* is installed in the form of a mosaic in the forecourt of the Parliament House of Australia, in Canberra. Vivien Johnson (1997) discusses the symbolism embedded within the mosaic of *Possum and Wallaby Dreaming* as creating a representation of the Australian landscape as a meeting place, an all-encompassing terrain that is pivotal to the identity of its people. (pp82-86)

The aim of this paper is to consider the duality of cultural and colonized or industrial landscapes; through contemporary Indigenous art works that transgress the conventional scale of artworks as they are applied to larger industrial contexts and urban settings. The paper will consider cultural landscapes as an internalized set of human markings, with the figure's identity based on the rituals and cultural activities within a specific landscape.

The Complexity of the Australian Cultural Landscape

Cultural landscapes are a part of the identity of a nation. The cultural landscape in Australia arguably has an ancient condition, as a country of spiritual and creative vitality for both land and humans. Gammage (2011) discusses this development of complexity since the colonization of the landscape by Great Britain in 1788, now identified through new human markings within the landscape. (p103) The new colonizers anticipated an 'ideal' of the Australian landscape as governed by an eighteenth century notion of the romanticized⁴ relationship between place and person, and of taming the wild as the other. That is, there was a separation of landscape from the human, and the wild and pristine were to be conquered and regarded as the other. Gammage (2011) suggested this led to a centralized and powerful image of a picturesque and sublime European colony. (pp 307-323)

Indigenous notions of landscape are far removed from the Eurocentric romantic assumptions. The indigenous landscape is not a place to be tamed or looked upon; there exists no hierarchy of human ruling over its landscape. Rather it is a country that gives and receives life. Deborah Bird Rose (1996) describes the Indigenous landscape as not being purely personified, but as synonymous with the Indigenous people. The Eurocentric and Indigenous notions of landscape, did not meld successfully, resulting in a complex cultural terrain.

Since post-industrial urbanization, this flux of place identity⁵ as described by Anne Buttmer (1980) has dislocated the Australian cultural landscape even further. In this paper, urbanization is not being considered as negative, but rather as a dramatic force in the reshaping of the cultural landscapes within an already delicate cultural terrain. For the Eurocentric romantics, the wild and pristine environments had mostly been tamed, thereby questioning their role and identity in contemporary cultural landscapes. And the dependency of the soul of the landscape with the health of its indigenous occupants is also disenfranchised. This has arguably lead to a collective instability and flux of the inhabitant's identities within the urbanized complexities of Australian cultural landscapes.

Both Lena Nyadbi and Michael Jagamara Nelson's artworks speak of this complexity that is prevalent within the cultural landscapes of Australia. Nelson's *Possum and Wallaby Dreaming* mosaic in the forecourt of the Parliament House of Australia in Canberra is particularly germane. It is not just a reading of the indigenous condition of cultural landscape, but also of all who have immigrated into the country's landscape and who may be finding their identities and heritage in a state of uncertainty or flux. The mosaic exists as a participatory and collaborative reading of the land, owing to its urban scale and its accessibility. The work is not aimed to be politically loaded⁶ although it sits in one of the most politically charged environments in Australia. Nor is the work sentimental, it is a sensitive response to the cultural landscape, as it exists, a multitudinous geography of identities meeting within the Australian environment.

Shortly after the opening of Nelson's mosaic in 1988, he travelled to New York City with fellow Indigenous artist Billy Stockman. Johnson (1997) discusses the importance for both the artists taking part in the *Dreamings: Art of Aboriginal Australia* exhibition at the Asia Society Gallery, as participating in the ritual of creating sand paintings as an instillation in the gallery space, marking the patterns and gestures of their cultural landscape within another. (pp92-98) Nelson saw this as an opportunity to communicate the globalized and dynamic symbolism of contemporary Indigenous art to the world outside of Australia, as a movement of work that is expressive of country in its holistic

multicultural condition, and not as a romanticized corollary of an ancient landscape. Johnson (1997) described Nelson's 1989 commission to paint the *BMW Aboriginal Art Car* in a similar light, as a global expression of the contemporary elasticity of Indigenous culture and art. The car was exhibited along with vehicles painted by prominent contemporary and pop culture artists of the 1980s. (pp99-109) The design applied to the automobile strongly referenced the symbol of landscape, as an environment of diverse cultural layers, on a local and global scale. The image of this piece became a popular effigy for contemporary Australian Indigenous art throughout the world.

Nyadbi's rooftop painting at Musee de Quai Branly in Paris resonates with a similar narrative. It is steeped in tradition, yet it also crosses into the reading of the landscape in its current condition: the scales of the barramundi scatter across the country and exist as diamonds deep in the land. These diamonds have now been found, removed and tamed from their pristine state.⁷ Nyadbi's work is a narrative that conserves notions of both the romantic Eurocentric, and Indigenous landscapes.

Furthermore, this narrative is read from an international landmark within the urban environment of Paris, allowing a voyeuristic experience of looking down upon the fabric of the landscape. The painting is applied at the scale of an actual urban landscape, as a technological application and an immersive work. The viewing of *Dayiwul Lirlim Ngarrangami* in this way shares its narratives between two distinctly different, yet humanly connected worlds, that of the ancient Australian landscape and urban France.

The Alternate Markings of Indigenous and Eurocentric Land Practice

The ancient cultural landscape of Australia is infused with an assimilation of topography and theology.⁸ Gammage (2011) speaks of an attitude within the indigenous communities of "thinking universally and acting locally" (p4) with this awareness of the environmental systems of the landscape underpinning their cultural and ecological approach to lifestyle and country.⁹ Rose (1996) discusses this ethos as stemming from the Dreaming, an Indigenous belief of ancestral geographical creations and gestures, its laws allowing place to govern time, all dominated by an understanding of ecology.

Song lines are expressive of this law, referencing the paths that ancestors and totems travelled throughout the landscape. Australia is etched with the traces of movement and song lines, which exist as one of many expressions of the cultural identity of its people and their synonymous connection to country. These paths are believed to have brought the landscape into existence, as indigenous peoples imitate the movement of their ancestors and totems between sheltered terrains. Patterns mark survival lines through the land, Gammage (2011) describing these lines as avenues between seasonal water catchments, fauna migration routes, and places for gatherings and rituals. (pp123-205)

Fire burning was widely used as a practice of maintaining country, moving through and marking the patterns of the song lines, creating grass lands for both the hunting of fauna and for the gathering of fresh plants, roots and seeds. As this practice was repeated seasonally, the country became, as Gammage (2011) discusses, a series of landscaped spaces, marked by the actions of its people. (p187) With edges, clearings and green belts creating a series of tribal territories, hunting grounds and conservation reserves¹⁰ the landscape reflected the laws of the Dreaming and movements

predetermined by the song lines. Both Rose (1996) and Gammage (2011) discuss the way in which the complexities of these nurtured environments were balanced perfectly within this unified and non-hierarchical system of people caring for land, as land cares for people.

A greater complexity of the Australian cultural landscape arose with the colonization by the British Empire in 1788. The new settlers of the country had little time for the Australian landscape as it existed. They entered the cultural terrain with a profoundly different ethos, to alter, develop and to gain a profit from the land. Gammage (2011) discusses the impact of the introduction of hooved grazing animals into existing Indigenous cultivated grasslands, which then became fenced and used for farming. This introduced system of landscape markings took its toll, and the ancient patterns of the continent began to dissolve. Where it had once been verdant and plentiful with water, soil began to compact and dry out under the impact of introduced animals. The once nutrient rich topsoil then became dry, shifting across the landscape with the slightest breeze, creating silt in river and stream systems. (pp103-121, 281)

The land has a dependency on the ecology created by its Indigenous occupants. Here exists the duality¹¹ within the landscape practice approaches that have created the Australian terrain. Where the Indigenous Australians farmed the country through religious sanctions and with an attitude of care, the colonizers sought to use the land for profit and export economy. The imbrications of these polar notions and applications of land practices underlie issues of place identity and the complexities of the Australian cultural landscape. And since the increased rate of urbanization, the identity of both the Indigenous and colonizing people of the landscape have been reflected in the flux of the systems of markings placed on the geographical condition of the continent.

The figure of Michael Jagamara Nelson

Place identity as an indigenous notion is immensely reliant on the condition of the landscape, which is apparent through many facets of Indigenous culture. For example, there is an innate and intimate connection between an Indigenous Australian and the landscape from before the moment of birth, as traditionally the spirit from within the country animates the foetus. Landscape is ingrained within the birth, physically and metaphysically;¹² Indigenous art is expressive of this. It is traditionally a tool to survival and a way of passing land practice techniques and song lines on to younger generations, as well as an expression of the inherent spirituality and physical reliance of the people with their country. Howard Morphy (1988) discusses the way in which both traditional and contemporary Indigenous art acts as an expression of the cultural landscape and the identity of the humans within it. (pp23,99)

Growing up in the early 1940s, Indigenous artist Michael Jagamara Nelson expressed his Dreaming and his landscape through sand paintings, skin markings, and travelling the song lines of the Warlpiri land with his family.¹³ Nelson first learnt the English language when his family settled in Yuendumu.¹⁴ After which he travelled extensively before residing in Papunya, in the mid 1970s.¹⁵ At this time in Papunya, there was an art movement stirring. The artists of the Papunya Tula art movement¹⁶ were commercializing their work, not as an artefact but as contemporary art.¹⁷ The art movement pushed for cultural recognition for the Indigenous societies of Western Desert regions of Australia. Johnson (1997) discusses Michael Jagamara Nelson's recognition of this threat of cultural loss through his experiences as a child and during his youth. Witnessing the alteration in the

markings of the Australian landscape, and with the permission and influence of the Papunya Tula elders, he placed his first artwork onto canvas in 1979. (pp47-50)

Nelson is the perfect precedent when looking at the implications of this complex cultural landscape. As an indigenous man, he has his Dreaming, an expression of his identity that continually stirs through his country, urban and wild. His expressions through art exist as a collaborative narration between the innate connection and Indigenous notion of landscape with the Eurocentric notion. As a case study, his art can be read as a bridging and collaboration of the duality and complexities of Australian cultural landscape.

Central to the expression of landscape in Indigenous art is the human figure and its movement through the country.¹⁸ The figure exists as a vessel for the initiation of markings and the practice of laws and Dreaming rituals. The figure is not directly or visually referenced in many contemporary Indigenous art pieces. Rather the patterns of the figure's motion within the landscape are expressed.¹⁹ Indigenous art is the static representation of a kinaesthetic notion of Australia's Dreaming landscape. Anne Buttimer (1980) discusses the figure as being pivotal through both the Eurocentric and Indigenous notions of landscape whether as a conqueror or a caretaker; in both situations there is a reliance on the land. (p166) Within Australia there exists a complex series of markings etched into the terrain through the ritualistic gestures of urban, rural and wild landscapes.

The markings of ancient and urbanized Australia are both connected to markings of the figure as caretaker, as well as conqueror. As Indigenous people developed their knowledge of the physical landscape around them, a spiritual system was devised to set up sanctions, allowing the markings and imprint of the people to have a more subtle and synonymous relationship with the landscape. This relationship as discussed by Gammage (2011) as caretaker can also be considered as conquering. The land practices and markings rose out of the dependency on the land to survive. (p107) Areas of the landscape were farmed and altered over time, creating a terrain that would sustain long-term cultural prosperity. A similar occurrence can be read from the markings within the urban environment. As the figure is born into the urban landscape, this exists as their place of survival.

The urban environment can be considered as a landscape to be nurtured as a multicultural terrain. The densely populated areas of Australia have little physical connection to the ancient landscape. But the markings within them can still be read in a similar fashion, as the figure patterns the country for survival and future prosperity. Both the ancient and the urbanized can be read as layers of marking, resultant from higher and lower densities of human interaction.

Nelson's mosaic in the forecourt of the Parliament House of Australia in Canberra is an expression of the cross-cultural landscape patterning by humans within the Australian land. It's reading allows for a reassessment of the cultural landscape as a multi cultural and dynamic space: the shaping of urban environments marked through a series of events.²⁰ Transport systems and pedestrian movement mark metropolitan zones through private territories of residential, business and industrial zones; gridded, marked and patterned through an interaction with landscape. A rural terrain divided by fences and stretches of panoramic roads, polka dots of human dwellings within vast strips of crops, with mines and quarries slicing the country into sections. The Australian landscapes of its wild conservation parks, etched by fauna, water courses and the climatic elements, with pedestrian

hiking tracks striking around their edges. The ancient narrative of the landscapes, as mentioned by Gammage (2011), are marked with a series of networks and song lines walking between territories, gendered spaces, sacred sites and seasonal hunting grounds. (p135) There exists a ritual of human gesture and shaping within all of these readings and cross connecting networks within Australia's landscape markings.

The architect of the Parliament House of Australia, Romaldo Guirgola, initiated the idea of including an Indigenous inspired mosaic in the forecourt. Johnson (1997) discusses the primary reason for his choice of Michael Jagamara Nelson's design from a selection of ten works submitted by five Papunya Tula Artists, for its narrative and form of patterning. The narrative of a 'meeting place' was parallel with Guigola's design intent for the forecourt space. (p84) *Possum and Wallaby Dreaming* is expressive of Waite Creek, a Dreaming place on the edge of his Warlpiri country. Johnson (1997) describes Waite Creek as a meeting place for Nelson's ancestors, and the mosaic exists as a representation of the congregation space for the figures of the "contemporary ceremonies" (p85) of the Dreaming. The narrative of the mosaic draws on the layering of ancient, colonial, and current urban technological conditions of Australian landscape, in an approach attuned to the cultural nuances.

The Figure as Expressed through Aboriginal Art

The figure not only marks the patterns that create these cultural impressions and expressions. Jeffrey Malpas (1999) discusses the figure as a vessel that holds an identity of its surrounding cultural landscapes, and an awareness of its place within country.²¹ The human figure can be considered as a custodian of its markings within the landscape. Through the Indigenous creations of landscapes, and the overlay of Eurocentric and urban markings, we arguably have a way of rereading and reassessing the urban landscape in a similar fashion to that of an ancient reading, as expressed through Indigenous art. The figure is central to the shifting of cultural lenses and attitudes, through collaborations and relationships between other spaces and other figures. It is the crossover for cultural landscape readings, as it moves through its complexities.

In Nelson's country and the broader Central and Western Desert regions of Australia, Indigenous ancestral law initiates a space from within the figure, moving outwards through surrounding events within the landscape. Nancy Munn (1996) discusses these inward spaces as reactions of memories and associations from their landscape, creating an internalized realm of personal identity.²² Therefore when there has been a shift in the condition of the landscape, the foundations of the associated identities also shift. This suggests a robust and versatile relationship between the Indigenous figures of the Central and Western Desert regions and their landscape. An inward identity that is at once being reflective of and expressive through its markings and gestures within the landscape, suggests an opportunity for a similar contemporary reliance on cultural identity.

This internal spatial environment, built from memories and associations, is apparent in perhaps a less spiritual fashion through the figures of the colonial settlers of 1788. As previously stated they entered the land with an ethos that was different to the ancient laws of the Australian landscape. Yet their ethos in turn affected the approach in which they went about marking the terrain. The manner in which they moved was with an awareness of a different landscape, the events that

travelled through the landscape were from another country with an alternative set of landscape identity associations.

Today the flux of identities within the urbanized landscape of Australia could be seen to have developed from the overlay of such remote associations. The internalized geography is associated with such complexities of external cultural landscape identities. Nelson's mosaic *Possum and Wallaby Dreaming* addresses this diverse multiplicity of inward landscapes of identity within urban environments. His work does not reject the dissimilarities, but embraces them as a synonymous part of the process of patterning country.

Johnson (1997) expresses Nelson's identity and spatiality of his figure and internal landscape as being robust. His art is explicit of a finely attuned and sensitive recognition of the markings that his figure makes, from within himself and within the landscape. (p33) An awareness of the spatial identities, the differing land practices, and the ritual of gestures the figure patterns within landscapes of differing urban densities. Each place, urban to wild, holds a unique system of markings based on the layers of movement made by the figure.

In 1984 Nelson painted two works that lent their narratives to such a notion of landscape marked by human gestures, in different layers, densities, and with different identities, as discussed by Johnson (1997). *Three Dreamings* and *Five Stories*, the first won the National Aboriginal Art Award in Darwin, (pp54-56) and the second was painted for the Art in Australia exhibition held in Melbourne in 1985. (pp61-70) As the title of both paintings suggest, they exist as a synthesis of multiple Dreamings. (pp54-56) With complex asymmetrical forms, interlocking and overlapping, their structure not dissimilar to the gestures inscribed in the urban landscape, but layered with traditional motifs and intricate dotting. In *Five Stories* his tonal variation strays from that of the Papunya Tula artists. (pp61-70) The narrative of the painting referencing the ancient condition of the artistic expression of landscape as painted on the skin of the indigenous figure. With an overlay of Dreaming landscapes of the 1980 cultural terrain,²³ the work reads as a contemporary filter placed over the ancient traditions of the land.

As seen through Indigenous artist Lena Nyadbi's work *Dayiwul Lirlim Ngarrangami* on the roof of Musee de Quai Branly in Paris, and through Michael Jagamara Nelson's *Possum and Wallaby Dreaming* mosaic in the forecourt of the Parliament House of Australia in Canberra, a cross-cultural reading of the complex landscape conditions is apparent, as Morphy (1998) states when discussing Indigenous art, through its strength of dynamic identity and symbolism. (p139) As Indigenous art is expressive and at once ingrained within the Australian terrain, it is dynamic by nature,²⁴ with the ability to adapt to the variations of markings²⁵ placed over the landscape, created by the figures and their identities. Contemporary Indigenous art engages the other; it is inclusive of and relies on the other to move through its realm of Dreaming. In this case, the other refers to the markings made by new settlers within the landscape and the patterning within contemporary urban environments. The actions of the figure, determined by its identity, forms the intricate networks within the Australian cultural landscape, transcending time as the markings of each individual is a continuum of expression and reaction within actual landscapes, as well as the internal landscapes of other figures.²⁶

Conclusion

Urban landscapes can be reconsidered and reread as spaces marked by cultural rituals. The ecologies of these built environments, sculpted by the movements and rituals of the figures that act within them. Movements as simple and modest as a daily routine of initiating activity between the work place and a café, can be read as identity based actions. These kinaesthetic moments between places of settlement mark patterns that are continuously overlaid by a multitude of other movements, and driven by forces of cultural identities with their memories and associations of the urban landscape.

Contemporary gestures and rituals and their patterning can be considered to be as culturally significant as the song lines that marked the ancient landscape of Australia. These rituals that result in the markings of landscape are both based on cultural norms and habits, relevant to the lifestyle and the societies of individual figures within the cultural landscape of collective identities. Hence there are contemporary song lines moving through the landscape and the figure's identities that dwell within it. Whether the country is marked by roadways or by the seasonal hunting grounds of its Indigenous figures of pre 1788, the act of marking is still the same. The human patterns the terrain through a series of gestures and movements. There is no loss of identity within urban environments, but a complexity in relation to its expression culturally through the dislocation of the land practice techniques, of the ancient and settler landscapes. The identity is relevant to the occupant of the space urban and wild. In both, there exists a series of survival patterns. The artworks of Michael Jagamara Nelson contain cross-cultural readings and narratives through the many layers of alternate markings within the landscape. This provides a cultural reading, as opposed to a technological reading, of the gestures of the figure that creates events in daily and seasonal cycles.

¹ The 'originary' condition of landscape referencing the time of settlement by Indigenous Australians, not the country in a state of wilderness untouched by human intervention. Gammage, B (2011) *The Biggest Estate on Earth: How Aborigines Made Australia*, Sydney, Allen & Unwin pp. 102 – 122.

² The technological reading of landscape here refers to the conceiving of landscape as driven by human prosthetic functions, rather than that of the immediate human gesture.

³ ABC News (2013) *Paris rooftop display shows Indigenous artist Lena Nyadbi's work to the world*, viewed 11 June 2013, <http://www.abc.net.au/news/2013.06.07/paris-rooftop-display-shows-lena-nyadbi-work/4738990>

⁴ As discussed in both Gammage, B (2011) *The Biggest Estate on Earth: How Aborigines Made Australia*, Sydney, Allen & Unwin p. 5, and in Buttimer, A (1980) "Home, Reach, and The Sence of Place" *Human Experience of Space and Place*, as she recalls the changes through different periods of time in the relationship between identity and place, making reference to the eighteenth century Romantic literature, which holds a centralized notion of home and place.

⁵ Buttimer is pushing for place identity to be taken into account at the time that she was writing her article, pre 1980, in a time of urban growth, where feelings of decentralization and loss of identity are abundant with the loss of culture. Buttimer, A (1980) "Home, Reach, and The Sence of Place" *Human Experience of Space and Place*.

⁶ Throughout Johnson's text the point is stressed that Michael Jagamara Nelson never pushed his artworks as a political agenda, but as an expression of cultural collaborations. It was not within the Law of his land and people, from the Warlpiri country to protest and cause disruption at public events. Johnson, V (1997) *Michael Jagamara Nelson*, Craftsman House Roseville, New South Wales.

⁷ Pristine, as a landscape inclusive of its indigenous occupants and the ecological land practices that were sustained through their soul occupation of the landscape.

⁸ Topography and theology as an alternate take on “theology and ecology” as written in Gammage’s text, Gammage, B (2011) *The Biggest Estate on Earth; How Aborigines Made Australia*, Sydney, Allen & Unwin, page 133. Where he expresses the density of the religious sanctions and the ecological sanctions placed over the land, by the Indigenous people, for survival of future generations, to “leave the world as found”. Although for the concern of this paper, the appropriate use of topography, as a pattern of marking is being expressed, not as a bias ecological stand point.

⁹ Refer to the use of the word country as an Indigenous definition of landscape in Rose, D.B (1996) *Nourishing Terrains, Australian Aboriginal Views of Landscape and Wilderness*, Canberra, Australian Heritage Commission.

¹⁰ As expressed by Rose, the term conservation is an idiom of the contemporary time, along with the realization of loss and need for preservation, but this notion was prevalent with the health of the Indigenous people relying on the health and preservation of the landscape. Rose, D.B (1996) *Nourishing Terrains, Australian Aboriginal Views of Landscape and Wilderness*, Canberra, Australian Heritage Commission.

¹¹ The duality of land practices within the cultural landscape, relating directly to Michael Jagamara Nelson and Lena Nyadbi’s artwork, implemented into urban environments, the duality exists in the modification and layering of landscape, with dislocations and assimilations.

¹² The innateness of the spiritual insemination of Indigenous life through the pregnancy is directly associated with Michael Jagamara Nelson’s own condition of birthplace, and therefore connected with the identity of his landscape. Johnson, V (1997) *Michael Jagamara Nelson*, Craftsman House Roseville, New South Wales pp. 9 – 13.

¹³ Michael Jagamara Nelson as a figurative vessel acts as a bridging between the dichotomies of land markings within the Australian cultural landscape, as he has lived through many variations of alternate markings, from ‘originary’ through to highly dense urban markings, such as New York City. Johnson, V (1997) *Michael Jagamara Nelson*, Craftsman House Roseville, New South Wales pp. 92 – 98.

¹⁴ Learning the English language, was not only one of Michael Jagamara Nelson’s first interactions with the Eurocentric society, but also was the beginning of him creating a narrative between cultures, symbolically and linguistically. Johnson, V (1997) *Michael Jagamara Nelson*, Craftsman House Roseville, New South Wales pp. 33 – 37.

¹⁵ Through Michael Jagamara Nelson’s traveling, experiencing differing urban environments and layers of cultural landscape, this is reflected in his art works, with systems of layering of alternate Dreaming stories and song lines.

¹⁶ The Papunya Tula art movement, as expressed by John Kean in *Papunya, place and time*, in Johnson, V (2007) *Papunya Painting; Out of the Desert*, National Museum of Australia Press, Canberra, pp. 5 – 15, as a meeting of two cultures, leaving one with the need to assert itself within the other, through its expression through a contemporary art movement.

¹⁷ Contemporary art speaking of the abstraction of traditional Indigenous symbols, such as the circle, line and dot, to reference the contemporary culture of the Australian landscape. Morphy, H (1998) *Aboriginal Art*, London, Phaidon Press Limited p. 124.

¹⁸ The kinesthetic actions of the Indigenous figure based on the rituals of land practices, as expressed through art. The notion of such Indigenous kinesthetic movement through land referenced from throughout Tawa, M (2002) “Place, Country, Chorography. Towards a Kinesthetic and Narrative Practice of Place.” *Architectural Theory Review Volume 7*.

¹⁹ In this case the figure moving through contemporary landscapes of alternate markings is reflected through contemporary Indigenous art, just as the ‘originary’ movement had been expressed in traditional art, the dynamic state of art and figure in relation to place has its strength in this notion.

²⁰ Referencing Munn, N.D (1996) “Excluded Spaces: The Figure in the Australian Aboriginal Landscape” *Critical Inquiry Volume 22*, and her writing on the spatialization of the actor within events, in the realm of social theories of “space, time and bodily action.”

²¹ Maplas discusses this awareness of self within place spatially, and as a site within a system of regions, through the notion of memory and experience, in great detail throughout his text, Malpas, J.E (1999) *Place and Experience; A philosophical Topography*, New York, Cambridge University Press.

²² Landscape within figure, making reference to the Indigenous notion, that stems from ancestral law of land use, territories and movement, discussed by Munn, where a space moves from within the actor, moving out throughout surrounding events, creating a landscape of identity and event based geologies. Munn, N.D (1996) “Excluded Spaces: The Figure in the Australian Aboriginal Landscape” *Critical Inquiry Volume 22*.

²³ "Since universe and Law never change, time is irrelevant, as in a dream. Change and time exist only as cycles: birth and death, the passage of stars and seasons, journeys, encounters, and after 1788 the appearance of plants and animals seemingly new but always there. Cycles are eddies, ending where they begin or eclipsed by larger cycles: travel by death for example, or seasons by life spans. Eddies exist not on a river of life, for a river has a beginning and end, but on bigger eddies, in a boundless pool. Time is an eddy; the pool is timeless. Pool, eddies and Law are the Dreaming." Gammage, B (2011) *The Biggest Estate on Earth; How Aborigines Made Australia*, Sydney, Allen & Unwin p. 123.

²⁴ Morphy considers Indigenous art and landscape as synonymous to one another, as it is an act of cultural identity. Morphy, H (1998) *Aboriginal Art*, London, Phaidon Press Limited p. 99

²⁵ Morphy sees little concern for the survival of indigenous art, as it is so intrinsically connected with landscape, it is dynamic in its form and expression, as are many art movements from all over the globe. Morphy, H (1998) *Aboriginal Art*, London, Phaidon Press Limited p. 139

²⁶ Tawa speaks of being within the landscape, when referencing the commercialized image of Uluru, and gazing into it, as an Indigenous notion, not to look upon it, move over it, or exist upon it, suggesting a reconnection of identities to the interiority of landscape as a sheltering environment. Tawa, M (2002) "Place, Country, Chorography. Towards a Kinesthetic and Narrative Practice of Place." *Architectural Theory Review Volume 7* p. 53.

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Why Melbourne Kept Its Trams

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Why did Melbourne keep its trams, especially during the 1950s and 1960s when other Australian capital cities, the major cities in New Zealand, the UK and Ireland, and most US and Canadian cities didn't? Melbourne now has the largest tramway system in the world, as measured by route length, though not by passenger numbers. This paper will explore how the automobile clubs and bus lobbies campaigned to get rid of trams. What is it in Melbourne's topography and political culture which enabled its tramway system to survive, while Sydney, with a bigger system, closed its entire network? Cities abandoning their trams promptly turned to buses. Only a handful of 'heritage' tram lines survived, though there is now a resurgence of light rail in some cities, and of all places, on the Gold Coast. The paper will set the analysis in the context of the coming of mass car ownership in the 1950s and 1960s, and the apparent attraction of getting rid of trams in the name of modernity.

Keywords: tramways, urban public transport, Melbourne, car use

Melbourne now has the largest tramway system in the world, as measured by track length, though not by numbers of passengers. Sydney's tramway system, at its peak length in the 1930s, was bigger than Melbourne's. From around the turn of the last century to the 1950s electric tramways carried more passengers in many of the world's large cities than did railways. Most large cities had tramway systems, especially in the UK, Europe, America and Australasia. At the same time, many invested in underground rail systems, also powered by electricity, from New York and London to Paris and Boston.

In this paper I attempt to explain the comparative fate of urban tramway systems. Why it is that Melbourne would save its tramway system? The only other large systems to survive were in Europe, from Amsterdam, Zurich, Berlin and Vienna, to Bucharest, Budapest, Milan, Prague and St Petersburg, the latter once having one of the largest networks and still, today, the highest patronage. Some other cities also retained smallish systems, from Lisbon to Basel to Hong Kong to Kolkata to Hiroshima.

Suburban railways and tramways spread throughout larger urban centres in the latter decades of the 19th century. Before then, residents and businesses had to rely on foot transport or horse and cart for carriage. The spread of these new forms of fixed track public transport not only made the cities more efficient, it enabled the movement of goods and people on a scale never before contemplated.

Most urban railway systems actually started as freight and passenger lines to service industrial and/or agricultural activities beyond the cities. The largest 19th century cities in Australia and New Zealand were port cities, so the railways provided transport for agricultural produce, including wool and wheat, to ports for export. Sydney and Melbourne were among the 20 largest cities in the world in the 1890s, which Adna Weber, deputy commissioner for Labor Statistics in New York, pointed out in his book *The Growth of Cities in the Nineteenth Century* (1899).

Gradually the railway networks, owned by colonial and then state governments in Australia, unlike the privately-owned networks in the US and the UK, could see the benefit of catering to growing suburbs, especially in the rapidly expanding metropolises of Sydney and Melbourne. In the other cities the port of Fremantle got a railway line, as did Port Adelaide and Hobart, while the Brisbane wharves were connected by rail to the state's hinterland.

While most of these suburban railway lines started as freight routes they soon had suburban services grafted onto them. The bigger cities gradually added new routes to cater for suburban land development, and allegations of vested interests for these new routes were common. All this transport investment was undertaken by colonial and then state governments who, holding income tax and inheritance tax powers, could readily borrow money on the British bond market. From the 1920s Sydney and Melbourne converted their suburban railways to electric traction, while other capital cities stuck with steam or diesel.

The ubiquitous tramway

At the same time as the railways are expanding, municipalities, attracted by the revenue they could raise from gas and electricity manufacture, suddenly realised that they too could get into mass public transport. Privately owned horse-drawn tram routes had become quite common by the 1860s and cable trams, most extensively in Melbourne, by the 1880s. But as the municipalities owned the roads and were increasingly investing in coal-fired electricity power stations, they seized the opportunity to become proprietors of electrically powered trams. Unlike the railways they didn't need to compulsorily acquire rights of way, they could simply have the track inserted in the streets they already owned.

These tramways were clearly aimed at suburban commuters. And because of the much heavier investment required in both track laying and property acquisition for railway corridors, trams were seen as a relatively cheap investment which municipalities could afford. Most early trams were open at the side. They could cope with overcrowding, which could be dangerous as photographic evidence of the time attests, with people literally just hanging on. The tram routes depended on the finances of the municipalities and tramway boards that funded them, but of course they were also strong income earners, fare evasion being relatively difficult with eagle-eyed conductors ever present.

With the notable exception of Melbourne, where the cable trams continued to flourish, most major world cities embracing trams moved quickly towards electric traction, whether they were municipally or privately owned. London, with its first electric tram in 1901, had a variety of private providers. St Petersburg got the American Westinghouse Corporation to provide its system in 1907. American expertise in what they called 'streetcars' was much admired around the world. By 1919 New York had one of the largest tramway systems in the world, carrying more people than railways and subways combined. (Rose and Seyfried 1995)

The nature of the routes depended on both the topography of the city and connections with other forms of transport. In Sydney quite a few tram routes connected to ferry wharves, often down perilously steep streets, hence photos of half submerged trams that had suffered brake failure hurtling into the harbour beyond the Taronga Zoo ferry terminus. In Brisbane the only way to get from South Brisbane station – which serviced both suburban railway lines and the interstate line – to the city was by tram, as no rail bridge had been built joining South Brisbane with the city centre. Melbourne, with its much flatter topography, provided fewer challenges to tramway builders. And unlike the convict cities – Sydney, Hobart, Brisbane and Perth – Melbourne luxuriated in wide streets, so the tramways often got their own reservation, separating themselves from horse-drawn traffic and subsequently the onset of ever more congestion caused by the car and the truck.

With the rise of the bus in the 1930s and the much anticipated coming of mass car ownership after World War Two, tramway systems throughout the world were under attack. Most had old rolling stock and all needed a new capital injection. Unlike railway systems, which were much chunkier, with guaranteed rights of way and control over vast swathes of inner city property, tramways could readily be challenged by buses, which were much more flexible. By the late 1940s most transport planners in the English-speaking world, not least in the United States, had decided that tramway systems were old hat, and that the bus and the private car would rule the post-war world.

Well over one hundred cities decided to abandon their tramway systems from the 1930s to the 1950s. The roads, which municipal or metropolitan authorities usually owned, could easily be reclaimed: tram lines could be simply covered over with bitumen. This happened throughout Canada, the United States, New Zealand, the United Kingdom and Ireland, and Australia, with the notable exception of Melbourne, with a substantial network, and Toronto, with a much smaller one.

The rise and rise of the car

Public transport use in Australia peaked towards the end of the Second World War. No new cars had been imported or manufactured for the domestic market during the last years of the war and severe petrol rationing severely restricted car use. Most blue collar and white collar jobs were in or within a few kilometres of the city centres, and the existing rail, bus and tramway routes served even the growing suburbs quite well. Most households lived within two kilometres of a rail or tram route in all the capital cities, and that distance was regarded as well within the walking or cycling capacity of most adults and almost all children. In the late 1930s only one in five households had access to a motor vehicle, and that declined during the war. Only a small proportion of women held licences, so many households put their cars up on 'blocks' while male heads of households enlisted in one of the armed services. (Spearritt 1987)

With the election of the conservative Menzies government in 1949, promising an end to petrol rationing, car use increased rapidly. The Curtin Labor government had already held an international competition for the manufacture of Australia's 'own car' which the US firm General Motors won, that corporation having already formed an alliance with Holden, an Adelaide assembly firm. The new Prime Minister, Ben Chifley, unveiled the first Holden coming off the assembly line in November 1948, to massive press and newsreel publicity. (Davison 2004, 8-10)

While railway patronage kept up after the war – particularly on longer suburban routes where trains were usually quicker than cars – tram patronage fell dramatically. Private bus companies had made inroads into tram routes since the 1920s. The regulations and restrictions on private bus operators varied greatly from capital city to capital city. Government bus services started in all the capital cities in the 1930s but none grew so rapidly as the Sydney system. Melbourne's government buses – some operated by the Tramway Board and some by the Railways – experienced a brief heyday during the war and early post-war years, but at their peak never carried more than one quarter of the trams' passenger volume. In 1950, before the most significant tramway route removal began, Sydney's buses were carrying almost two thirds the number of passengers accounted for by the trams. (Spearritt and Wells 1984)

In a number of American cities General Motors and other automotive interests bought up entire tramway systems with the express purpose of closing them down. The automotive industry stood to gain through car sales, truck and bus sales, as well as catering for an ever-growing demand for petrol. Trams were readily condemned as old-fashioned, no longer pertinent to establishing America as the world's most modern industrial power. Mass car ownership had well and truly arrived in America, having already flourished in the interwar years. Privately owned cars could cater for every imaginable trip, whether for work or leisure. (Yago 1984)

London: a streetcar named defunct

In the late 1940s and early 1950s Australian public transport bureaucrats either went overseas or hired overseas experts to come to Australia to tell their state government masters who to modernise their road and public transport systems. The NRMA and all the other motoring organisations (all with 'Royal' in their title) took their lead from America, and began a strident campaign for city freeway building which they have continued ever since. The NSW government hired experts from London to tell them what to do about road passenger transport in Sydney and Newcastle. (Sinclair 1949, Spearritt 2000).

Trams had continued as an important part of London's transport throughout the interwar and war years, but unlike the underground, which continued to expand its network, trams were already being replaced by trolley buses (overhead electric wires, but not fixed-track). Red double decker motor buses were introduced to London in the 1930s, and soon became a central trope for the depiction of the great metropolis.

As Barker and Robbins explain in their definitive *History of London Transport* (1974) the new diesel buses had a flexibility that both trams and trolley buses lacked, especially in new routes, where they did not need either fixed track or an overhead electricity supply. And Britain had its own major bus manufacturer in Leyland. The decision to ditch the tramway system, taken in 1946, saw its complete

closure by July 1952. *The Economist* ran a substantial editorial, with a delightful pun on the Tennessee Williams play, headed 'A Streetcar Named Defunct'. It noted a marked difference between London and those European cities which had much higher population densities and commented:

In Britain the urban population has in this century spread relatively thinly into the suburbs; the bus can operate correspondingly thin services economically. In countries where the towns have grown upwards as much as outwards, the tram can still provide very economically services on routes where the traffic is heavy....The buses could run as cheaply, or more cheaply, over the tram routes and then fan out in the suburbs and countryside to give something like door-to-door service. Why, then, keep the trams going too? (*Economist*, 5 July 1952)

It is easy with hindsight to point out the mistaken assumptions in this analysis. The *Economist* did not foresee that the coming of mass car ownership would produce very high levels of traffic congestion. There was no appreciation of the possibility that fixed-track transport systems might become both quicker and more reliable than driving, because of the difficulty of parking, and ever increasing traffic congestion, exacerbated every time there was an accident. The writer also failed to observe that the overground rail system, in conjunction with the London Underground, serviced most busy commuter routes very well, delivering people from far-flung suburbs to almost all the major centres of employment, with just a station change or two. The writer did note that Paris had already closed most of its tramway system, and that Bruges had done likewise, concluding 'in taking the tram to its terminus modern Britain is, as happens perhaps too rarely, showing the way'.

The Melbourne and Metropolitan Tramways Board

Post-war Britain did show the way to all Australian and New Zealand city tramway systems, with, in the first instance, only two exceptions, Brisbane and Melbourne. Trams had been regularly pilloried in all Australian cities, especially with the growth in car ownership in the 1920s and 1930s. In 1934 the Melbourne Lord Mayor wanted to 'pitch the trams out' of city streets, and the RACV complained that trams took up one third of the roadway, but only accounted for five per cent of the traffic. The ever-vigilant Tramways Board were quick to respond that while trams in Elizabeth St, City might be only five per cent of the vehicle movements, they carried 85 per cent of all people using the thoroughfare. (*Argus* 31 May and 28 June 1934)

Oil and motoring interests combined to continue their campaign against the trams. T.G. Paterson, the chairman of their thinly disguised lobby group, deceptively called the Australian Road Safety Council, told the *Argus* in 1948 that

Trams are illogical vehicles, since they are really railways using the road for a track...Because they are confined to the centre of the road they are 'road hogs', and a menace to their passengers and other vehicles. (28 July 1948)

Paterson claimed that in other parts of the world trams had been scrapped at the rate of 2,500 per year for the last 20 years, and that there were now 52,000 fewer trams worldwide than in 1927. He further claimed that 'in the interests of smooth traffic flow and road safety' the number of trams in the US had been reduced from 73,000 in 1923 to 24,000 in 1947. (*Argus* 3 August 1948) Paterson

did not mention that some of this sharp reduction was the result of General Motors buying up tramway systems cheaply and promptly closing them. (Rose and Seyfried 1995)

The Chairman of the MMTB, H.H. Bell, countered by telling the press that Melbourne's future city transport will be 'restricted to trams' which in time would be 'silent in running'. Bell reported that unlike other major cities, Melbourne was opening tram lines to replace buses, including the La Trobe St to Port Melbourne line and a line to Collingwood. Police Chief Morris proved a useful ally, stating that trams handled crowds better than buses and that 'until we have underground railways, I say, stick to trams, Melbourne'. (*Argus* 10 March, 31 January 1948) Sydney already had a small underground rail network in its city centre, but Melbourne had to wait till the 1980s for that.

The MMTB, as an independent statutory authority, had a long history of strong leadership. During the war Bell had run the system at a substantial surplus, but the profits were returned to the participating municipalities. Bell was replaced as Chairman in 1949 by Major-General Robert Risson, then the assistant manager of Brisbane City Council's tramway department. Coming from Australia's only capital city with a metropolitan-wide government, Risson came from a tradition of independence from the state government. The BCC not only owned the trams and the tracks, but they owned the power station on the Brisbane River that powered the trams. And tramway employees were on the council payroll. (Cole 1984)

Risson had no difficulty in adapting to the statutory authority he was to run. The MMTB had healthy patronage, and even though car ownership was increasing rapidly, the trams were still vital – with the railways – for the majority of journeys to work, and vital to get customers to and from the shops, whether in the city centre or along the great suburban shopping strips that the tram made possible, from Chapel St Prahran, and Acland St, St Kilda, south of the Yarra, to Nicholson St and High St in the north. Some arterial tram routes had their own rights of way, from Dandenong Rd and Royal Parade to Victoria Parade, where the trams could really belt along. The MMTB had actually put down some new routes in advance of suburban growth in the 1930s.

Tram patronage fell in Melbourne in the 1950s, but not as precipitously as in the other capital cities, where line closures were in full swing. Adelaide (maximum route length 129 kilometres) and Perth (maximum route length 55 kilometres) both closed their tramways in 1958. Auckland and Christchurch had closed theirs a few years before and Wellington had already abandoned half of its network, as had Sydney.

The coming of television in the late 1950s saw a decline in cinema attendance, but both rail and tram remained vital in getting people to and from AFL games, in the Australian city that still draws greater numbers to sporting events than any other. While Sunday drives remained the preserve of the car, trams still drove much of the action in inner and middle ring suburbs, from the journey to work to school and shopping trips.

In his suit, waistcoat and polished black shoes, Risson, who lived at Burwood, caught the Toorak Tram to work. For two decades he ran an effective holding operation, steering the Melbourne system through the dismantling of all other capital city systems, including Sydney by 1961 and Brisbane by 1969. Risson's trams didn't get to the new car-based shopping centres, including the first in Melbourne, Chadstone, opened in 1960. Brisbane's tram network did reach Australia's first

car-based shopping centre, at Chermside, opened in 1957, but that was it. Brisbane had invested in placing tram lines in concrete rather than bitumen but the rolling stock was decrepit. Hundreds of new buses were purchased from Leylands in the 1960s, which Brisbanites saw as the embrace of modernity. A fire in the Paddington Tram Depot in 1962 destroyed one fifth of the city's tramcars. Before then trolley buses had replaced trams on a number of routes, especially in the city centre. Trolley buses had been supplanted by diesel buses in all Australian cities by late 1969. (Manning 1991, 37)

Risson inaugurated a house journal for the MMTB in 1964, where unions and management would meet face to face. The MMTB journal carried more overt lobbying about expenditure on public transport than the union journal, preoccupied with working conditions and pay rates. In May 1966 they ran an article praising the purchase of new rolling stock, with the added tagline that Melbourne 'is well suited to trams'.

Why does Melbourne retain its trams? Because trams are eminently suitable for Melbourne...They are more efficient than buses...and they are many times more efficient than private cars, which eat up road space and carry, on average, less than 1.5 persons per vehicle...There is a tendency by some people and some authorities to suggest that scrapping of trams, and replacing them with a huge bus fleet...(but) Melbourne is well suited to trams. Its broad layout and wide streets, especially in the city, give it a place well ahead of congested cities – with narrow, twisting streets like Sydney and London. (May 1966)

A few months later, Risson, no doubt partly with a cheeky eye to the pro-Soviet group in the powerful tramways union, praised trams 'staging a fast come-back in Soviet Russia, one of the world's most advanced technological nations'. At the time, only a bureaucrat who had served with distinction in the Middle East and New Guinea could get away with praising the Soviets, even if just for their tram systems. During two decades of retirement, Risson had the pleasure of seeing a whole series of extensions to his tramway network, to Keilor Rd, Preston and East Burwood, while the tram lines from Port Melbourne and St Kilda were converted to light rail in the late 1980s, with some minor adjustments to their respective routes. (Vines, 2011)

Risson had, as a sometime ally, the nation's strongest tramway union, which managed to resist 'one man' operation for longer than in any other city. In NSW, the tramways union was promptly bought off with offers of employment in the rapidly expanding bus networks in Sydney and Newcastle. Tram depots were readily converted to bus depots, with the notable exception of the Bennelong Point tram terminus which made way for the site of the Sydney Opera House. (Manning 1991, chapter 3)

Melbourne's trams faced only one serious challenge in Risson's lifetime. In 1980 transport minister Robert MacLellan, was happy to admit that he travelled the forty kilometres from his home in Berwick to the city in a chauffeured government limousine. This product of Melbourne Grammar and the Melbourne University Law School, commissioned Murray Lonie, the former General Manager of BHP Coal, to reform Melbourne's public transport system. MacLellan stated,

the tramways and suburban railways are carrying fewer passengers now than they did in 1915 and they are doing it at about 1000 times the cost...Fewer passengers, higher costs, and if anybody wants to know why, and there are a few kinky in the community, who cannot perceive what has happened

between 1951 and now, then I try to remind them that Henry Ford was right when he said that the internal combustion engine had a future. (Victorian Automobile Chamber of Commerce *Proceedings* 1980)

Six months later Lonie recommended the closure of seven tram lines and eight rail lines. McLellan dismissed the protestors as white collar commuters. Lonie pointed out that 90 per cent of all trips in Victoria were by private car, and that buses could readily replace the proposed abandoned tram lines, as they had done in Sydney. (Lonie 1980)

Lonie's recommendations galvanised discussion about the future of Melbourne's public transport. Neither Lonie nor MacLellan appreciated the cross-class support that Melbourne's trams enjoyed, including middle class professionals getting to work in the city centre and their children getting to the major public and private schools, especially in the eastern suburbs. Many other Melburnians could not and cannot afford a car, and at any one point in time over one third of the population can't drive because of age (both young and old) or they don't have a licence.

Melbourne's trams had long starred as one of the city's most distinctive features, from tourist posters to visitor maps of the CBD. Photographs of the Shrine, St Kilda Rd, St Paul's Cathedral and the new Arts Centre were invariably taken with trams in the foreground. They were the nearest Melbourne had to Sydney's ferries, long a core ingredient in that city's marketing campaigns (Davidson 1986, chapter on city images).

In the 1950s Melbourne's trams required a much smaller operational subsidy than Sydney's' buses, not least because the trams served higher density suburbs, which they had, in part, helped to create or at least sustain. CBD workers continued to use the trams for travel around the city and for the journey to and from the inner eastern, northern and southern suburbs, with less reach into the west (Manning 1991).

Conclusion: why did Melbourne keep its trams?

Melbourne's tramway system survived through the 1950s and 1960s for a number of key reasons, all peculiar to Melbourne. In Major General Risson they had a strong and adept political adept leader/administrator. The RACV was a much more demure motoring organisation than the NRMA in Sydney, much less aggressive in its attacks on trams. And Melbourne, with its generous street layouts, had many more tram 'rights of way' than any other Australian city (See Broomham, 1996 and Priestly 1983 on the respective cultures of the NRMA and the RACV).

The only other time Melbourne's trams faced a draconian challenge came with the Lonie report. But with the almost total rejection of Lonie's closure recommendations, trams resumed an unchallenged centrality in inner Melbourne. A huge tram strike in 1990 backfired on the union, which won only a brief reprieve for keeping conductors, but it simultaneously reinforced the importance of trams for the functioning of the city. On tram ticketing machines were introduced between 1996 and 1998, and conductors eventually disappeared. Gradually the system has acquired new rolling stock making it more user friendly. Under Premier Kennett trams became semi-privatised in 1999, but with fewer downsides than the troubled railway privatisation, where the state government keeps on switching providers. (Davison 2004, 240-42, Mees 2005).

The tramway systems of Eastern Europe, most of which had to be at least partially rebuilt after the war, continued to flourish in the 1950s and 1960s, before car ownership became widespread. Since then many have reduced their route length, but their patronage remains substantial. Melbourne currently boasts 240 kilometres of track length, and 190 million passengers per annum. St Petersburg's network is much reduced, to 220 kilometres, but it still carries 490 million passengers a year. And around the world, from Manchester and Los Angeles to Sydney to the Gold Coast, new tramway routes are on the rise, sometimes reusing redundant rail corridors. While Melbourne is today only around the 200th largest city in the world – a long way from the top 20 in 1900 – it can now lay claim to have the largest tramway system on the planet, and what a civilizing influence that is.

Note of sources: There is a vast enthusiast's literature on former tramway systems in most parts of the world. The books tend to be reliable on the opening and closing dates of routes, and go into great detail about the rolling stock, but as with railway history, are usually less interested in the public policy and political issues around public transport versus private car use.

The rise and decline of street cars and tramways is best documented, in a concise fashion, in successive editions of the *Encyclopaedia Britannica*, including the 1910, 1947, 1964 and 1969 editions, with later entries under the title 'Electric Traction'. National Encyclopaedias are also useful, but with the demise of the reliable, multi-volume print Encyclopaedia as a well-edited, well-researched source, Wikipedia has come to the fore. The quality and reliability of its tramway coverage is very variable, but it does have a useful entry canvassing the automotive 'conspiracy' to buy up and shut down US streetcar systems. It is also the best single source on information about new tramway systems, but again the coverage is scatty. Nonetheless it is the best single source for up to date figures on route length and passenger numbers of tram systems around the world.

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Shaping Moral Landscapes

Comparing the regulation of public memorials in democratic capitals

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The planning and regulation of public memorials in a capital city significantly shape the representation of a nation's identity and values, lending it both historical and conceptual grounding. The processes through which commemorative planning for a capital is conducted also reflect a nation's democratic traditions. In autocratic nations, urban plans are decided and built by a central authority to serve and reflect its specific beliefs and interests. But in multi-party democracies with active civil societies, the development of capitals' commemorative landscapes is much more complex. Memorials in democratic capitals are often not initiated, funded or designed by the government itself. These commemorative landscapes develop through negotiation between political parties, social movements, interest groups, subject experts, and individual mourners. This paper provides a comparative analysis of national and local government planning approaches that have guided the development of public memorials in a structured sample of four types of capital cities: capitals that have long, pre-democratic histories of physical development; new, masterplanned post-colonial capitals in the New World; 'international' capitals that host major international political organisations; and capitals of countries where democratic government has only emerged in the last 25 years from a range of kinds of pre-democratic regimes (dictatorship, communism, apartheid). It is hypothesized that these different polities employ quite different strategic, procurement and regulatory processes for public memorials. The paper's methodology centres on analysis of policy documents from relevant agencies, including special-purpose strategic plans, policies that establish approval authority and criteria, and codified decision-making processes for approvals, as well as examination of key commemorative precincts and individual cases, and interviews with planning officials. The paper considers the relative prominence of various commemorated themes, the ways strategic plans and policies guide the location, form and theme of individual memorials, and how commemorative masterplanning relates to the cities' wider spatial planning needs.

Many millions in public and private funding are spent each year on planning, designing and constructing public memorials in national capital cities. Such memorials are prominent, long-lasting investments in national and local identity and collective memory. The planning and regulation of 'national' memorials significantly shapes the representation of a nation, lending it both historical and conceptual grounding (Vale 2008, Halbwachs 1992, Huyssen 1994, Nora 1989). In autocratic nations, memorials are decided and built by a central authority to serve and reflect its specific beliefs and interests. But in democracies with multiple parties and active civil societies, the development of capitals' commemorative landscapes is much more complex. Memorials in democratic capitals are often not initiated, funded or designed by the government itself. These commemorative landscapes develop through negotiation between numerous stakeholders, including political parties, social movements, interest groups, subject experts, and individual mourners. Such processes reflect and contribute to a nation's democratic traditions. In recent decades, national imaginaries in many democracies have been reshaped by increasing numbers of public memorial proposals that come from a broader diversity of constituencies, serve a wider range of purposes, and have more varied subject matter. As societies seek to commemorate an expanding range of subjects, and negative, socially conflictual memories as well as positive, unifying ones, decision-making processes for memorial planning present opportunities to 'work through' difficult issues of social difference, injustice and responsibility.

There is very often public dissatisfaction with the forms, meanings and locations of new public memorials, and with insufficient transparency and opportunities for participation in processes of memorial procurement and regulation. In practice, the regulation of public memorials remains contentious and difficult; planning processes may exacerbate society's conflicts over identity and history and their representation, rather than resolve them. Problems in delivering broadly-acceptable outcomes suggest the need for a comprehensive examination of the planning processes that have been used and are currently used for public memorials. Such an investigation is particularly timely now as many democratic capitals overhaul their national policies for memorials (NCC 2006, NCPC 2006). Australia has recently had several formal parliamentary inquiries into the regulation of public memorials in Canberra (JSC 2011, 2009, 2004). Understanding the historical development of various capital cities' memorial landscapes has very practical relevance for national government policy and its administering agencies, as well as the design, planning and art professions, allowing them to understand how different planning and management objectives and approaches shape intangible values linked to collective identity, emotion, and memory.

Methodology

This paper provides an international comparative analysis of formal policies, plans and regulatory decisions for public memorials in a range of national capital cities. It explores how strategic plans and policies prefigure the location, form and theme of individual memorials, what kinds of regulations and opportunities shape memorial outcomes, and how commemorative master planning relates to the cities' wider spatial planning. This approach is informed by the limited existing research into the planning and regulation of capital cities' memorial landscapes, including individual city case histories by Savage (2009), Bogart (2006), Rosenfeld (2000), Dovey (2001) and Dovey and Permanasari (2009). Burling (2005) provides a unique comparative study of memorial planning

policies, although it is limited to Washington and two US state capitals and on policy documents, without discussing actual built memorial outcomes.

This paper's analysis of planning documents is augmented by interviews with planning officials, and examination of how policy frameworks have been applied in the development of key commemorative precincts and individual memorial cases, based on case files, site inspections, and existing published critiques. Planning for memorials embraces both the management of past construction (planning as regulation) and proposals for future commemorative development (planning as visioning). The paper explores how different sponsoring groups have fared with erecting memorials and the relative prominence of various commemorative themes within each city, and seeks to identify where policies and their administration have led to innovative outcomes.

The selected capital cities (Table 1) embrace four distinct contexts: 'evolved' national capitals with long histories of physical development and complex urban functions (Vale 2008); new-world capitals master planned as showpieces of post-colonial democratic states; capitals of modern nation-states which only became democratic within the last 25 years; and 'international' capitals, which Hall (2006) calls 'super capitals', that host two major international political organizations, the UN and the EU. This also functions as a control group: two of these cases are not national capitals. They nevertheless have significant roles in shaping and displaying cultural identity at different geopolitical scales. As Hall notes, definitions and categorisations of capitals overlap, particularly because of historical changes in the power and role of particular cities and nations, but in this study, the cases have been selected, analysed and compared to focus on how the 'capital-like' function of national commemoration differs across the four key categories. The sample within each category provides a breadth of contexts, embracing cities that originated and grew in different historical eras; varied cultural, geographic and climatic contexts; and democracies that have emerged in the last 25 years from a range of kinds of pre-democratic regimes, including military dictatorship, communism, and apartheid. The sample thus explores how cities and polities with differing pluralism, stability, and history have employed different planning processes for public memorials, and what different outcomes these have produced.

The selected cases are reasonably high on the Democracy Index (Economist Intelligence Unit 2012), both because it confirms that memorials in these nations' capitals might reflect broad national histories and interests, rather than those of a ruling class, and also as a proxy for knowing which countries might actually have open public discussion about the planning of national memorials. Only the top 25 countries in the Democracy Index are rated fully democratic. Capitals of eight of these are among the selected cases. The nations listed from 26 to 79 are 'flawed democracies'. City cases have also been selected on the basis of having a sufficient number of large, recent memorials in urban settings which thus required planning decisions.

Although the study is ongoing, data has been compiled for seven of the 12 cases: Berlin, London, Canberra, Ottawa, Washington, Budapest, and New York. These seven cities cover all four analytical categories and span both extremes of the sample's range of democratic rankings, from 6 to 49. The three completed studies of master planned capitals also allow an in-depth comparison within that category. These three cases are particularly useful because their plans have been self-consciously created and managed by national governments as diagrams which represent myths of national identity, values and history; they thus have particularly detailed plans for national commemoration.

A preliminary analysis of the data from these seven cases thus gives a useful indication of the scope of memorial planning issues and solutions that might be revealed by the entire sample, and suggests further questions, both of which can be fed back into refining the remaining data collection and analysis. This paper reports on preliminary findings from these seven cases.

Table 1: Selected cases of local government regulatory frameworks for major national memorials, showing Democracy Index ranking (Economist Intelligence Unit 2012).

<i>Evolved capitals</i>	<i>Master planned democratic capitals</i>	<i>Newly democratic capitals</i>	<i>'International' capitals</i>
Berlin (14)	Canberra (6)	Seoul (20)	Geneva (7)
London (16)	Ottawa (8)	Pretoria / Cape Town (31)	New York (21)
Rome (32)	Washington (21)	Budapest (49)	Brussels (24)

Memorial forms and sites

Although new public memorials are still often statues, there has been a significant diversification of forms since the 1980s (Doss 2010). New World capitals and imperial European capitals destroyed by war tend to have ample space for experimentation. Recent memorials are often wider and lower than traditional statues, forming enclosed settings (Savage 2009). The large area of many memorials to large-scale events reflects desires to see each individual person separately commemorated, and for such memorials to make major political statements.

Public memorials occupy a range of kinds of urban locations. Many memorials are located in public open spaces, ranging from minor neighbourhood foci to very central urban locations and from open green parks to tight hardscape plazas. The placement of memorials on major plazas and streets often attempts to harness the visual power of a city's existing constellations of memorials. Memorials are also often squeezed onto unused, inaccessible traffic islands, as with Canada's Peacekeeping Monument, New York's Angels' Circle and London's Hyde Park Corner, and several medians on London's Whitehall. Larger spatial memorials are often placed within public parks, where their designs may be required to contribute to wider open space amenity.

In cities that are not master planned for national identity, memorials sometimes arise on sites that have been cleared and opened up for new uses. In New York, a former African burial ground was discovered when a new federal government office building was being built, and the site's developer agreed to modify the construction plans to accommodate a memorial. This category includes sites cleared by unexpected large-scale destruction, such as the area destroyed in the Great Fire of London in 1666, where The Monument was erected in 1677, New York's National September 11 Memorial, and Washington's Pentagon Memorial. These latter cases show that even New World capitals have important historical sites which become memorialised.

In capital cities with long, eventful histories, memorials very often have meaningful, historical links to particular spaces or to institutions near them. In Berlin, the memorial underneath Bebelplatz (1995) remembers the Nazi book burnings that occurred there. Memorials to those who died trying to cross the Berlin Wall during the partitioning are also mostly located on the wall's former alignment. The Memorial to the Murdered Jews of Europe (MMJE)(2005), also built in this zone, is a notably unrelated exception. The memorial at Berlin's Grunewald railway station (1991-98) commemorates its use for deporting Jews during the Holocaust. Many different victims' groups have sought memorial sites near the *Reichstag*, both to convey the responsibility of the German parliament, and to ensure high public visibility to their fate. This city's chequered history means that spatial and historical continuities are not always positive or desirable. The proposed National Monument to Freedom and Unity has been criticised for its siting on the pedestal of a former 'national memorial' to Kaiser Wilhelm, Emperor of Germany's First Reich (AKM 2007). In many capitals, public memorials are sited at airports, railway stations and ferry terminals to remember events specifically related to those sites, because disasters, attacks and rescues often occur at such places. Opportunities to install permanent public memorials in large, old, densely-developed cities depend on the resources and interests of sites' owners. It is difficult to install a substantial memorial at the site of the 1911 fire at New York's Triangle Shirtwaist Factory, which killed 143 workers, because a privately-owned building still stands there.

Managing memorial space

As history continues to unfold, the total number of memorials in capital cities is increasing, particularly in inner areas. Most choice sites are already taken (Cuthbertson 2012, Kempf 2011). Nevertheless, desires for prominence and meaningful links tend to further concentrate memorials, intensifying meanings and conflicts. Additionally, old memorials are not removed as quickly as new ones are installed. The growing number of memorials since Berlin's and Germany's reunification in 1990 has raised the spectre of an 'inflation of memory', where each individual memorial and the events they commemorate begin to lose their impact (Bornhöft 2007). Providing adequate space for future memorials in inner-urban locations is also made more difficult by the expansiveness of many contemporary spatial memorials. The three master planned capitals analysed have the greatest need and scope for tackling such problems.

One typical response is to manage demand. In many capitals, memorials can only be erected 10 or 25 years after the commemorated event. Memorials that duplicate themes already commemorated are also generally refused. The United States' *Commemorative Works Act* (CWA) slows down the production of new Washington memorials by requiring a 24-stage approvals process (Watkins 2008). The planned capitals, Washington, Canberra and Ottawa, all have clear criteria for what counts as a 'significant', 'national' memorial, and what does not. Capital planners strongly resist any new memorials in their most hallowed, representative central sites, such as London's Trafalgar Square and Budapest's Kossuth Square. The amended CWA of 2003 placed a moratorium on new memorials in the central section of Washington's Mall. In London, the City of Westminster also generally excludes new memorials from its 'Saturation Zone' embracing Whitehall, St James and Aldwych (Westminster ND). Ottawa's Parliament Hill has a separate approvals process, and historically remained restricted to commemorating monarchs and statesmen, although its scope was deliberately broadened by the Suffragette memorial *Women are Persons* (2000). Washington's and

Ottawa's memorial plans establish hierarchies among available public sites, according to their size and prominence, and criteria for defining worthy subjects (NCPC 2002, NCC 2006). Canberra's guidelines zone 17 distinct areas, to distribute particular commemorative subjects (NCA 2002). Memorials to foreign persons and events, often unrelated to Australia's own history, are restricted to areas near the relevant embassies. Washington's planners direct the frequent memorial 'gifts' from foreign nations to sites along Massachusetts Avenue - 'Embassy Row' – where 27 memorials currently stand. Planning agencies also encourage sponsors to host memorials they have proposed on their own land (Kempf 2011).

Containing demand for remembrance only has limited effectiveness. Contemporary societies appear obsessed with memory and public expression (Doss 2010). Planning thus also seeks to proactively augment the supply of suitable memorial sites. The network of wide axial streets in L'Enfant's 1791 Washington plan sought to disperse future memorials across a wide area (Savage 2009, Reps 1967). Modern, planned capitals like Washington and Canberra have been able to continue to accommodate future commemorations. They have the advantages of expansive streets, many generous, prominent open spaces, and federal management agencies which can resist economic development pressures and other local interests. Washington's Lincoln and Jefferson memorials were built on waterfront landfill, following the 1901 McMillan Plan. The recent boom in Washington memorial building began with the 1973 demolition of 'temporary' Army offices on the northwest Mall and the creation of Constitution Gardens, subsequently occupied by the Vietnam Veterans Memorial (Savage 2009). Washington's *Memorials and Museums Masterplan* (NCPC 2006) identifies 100 prime sites for future memorials throughout the city, and promotes reserving the best twenty for the most significant commemorations. Canberra developed its main central war memorial precinct, Anzac Parade, in 1965, and only 25 years later it was effectively full. Several new 'niches' have been added along it, but other new commemorative precincts have also been developed. The grounds of the Australian War Memorial, a large museum and archive terminating Anzac Parade, accommodate 14 less-significant war memorials. Lakefront parklands at Anzac Parade's other end accommodate quasi-military memorials to the police and emergency services. The Australian-American Memorial (1954) initiated a third precinct as the centerpiece of the Russell Offices, Australia's Pentagon. One lakeside park accommodates the few memorials commemorating Canberra's own 100-year history. In Ottawa, formerly an industrial town on a gridiron plan, space has been created for memorials by clearing obsolete industrial buildings around the riverfront. Many of Ottawa's recent memorials have been installed along Confederation Boulevard, a looped ceremonial route with two peripheral extensions, which aims to spread economic and commemorative development across the Ottawa River to neighbouring Gatineau, Quebec. This case shows that giving a memorial prominence does not necessarily require placing it on a straight axis.

No major new commemorative axes or precincts have been created in the central areas of Berlin, London, Budapest or New York since World War II, and given increasing demand, finding adequate new spaces is a significant concern for their councils. Sometimes destructive events have created space where those events, or others, can be commemorated, as with the September 11 terrorist attacks and the removal of the Berlin Wall. Berlin's planners, politicians and citizens are understandably wary of large-scale plans that manipulate national history and identity. Memorials to darker moments of Berlin's past are often located at sites connected with those events. In many other old capitals, new memorials have continued to be added into existing commemorative

precincts, modifying their meanings and audiences. In London, Waterloo Place (1816) subsequently became a focus for commemorating the Crimean War (1861) and other Victorian luminaries, and in 2010, the commander of the Battle of Britain. Memorials have been built on several narrow traffic medians on nearby Whitehall, including Britain's national war memorial the Cenotaph (1920) and its recent double, the Monument to the Women of World War II (2005). Parliament Square (1868) has continuously accumulated statues of former UK Prime Ministers, as well as Abraham Lincoln and former South African presidents Jan Smuts and Nelson Mandela. In New York, major plazas at the two southern corners of Central Park were long ago filled by large memorials to explorer Columbus (1892) and Civil War General Sherman (1903). More recent memorials on the two northern corners, in Harlem, commemorate African-American musician Duke Ellington (1997) and statesman and former slave Frederick Douglass (2010). Trafalgar Square (1845), exceptionally, was developed as a set piece, although no statue was ever commissioned for its fourth plinth, now used for temporary art installations (Sumartojo 2012).

Some open spaces have been reorganised to accommodate more memorials and more intensive use. In 1830, Constitution Arch was built on London's Hyde Park Corner, a major traffic intersection between Green and Hyde Parks. The arch was moved to one side in 1883 to allow road widening. World War I memorials to the Royal Artillery (1925) and Machine Gun Corps (1925) were erected on smaller separate traffic islands. In 1963 these were gathered on the current widened roundabout. Two recently-added memorials commemorate the war sacrifices of Commonwealth allies. Both were designed to help shield out the views, noise and fumes of surrounding traffic. The Australian War Memorial (2003) is a curved perimeter water wall on one corner; the New Zealand War Memorial (2006) stands on an earthen berm diagonally opposite. New York's Battery Park is a ten-hectare site at Manhattan's southern tip containing 21 separate memorials, including national memorials to World War II, the Merchant Marine, and the Korean War. To improve pedestrian and bicycle circulation and provide a large open lawn for public events, eleven existing memorials are being re-arranged as nodes along a regular perimeter promenade separated from the park proper by a low wall and cycleway. The memorials will be clustered thematically as 'Explorers', 'Defenders', and 'Mariners' (CNYPR&TBC 2010). Memorials have also expanded on an ad hoc basis into urban green spaces intended for general public recreation. In New York, a large area of landfill created in downtown Manhattan in the 1970s, Battery Park City, provided space for two large landscape memorials, the New York City Police Memorial (1997) and the Irish Hunger Memorial (2002). This area lies outside City council jurisdiction. Such supply of lightly-regulated, unprogrammed open space potentially helps stimulate demand for larger memorials. The undeveloped littoral shorelines of adjacent New Jersey and Staten Island also have several large, recent memorials, particularly those to commuters who perished on September 11, 2001. In London, the Royal Parks, which are not managed by Westminster Council, have recently accommodated numerous new memorials. In Hyde Park these include memorials to Lady Diana (2004) and the 7 July terrorist bombings (2009). These illustrate how relatively rapidly demand often arises to permanently commemorate the deaths of innocent victims. Their Royal Park locations avoided the minimum 10-year delay required under Westminster's memorial policy.

Subject matter

Military themes and symbolism predominate among the memorials of many national capitals, and there is a relative lack of attention to civil concepts such as democracy and diversity (Fischer 1984, Columbijn 2002, Doss 2008). Memorial planners are keenly aware of this imbalance (Kempf 2011, NCA 2002). Although planning policies tend to prevent any particular theme being commemorated twice, there are memorials to many different wars, battles and military branches and units, military accidents, military service of women and indigenous people, and non-combatants including nurses, merchant seamen, and chaplains. Washington's National World War II Memorial was unveiled 59 years later, and Canberra is planning a memorial to the South African Boer War (1899-1902), 112 years after that war ended. In recent decades, commemorative frameworks have accentuated the State's importance to order and safety in peacetime, extending the logic of sacrifice to include quasi- and non-military subjects, by admitting centrally-located memorials to international peacekeepers, police, emergency services workers, aid workers, the coast guard, and soldiers killed fighting domestic insurrections. The most recent war commemorated in this capital city sample is the Vietnam War, which the U.S. and Australia lost. Budapest's most prevalent memorial theme is Hungary's two popular uprisings in 1848 and 1956, which were both unsuccessful.

War memorials in capitals do not only remember a nation's own soldiers. Berlin and Budapest were conquered by Soviet forces at the end of World War II, and several of the largest memorials in both cities commemorate fallen Red Army soldiers and the friendship between the USSR and the socialist states subsequently created in Germany and Hungary. These continue to be maintained under reciprocal agreements. Both capitals have relatively few military memorials to their own nations' losses in the world wars. In 1951, during the Cold War, West Berlin installed a large memorial to the Berlin Airlift. Canberra's tallest memorial honours Americans who fought to defend Australia in the Pacific during World War II. Another, standing opposite the Australia War Memorial commemorates Kemal Ataturk, enemy commander at Gallipoli (1985, expanded 2007). This was funded by the Australian government to guarantee the official renaming of Gallipoli's Anzac Cove. Numerous memorials around London's Hyde Park Corner commemorate Britain's Commonwealth allies.

During the Cold War, East Berlin's socialist government erected large-scale statues of Marx, Engels, and Lenin along a new urban axis, Stalinallee, and Hungary's socialist government also built statues to Stalin, Lenin and a plethora of local socialist political and cultural heroes (Jordan 2006, Ladd 1998, Fowkes 2002, 2004). Democratic societies appear to build relatively fewer didactic national memorials to great individuals, other than soldiers, politicians and explorers, all of whom are important to the practical and mythological founding and defence of the Nation State itself. The recent Martin Luther King, Jr Memorial is an exception, which has been criticised for its social realism (Margolin 2012). Commemorative policies for the planned capitals Ottawa and Canberra express desires for an increasing number and range of civic commemorative subjects. Ottawa's seeks "To better reflect the identity and diversity of Canada and Canadians and encourage new commemorations that address the under-represented themes" (NCC 2006:11). It also specifies particular topics that should be given priority among commemorative proposals, to "ensure a better balance in representing the full Canadian experience": Aboriginal Peoples, Ethnocultural Communities, Women, and Environment (NCC 2006:13). One minor recognition of the struggles of Canada's Aboriginal Peoples was that a 1918 statue of a kneeling Native scout, which had been

placed at the base of a large 1915 statue of explorer Samuel de Champlain, founder of New France, was relocated to a nearby park in 1997 after First Nations' leaders complained it was demeaning (Osborne and Osborne 2004). The 17 areas delineated in Canberra's commemorative plan for particular memorial subjects include 'Humanities and Sciences', 'Arts and Civics', and public service (NCA 2002). Washington's memorial policy, by contrast, emphatically "does not suggest which individuals or historic events are suitable subjects for commemoration" (NCPC 2006:1). All proposed subjects require congressional approval. Only four of Washington's 150 memorials are specifically to women (Kempf 2011).

Policy aims to broaden the scope of commemorative subjects do not mean there will necessarily be constituencies or resources to produce any memorials. Canberra's recent National Workers Memorial (2013) and (impermanent) 'commemorative artworks' to the Centenary of Women's Suffrage (2004) and to "the shared history of Indigenous and non-Indigenous Australians" at Reconciliation Place (2001 onwards) were achieved through direct government funding (DFCSIA&NCA n.d.). Reconciliation Place is rather unique in placing the struggles and successes of Indigenous peoples outdoors on the national stage, and articulating some of the Nation State's past abuses of power against its Indigenous population. In Washington and Ottawa, such energies were channelled into museums. Reconciliation Place was not, however, driven by politicised Aborigines. In all three of these Canberra examples, the commemorated groups are large but diffuse, and government leadership appears to have strongly shaped the form, location and meanings of the memorials, to tell these histories of otherness in ways that suit the interests of dominant groups.

Many projects commemorating controversial or partisan interests find other, more independent means. Canberra's Immigration Place, a memorial being built to immigrants' contributions to Australia's development, is being funded through public donations. Canberra's SIEVX memorial, remembering 146 asylum seekers whose boat sank, is a grassroots project constructed through broad-based community involvement. Because both London and New York are very large economic centres with long histories of multicultural immigration, they are homes to diverse, wealthy constituencies who enthusiastically support the representation of their various contributions to local and national history (Bogart 2006). Although contemporary Hungary is, by contrast, ethnically quite homogenous, several small memorials outside Budapest's main Orthodox church remember the sufferings of Armenian, Ukrainian and Greek Orthodox communities. Numerous memorials have also recently been erected in Budapest marking the fascist genocide of Hungary's Roma and Jews and remembering numerous 'righteous gentiles' who rescued Jews, with significant financial and political support from the diaspora. In 2005, the conservative-right neighbourhood council of Budapest's District XII facilitated the construction of a memorial to the neighbourhood's World War II dead, including not just soldiers but civilians killed by fighting or bombing, although the proposal had been rejected by the liberal municipal government. In 2010, the conservative-right national government authorised this memorial post-facto, through legislation devolving the approval process to neighbourhood councils.

One pronounced, widespread shift in commemorative subject matter has been toward so-called 'victims' memorials, in contradistinction to heroic monuments (Doss 2010). Since Berlin became the re-unified German capital in 1990, numerous major memorials have been built in the city centre to various victim groups of Nazi persecution. The two-hectare MMJE (2005) lies near the Brandenburg

Gate between the Parliamentary Quarter and the leisure precinct Potsdamer Platz. A memorial to Nazi persecution of homosexuals was installed across the road in 2008, and a memorial to persecuted Sinti and Roma next to the Reichstag in 2012. These examples are on sites unrelated to the national crimes being recognised, and their thematic links to the current seat of government are weak, but their sites were government-owned and provided high visibility to passing tourists. London has recent memorials to Lady Diana (2005), the 2002 Bali bombings (2006) and London's own bombings on 7 July 2005 (2009). In New York, the National September 11 Memorial (2011) commemorates those who died from the 2001 terrorist attacks on the World Trade Center towers, the Pentagon, and United Airlines Flight 93 which crashed near Shanksville Pennsylvania. Other significant New York victims' memorials include the African Burial Ground National Monument (2007), the Irish Hunger Memorial (2002), and a modest fountain commemorating the sinking of the steamboat General Slocum (1906), the city's second largest civilian tragedy with over 1000 victims. A broad civic coalition is currently seeking to build an on-site memorial to the 1911 Triangle Shirtwaist Factory Fire. Budapest has a national memorial for traffic accident victims (2005), listing the numbers killed each year since 1972, although not their names. Victims' memorials are clearly not only built for immediate mourning, but also to teach wider socio-historical lessons.

While a nation's great deeds are usually commemorated by large memorials on prominent locations, more recent public memorials to negative events often have different forms and require very different kinds of sites. Many victims' memorials are 'spatial', providing a therapeutic, existential place of refuge for mourners (Griswold 1986, Savage 2009). Unlike traditional statues, these large, discrete, enclosed settings do not easily fit within dense urban streetscapes or wider commemorative precincts; they tend to have to sit in isolation in large open spaces. They are also usually thematically at odds with the kinds of overarching, positive narratives of culture, national identity and heroism under which statues of prominent individuals can be gathered. The empty library under Berlin's Bebelplatz (1995) and the 'reflected absence' of the destroyed World Trade Center footprints are 'anti-memorials' that use dark, sunken, empty forms to evoke the shapes of things now lost (Sturken 1991, Young 1999, Ware 2004). Canberra's Reconciliation Place and Washington's Vietnam Veteran's Memorial are 'counter' or 'dialogic' memorials, created as explicit counterpoints to particular extant, affirmative memorials, in order to contest and modify the official stories that they tell about the past. Being effective in critically recontextualising the meanings of these specific memorials requires obtaining sites in close, visible proximity to them (Wijsenbeek 2010, Stevens et al 2012).

Power and process

While capital cities' commemorative planning helps to rationalize the organized violence of war and government authority, it masks urban planning's own violence. Washington, Ottawa and Canberra are the capitals of post-colonial states. Reconciliation Place is perhaps the only site in any of these cities that mentions, albeit obliquely, the roots of these states and cities and their spatial regulations in the expropriation of indigenous land rights. While these commemorative landscapes suggest that violence against external enemies is noble and necessary, they mostly ignore the internal struggles of Indigenous populations and other groups (Inglis 2008). National capitals' memorial planning tools, in particular 25-year delays on commemorating subjects, favour the historical inertia of edifying national narratives, and tend to subjugate ordinary citizens' desires to have their particular grief and

grievances permanently marked in the landscape. Large projects such as Berlin's MMJE and Canberra's Reconciliation Place illustrate that when the State wishes to acknowledge its own role as a perpetrator of past crimes through a memorial, it can ensure that this is done prominently.

The commemorative landscapes of Berlin and Budapest are selective in terms of which pasts are commemorated and which older memorials remain visible. The crimes of Nazism are given considerable attention, and Budapest's 1956 anti-communist uprising is amply commemorated. But most of East Berlin's socialist-era memorials have been removed. Hungary's current government is reconstructing their capital's key national commemorative space in front of the Parliament, Kossuth Square, including only the memorials that stood there in 1944, before the periods of fascism and socialism. Most of Budapest's socialist-era memorials have been removed to an educational theme park on the city's outskirts (Foote et al 2000). The large Stalin statue toppled in the 1956 uprising had ostensibly required the demolition of a church. This site is now filled by a large memorial to the uprising. The current government thus appears to be repeating the socialists' own earlier erasures of unpalatable aspects of history. But these are only the most obvious cases. London, Washington, and even Canberra have also remodelled their key commemorative precincts and moved numerous existing memorials to less prominent locations. History is not entirely frozen in memorials; their history also develops continuously over time. There are as yet few new memorials in Berlin or Budapest remembering the crimes of socialism or its eventual overturning. Washington has a Victims of Communism Memorial, dedicated in 2007 on the 20th anniversary of President Reagan's "tear down this wall" speech in Berlin.

In all seven democratic capitals studied, the regulation of themes and sites for individual memorials is distanced from the executive branches of national and municipal governments. Memorial approvals all require majority support from one or more non-partisan bodies - a parliament, a municipal council, or an independent panel of appointed experts - at least in principle. Although anyone can propose a memorial for Budapest, approval processes seem to centre on informal negotiation, which raises questions about transparency and fairness. Planning for commemoration in London is rather decentralised, with sites variously administered by the Borough of Westminster, City of London, Greater London Authority, and Royal Parks. The latter agencies have relatively permissive, inclusive and even experimental attitudes toward commemorative sites, themes and forms. Memorial sponsors can thus 'shop around' for amenable regulators. In Budapest, 23 different local councils can now authorise memorials for the capital. Critics have suggested that decisions and planning for Canberra's public memorials by the National Capital Authority (the administrative agency) and the Canberra National Memorials Committee (the parliamentary decision-making body) sometimes amounted to rubber-stamping particular government leaders' personal support or opposition for projects (Stephens 2011, JSC 2011, 2009, 2004). Public inquiries have highlighted the need to enhance and broaden public engagement in decision-making processes for Canberra's commemorative landscape, through such means as public meetings, encouraging online debate, and publishing minutes of meetings. Berlin does not have a masterplan for future memorials. The theme, siting, and design of each new memorial must go through extensive public and parliamentary debate. This process itself aids remembering and reckoning with the past (Spielmann 2005, Young 2010). Germany's parliamentary policy encourages memorial development to be led by non-governmental agencies, foundations, and citizens' initiatives (BBKM 2008). This aims to avoid repeating Germany's history of centralised authority and propaganda.

Memorial approval processes usually follow specific legislation. Some are quite old and general, such as London's 1854 *Public Statutes (Metropolis) Act* and Canberra's 1928 *National Memorials Ordinance*. Others are quite recent and precise, including Washington's *Commemorative Works Act* (1986, amended 2003), Germany's *Updated memorial concept for the Federal Republic* (BBKM 2008) and Budapest's 2010 *Lex Turul* (Marsovszky 2011). These changes attempt, variously, to ensure consistency in decision-making, to balance the interests of local residents and other ordinary citizens against the empowered views of experts, bureaucrats and elected representatives, and, less frequently, to set specific rules about memorial subjects, sites and designs.

Capital cities' commemorative landscapes shift slowly, in reflection of changing historical consciousness and values (Young 1992, Till 2005, Bogart 2006, Savage 2009). The caution and conservatism that is typical of most commemorative planning policies belie the fact that many cherished commemorative precincts are actually quite recent, and physically different to earlier incarnations. Canberra's Anzac Parade dates only from 1965, and the Washington Mall's main memorials from the 1920s onwards. Many earlier memorials in Berlin and Budapest have been taken down, and some of them later reinstated (Attila 2013). A 1959 statue to Walter Raleigh (1552-1618) was moved from London's Whitehall as recently as 2001.

Conclusion

Central areas in many capitals are saturated with memorials, but all capitals keep accumulating more. Governments make room for commemorative subjects they favour by expanding existing precincts and developing entirely new ones. New memorials also spread, rather unplanned, to sites where commemorated events actually happened and into streets and parks. Older memorials are often removed or moved around, either to change a national narrative or, more pragmatically, to enhance the attractiveness or usefulness of public spaces.

A great many new memorials are to wars; even wars that happened a long time ago and that were lost. Traditional military themes of courage and sacrifice are also extended into the commemoration of peacetime service. Contemporary memorials have increasingly varied subjects and audiences, conveying the achievements of women and ethnic and religious groups, or their victimhood. In some cases commemoration of such subjects serves the government's shifting understanding of national identity and national interest. In other cases it occurs through the interventions of advocacy groups or local actors, sometimes using 'grassroots' means that elude regulatory frameworks. These subjects tend to occupy less prominent sites and have 'anti-' or 'counter-'memorial forms. The increasing diversity of public memorial subjects, audiences and forms requires a rethinking of how they might be regulated.

The extreme decentralisation of responsibility for memorial decision-making in London and Budapest highlights a general finding that 'capital space', despite its rhetorical significance, is actually quite limited. Different agencies control different sites, and memorial sponsors can approach different regulators, or erect memorials on private land. German memorial policy encourages third-sector involvement, and elsewhere grassroots groups are increasingly proactive. This shifting field of actors and contexts suggests that in future, commemoration will not be what it used to be. The ongoing diversification of the locations, subjects, constituencies and procurement processes for memorials all suggest that there will probably be increasing controversy and

contestation over future commemorative proposals. But as Spielmann (2005) noted, controversy is not necessarily bad; it opens up history and values to discussion; it makes people remember and makes them think.

Acknowledgements: This project was supported by an Australian Research Council Future Fellowship (project number FT0992254) and by a Visiting Fellowship from the Humanities Research Centre at the Australian National University.

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Beyond Protest Activism and participation in 1970s Sydney

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The 1970s was a time of significant urban activism in Sydney. Most famously, Jack Munday coined the term “green ban” to describe a movement bringing together property owners, public tenants, workers and ‘ordinary’ citizens to demand a say in planning. There is a well-worn historical narrative that provides us with the concrete achievements of the green bans in preventing demolition of much-loved parts of the city and in helping to trigger the passage of new planning legislation with express provision for public participation and conservation.

While the most recognisable, the green bans should not be understood as the primary avenue for participation in Sydney during the 1970s. As this paper will argue, the green bans emerged during a period of broader experimentation and exploration in participatory planning and design. The legacy of the period, like that of the bans themselves, extends far beyond protest.

This paper will illuminate that wider context. Histories of participation in the 1970s have focused on the green ban movement, and have discussed these primarily in terms of the connection between the green bans and social and labour movements. Focusing particularly on what will be described as ‘positive participation’, this paper will instead explore the range of tactics employed during the period from the perspective of planning and design practice. It will illuminate little-discussed elements of the green ban movement such as the design panel established to guide architectural decisions, as well as a range of participatory practices far beyond the movement in which activists, community members and professionals engaged constructively in developing visions and strategies for the future of the city.

Introduction

The story of the green bans is well-known (Roddewig 1978; Burgmann and Burgmann 1998). First was the unlikely alliance between middle-class housewives in the leafy suburb of Hunters Hill (the self-named “Battlers for Kelly’s Bush”) with one of Australia’s most radical unions (the NSW Builders Labourers Federation) over an area of riverfront bushland on the Parramatta River. In 1971, when the BLF threatened to impose a ban not just in Hunters Hill but on the developer’s other projects in North Sydney, the Battlers’ long-running campaign to prevent construction of housing on the site was at last successful. This prompted calls for union assistance from other groups, which in turn led to the imposition of over 40 bans, most famously in the Rocks, at the foot of the Sydney Harbour Bridge.

The green bans attracted considerable attention in Australia and internationally. Paul Ehrlich considered them critical in the birth of urban environmentalism; key figures from the bans were invited to give lectures in the United Kingdom and to participate in the first UN conference on the built environment in Vancouver in 1976 (Roddewig 1978; Freestone 2010: 29). Petra Kelly’s decision to establish the German Green party, and with it the international green movement, was apparently inspired by her experience of the bans in Sydney (Brown and Singer 1996: 64-5). The bans have been linked to policy and legislative changes at both state and national levels, and particularly to the passage in NSW of the *Heritage Act 1977* and the *Environmental Planning and Assessment Act 1979* (Thorpe 2013).

While controversial at the time, the movement is now widely recognised for its role in saving much-loved parks, streetscapes, housing and heritage buildings in Sydney and beyond. Today, the green bans have an almost folkloric status. As one prominent historian has suggested, “the bans are almost shorthand for the wider unrest that was happening”.¹

That shorthand provides the impetus for this article. We argue that there is indeed a dominant narrative in which the green bans are treated as symbolic of a much wider range of activities that took place in Sydney during the 1970s. We argue that this shorthand unhelpfully suggests – for both that wider activity and the green ban movement itself – a narrower and more negative approach to engagement in planning than that which actually occurred. In contrast to that dominant narrative, the aim of this paper is to highlight examples of what we describe as “positive participation”.

Protest and conservation as the legacy of the 1970s

While a full discussion of the histories of architecture, planning and environmentalism – or even just one of these fields – is beyond the scope of this paper, our work identifies and responds to one particular narrative which is present in all three fields. We argue that two elements are consistently repeated in the histories of planning and related activism in the 1970s: protest and conservation. The literature we surveyed consistently emphasises the ways in which communities expressed objection and dissent, and the ways in which they endeavoured to preserve and protect the natural and built environment.

Turning to accounts dealing with the field of professional planning itself, for example, Robert Freestone and Margaret Park (2009) have suggested that: “From the late 1960s resident action

groups sprang up wherever planning and redevelopment endangered amenity, flora and fauna, and urban character. Such groups constituted a new form of informed and activist environmental protest..." (p335, internal citation omitted).

For planners, it seems, the green bans tend to constitute the defining example of participation in this period. In Nancy Marshall, Christine Steinmetz and Robert Zehner's chapter on community participation in *Planning Australia* (2012) they are depicted as shaping subsequent public participation and the two tropes of conservation and protest are again foregrounded:

"One of the defining movements for Australian public participation in response to government decision-making was driven by the emerging global environmental movement in the late 1960s. This was demonstrated through a confrontation regarding Kelly's Bush... The BLF's 'Green Ban' was successful and the unexpected collaboration of people from different social milieu gave added publicity to the effectiveness of open opposition to the decisions of local government and the necessity to involve the public in local decision-making.

... from the time of the BLF's Green Ban on Kelly's Bush, significant decisions by local, state or federal governments have often engendered opposition during the decision-making or implementation stages." (p279).

That focus has also tended to produce a characterisation of citizen participation in planning during the period as fundamentally protectionist and oppositional. The following quotes are extracted from articles addressing the issue of public participation in planning, over a period from 1975 to 2001:

"...people reacted with whatever instruments they had to hand, sometimes in surprising alliances: residents' action groups, BLF green bans, conservationist groups – coalitions with common negative aims but not always shared positive aims." (Sandercock 1975a: 4)

"Green Bans simply ensured that the 'status quo' was maintained, and that the rich kept their parks intact and prosperous suburbs retained their trees. The most the poor obtained from the Green Ban approach was *not* to have an expressway demolish their homes, *not* to be obliterated by office blocks, and *not* to be moved out to the fringes of the city for housing towers." (Fogg 1981: 264)

"Community groups mobilised, sometimes in curious coalition, for reasons that ranged from opposing NSW conservative politics to protecting "better class" property values to preserving natural environments." (Ryan 2001: 569)

Consistent with this understanding, responses to activism, such as establishing precinct committees and other channels for formal participation, have been described as "institutionalisation of protest" (Costello and Dunn 1994: 74).

Turning to architectural history, we find the activism and citizen participation of the period, and particularly the involvement of the architectural profession, registered largely as the rise of a preservationist consciousness. The architect and critic Robin Boyd provided an early appraisal of the shift, identifying a demand for a retreat from "bulldozer rehousing techniques" towards a more

sensitive approach to design and development, involving the retention of greater amounts of the existing built environment. Alongside Boyd's *The Australian Ugliness* (1960), the architect Don Gazzard's 1963 'Outrage' exhibition at Farmer's Blaxland Gallery, and the subsequent book *Australian Outrage* (1966), are key examples of that shift in the architectural profession – presenting a compendium of visual blight in Australia's built environment. Gazzard would go on to be one of the founders of the Paddington Society and led the citizen actions that culminated in the conservation of the Paddington area in Sydney.

The architectural historian Jennifer Taylor, in *Australian Architecture Since 1960* (1986), followed the same line of thinking, suggesting that the cumulative effect of the Green Bans in places such as the Rocks and Woolloomooloo was to highlight the importance of Australia's built heritage: "These events drew attention to the changes that had been taking place and increased the average Australian's awareness of his [sic] heritage." (p54)

Taylor's, admittedly brief, accounting for the broader participatory initiatives of residents and union groups tends to reduce their intentions to protest against the destruction of historic built fabric.² Specifically discussing the resident action groups that were such a prominent aspect of 1970s grassroots participation in planning, she downplays the diversity of their aims and activities. Instead, Taylor suggests a more reductive focus: "While the social bias remained strong, before long more emphasis came to be placed on the preservation of buildings, trees and other objects in the streetscape for their own intrinsic merits." (p65)

Peter Webber in 'The Nature of the City', his introductory chapter to *The Design of Sydney* (1988), similarly condenses the intentions and outcomes of 1970s planning participation in the city. In a section tellingly titled 'Conservation politics and pressures', he aligns Vietnam War protest and nuclear disarmament struggles with a realisation, across a wide cross-section of society, that a continuation of the 1960s building boom would decimate historic buildings of earlier periods and important enclaves of inner-city communities. Webber highlights the *Heritage Act* as a key outcome of the period, but does not mention the *Environmental Planning and Assessment Act*. Again, the narrative about the shaping of the city – and the motives of citizens and professionals who sought to rethink the processes of its formation – is narrowed to a concern for the preservation of exemplary elements of the Sydney's built fabric:

"The form of the city would be a great deal different today had it not been for the remarkably strong movement which emerged during the early part of the 1970s towards conservation of the most important elements of urban heritage." (p13)

In addition to its consideration in the spheres of planning and architecture, activism regarding the built environment is often discussed as part of environmental histories. Participants in these histories tend to be described as 'conservationists'; their activities as 'protest' and 'objection'. Tim Bonyhady's (1993) much-cited book is a clear example, making this focus clear right from its title: *Places Worth Keeping: Conservationists, politics and the law*. As the introduction explains:

"During the 1960s, dozens of new groups began working to protect both urban and natural environments. ... By the end of the decade conservationists had begun discovering their rights to *object* to grants of new mining leases and to *appeal against* approvals of new urban

developments [...] the book provides a framework for understanding the difficulties for conservationists in securing new protections for the environment or at least stopping developments which threaten its integrity.”(pix, emphasis added; pxii)

The language of ‘protest’, ‘appeals’, ‘objections’, ‘securing protections’ and ‘stopping developments’ continues throughout Bonyhady’s book, and much of the literature (Mosley 1988; Hutton and Connors 1999; Ryan 2001; Pakulski 1991). Along with the green bans, histories of environmental activism in Australia focus on conflicts such as those *against* the damming of the Franklin River, *against* sand-mining on Fraser Island, and *against* uranium mining in Kakadu. The objectives of participants are described almost exclusively as securing protections for the natural and built environment, and as stopping new developments. There is very little discussion of activists contributing to the formation of more constructive visions for the future.

The similarity between the discussions of conservation and of protest across planning, architecture and environmental histories is striking, and is itself worthy of further exploration. One explanation for the dominance of this narrative may be the recognisable impact of such activism: it is much easier to identify instances where communities have saved particular places, than to try to identify their contributions to new developments. However, such questions are beyond the scope of this paper. Our aim is instead to highlight the gaps in these histories, and in doing so to lay the foundation for a much larger body of work.

Positive participation

In contrast to the protest/conservation narrative, this paper will highlight examples of what we describe as “positive participation”. We do not deny the importance of protest, preservation, or the conservation movement for public participation in Sydney’s planning during the 1970s or more generally. However, we argue that there is, firstly, a fuller history to be accounted for and, secondly, an unacknowledged potential for the struggles and experimentation of the 1970s to inform contemporary practices. The reductive understanding of the period and its legacies constrains a more nuanced examination of the possibilities for participatory planning and design. More specifically, it obscures the opportunities to understand and articulate participation that goes beyond the simple blocking of development and unmitigated opposition to change.

It should be noted that “positive participation” is a term for which we do not yet have a sophisticated definition. It is a working concept that will hopefully be illuminated and sharpened through the examples we discuss below. At the most basic level, it involves anything more than just saying “no”. The citizen participant in planning is often caricatured as the ‘NIMBY’ – the person arguing ‘not in my backyard!’ Again, we do not dispute that opposition to development is sometimes warranted. The green bans certainly offered many examples of important struggles to avert potentially catastrophic interventions in the city. Sydney would be a far poorer place had some of the places that were retained instead disappeared. However, cities inevitably change: their populations grow and change in composition (and sometimes they decline); their economies shift; their ecologies transform; their infrastructures extend, decay and are renewed; their citizens’ aspirations and lifestyles are transfigured. Positive participation is the expression we have used in an attempt to capture efforts of citizens, professionals and others who have engaged constructively in developing visions and strategies for the future of their city.

Positive participation implies something beyond simply future-oriented planning. The examples we point to are particularly concerned with the development of a more just city. In line with the recent work of scholars such as Edward Soja (2010), David Harvey (2012), Leonie Sandercock (2003), Ruth Fincher and Kurt Iveson (2008), Susan Fainstein (2011) and Neil Brenner, Peter Marcuse and Margit Mayer (2011), we believe that discussions of justice in cities must involve some normative evaluation of outcomes. Whether the efforts toward participation we discuss in this paper were more just is beyond the scope of this paper. While the question of impact and assessment is important, it is not our focus. Rather, we have been more attentive to intent, and seek to highlight conscious efforts to create forms of participation that increase meaningful inclusion in planning and design processes.

Drawing on the work of influential scholars from the period such as Sherry Arnstein (1969), our understanding of, and attention to, positive participation is also concentrated on the facilitation of people's creative and collective involvement in the shaping of the places they live in.³ The emphasis here is on forms of participation in planning, design and direct action that have developed around struggles over urban spaces. The examples from 1970s Sydney that we draw on can be linked through Henri Lefebvre's focus on the importance of city dwellers' continual, inventive spatial production. The creativity and experimentation in urban living that defined the '70s activism offers a clear, forceful expression of Lefebvre's contention that human beings have "[a] need for creative activity, for the *oeuvre* (not only of products and consumable material goods), of the need for information, symbolism, the imaginary and play" (1996: 147). The *oeuvre* was a concept that recurred in Lefebvre's work and stood for a more expansive understanding of the city, placing it as an unintentional and collective work of art, richly significant yet embedded in everyday life – beyond the realm of commodified space (p101). The struggles over participation in the making of Sydney we highlight can be thought of as struggles to inhabit spaces and access their resources, to transform them to suit values, lifestyles, and identities, and, perhaps above all, to participate meaningfully in the decision-making process that determines their fate.

Following this thinking, it is important to note that positive participation for us does not necessarily invoke ideal consensus; it includes forms and processes that are conflictual and unpredictable (and do not uncritically accept a single role for the citizen). Positive participation seeks to be productive, but it does not ignore fundamental, structural differences of interest – participatory practices often become important realms for struggles over questions of empowerment, inclusion and justice. We see positive participation as practices that do not simply reject expert, or professional, roles, nor do they idealise inclusion and localism – they engage with the difficulties of what Tim Richardson and Stephen Connelly (2005) have termed 'pragmatic consensus'. They are practices that involve dwellers and their designers in the *negotiation* of urban and political space.

The selection of initiatives, activities and projects discussed in the following section was informed by this idea of positive participation. In turn, these projects form part of our ongoing exploration and definition of the term.

Grassroots activities

The portrayal of the green ban movement as shorthand for citizen activism in Sydney during the 1970s is reductive both in its failure to acknowledge the wider range of activities taking place, and

also in its depiction of the green bans themselves. While the green bans are frequently discussed as the movement that stopped development, saving bushland and heritage buildings, both the aims of and the tactics used in the movement were much broader. This section will begin to sketch a more comprehensive picture of the green bans. It will then consider another key avenue through which non-experts sought to engage in planning: resident action groups.

Green bans were not conceived as a long-term solution, and were not intended simply as a means to block development. While a handful of bans were conceived as permanent – Kelly’s Bush, and the few buildings classified by the National Trust – the majority were not (Summers et al 1973: 25). Rather, by delaying projects, green bans were intended as a means to put the community onto a footing where they could negotiate with developers and government decision-makers (Munday 1981: 82-4). As a contemporary guide to the green bans noted:

“The BLF and the people who support them are not opposed to change per se... In almost all cases the residents have asked for green bans to be imposed to give them time to discuss what kinds of changes they would like to see in their area, to enable them to consult with each other and with all those affected by the proposed developments and to draw up alternative plans.”(Summers et al 1973: 25)

In many cases, the negotiations secured through the green bans included calls for new developments – particularly social housing, child care and other community facilities. In recent archival research on the green bans, Kurt Iveson found that “...green bans were not only *against* a proposed development, they were enacted in favour of an alternative plan for the area, which was usually described as a ‘People’s Plan.’” (2013: 10) A consistent demand of residents in green-ban protected areas was that plans for low-cost housing replace “high-rise executive style apartments and expensive trendy town-house development”; green bans were seen as a means to work out an alternative system of housing (Summers et al 1973: 30).

In the Rocks, Glebe and Woolloomooloo, for example, green bans secured not only the preservation of heritage buildings, but public engagement in the formulation of alternative plans and the provision of new social housing (Roddewig 1978; Burgmann and Burgmann 1998). The Residents’ Advisory Committee established in the Rocks was active in informing and engaging residents and, in addition to securing a number of design modifications (including vast reductions in the amount of demolitions proposed, restricting the scale of development to nine storeys, rather than the 30-50 storey heights originally proposed, and the provision of facilities for residents including playgrounds, a pedestrian overpass and a car repair pit), persuaded the redevelopment authority to acquire land and build new pensioner housing.

This constructive approach was consistent with the BLF’s increasing engagement in social and environmental issues from the 1960s. In addition to its actions on apartheid, Aboriginal, women’s, student and homosexual rights, the BLF had been criticising the boom in office construction, predicting an oversupply of office space and calling instead for work on socially useful projects (Burgmann 2011). Recognising that improvements in pay and working conditions would be little use if pursued without concern for the city in a broader sense, the green ban movement was driven by a desire to move beyond both the economic interests of workers and the interests of local residents, to consider instead the long-term interests of the broader community (Munday 1981).⁴ In agreeing

to impose a ban, the BLF required local groups to demonstrate that their cause was broadly supported and not just about “a fortunate few who [wished to further] their own vested interest” (Munday 1981: 81).

The tactics employed in the green bans extended much further than strikes and protest. The BLF developed procedures to be used in determining whether to impose a green ban: the project had to be of a sufficient size, there had to be a sufficient number of people supportive of a ban, and the neighbourhood had to be supportive.⁵ In line with their philosophy that workers had a right to a say in the end result of their labour and whether it was in the best interests of the community, the union leaders also believed that residents had the right to a say in development that directly affected them (Pringle, Munday and Owens 1978: 158). Resident groups were consulted and their views given significant weight. When developers began to approach the BLF early in their planning processes, the union’s response was to direct developers to contact the local community first (Roddewig 1978: 31).

Experts were also given a significant role. In addition to encouraging developers to speak to local communities, the BLF responded to requests from developers by recommending they prepare an environmental impact assessment (Roddewig 1978: 31). The BLF also sought professional advice to inform its own decision-making (Freestone 2010: 29). As the bans progressed this came to be formalised, with the BLF establishing an architecture and planning panel to review the merits of conservation before determining whether to impose a green ban (Roddewig 1978: 31).

After the green bans, resident action groups (RAGs) are probably the most well-known forum through which members of the public have engaged in planning. The number of RAGs in Sydney more than doubled during the 1970s, from 15 at the start of the decade to 35 by 1980 (Costello and Dunn 1994: 68). RAGs also became increasingly influential in this period (Freestone 2010: 28; Costello and Dunn 1994: 74).⁶

Like the green bans, RAGs are typically understood as a force against development and against change, and derided as self-serving “NIMBY rat-bags” (Costello and Dunn 1994, p74). However, many RAGs also broadened their approach to planning and development during the 1970s, moving from single-issue, parochial and ephemeral groups to take a more holistic and integrated perspective. For example, residents in Surry Hills joined with local ethnic leaders to hold a number of meetings on the Strategic Plan proposed by the City of Sydney. The meetings were “packed,” and led to the development of an alternative People’s Plan for the area (Pringle, Munday and Owens 1976: 60).

Ten RAGs came together formally in 1971 as the Coalition of Resident Action Groups (“CRAG”). The group agreed on five main objectives:

1. The arrangement of regular meetings to exchange experiences and share methods, strategies and tactics;
2. United action to amend town planning legislation especially right of appeal and citizen participation;
3. The organising of joint action about complaints of local areas when agreed upon – e.g. citizens rights and shown inadequacies of planning legislation;

4. The use of this Coalition to be a body which can draw support from other general groups, e.g., trade unions and professional groups; and
5. To ensure that planning by public and private agencies should have as its end the well-being of the people not profits.(Nittim 1980: 234)

Like these objectives, many of the activities of the Coalition could be described as positive planning. In 1973 CRAG Chair, Murray Geddes, supported lobbying by residents in Mt Druitt for local hospital facilities, criticising the government's plans to construct a new childrens' hospital in the already well-served Eastern suburbs instead.⁷

CRAG also engaged in formal policy and law reform processes. In 1971 CRAG made a submission on the City of Sydney Strategic Plan, calling for subsidised housing for low income earners, street closures for child play, resident participation in planning decisions, spot zoning and differential rating to allow for social and use mix (Nittim 1980: 237). When it became known that revisions to planning legislation were being considered, CRAG made a submission to the Minister for Local Government, as well as engaging with the media, lobbying politicians and undertaking street demonstrations. CRAG members contested local government elections. In 1972 CRAG organised a conference on local government reform, with speakers from local councils, universities, the Royal Australian Institute of Architects and the Civic Design Society, as well as student activists. A post-conference press release called for a number of radical reforms to broaden the range of interests considered and to recognise "the rights of ordinary citizens to have a say in decisions which affect their living standards" (Nittim 1980: 237).

It is important to note that not all of the RAGs moved beyond parochial concerns, and differences in the objectives of various RAGs meant that the CRAG was a loose coalition.⁸ However, it is clear that at least some of the activities of RAGs fell within our concept of positive participation.

Professional initiatives

Freestone and Park (2009) have noted that the professions were slower to question the aims, processes and results of established modes of urban development in Sydney. However, there were shifts occurring: "Milo Dunphy's Environment Subcommittee of the Royal Australian Institute of Architects led the way from 1963" (Freestone and Park 2009: 335; also Meredith 1999). By the 1970s, questioning of the role of the architectural profession in the production of the city, focused on the issue of public participation, was appearing in the pages of its journal of record – *Architecture in Australia*. This was, in part, due to a shift in the Royal Australian Institute of Architect's publication policy, announced by *Architecture in Australia's* editor Colin Brewer in the February 1970 issue. The new approach was aimed at providing "material of more general interest" in order to "greatly improve communication with members and the general public".⁹

Whether or not the new policy increased the journal's (or profession's) engagement with the wider public, its impact certainly was a growth, during the early 1970s, in articles addressing social and environmental issues considered relevant to architectural practice. Two issues of the journal stand out in relation to this discussion. In February 1974 a student-edited issue included extensive critique of the profession's approach to citizen participation, as well as examples of student involvement in alternative experiments, such as participatory school building in Papua New Guinea and 'Learning

Exchanges' (including the "Learning Co-Operative" in Surry Hills).¹⁰ The August 1974 issue included an interview with Jack Munday on the development process (alongside interviews with Gordon Barton and Sir Paul Strasser) in which Munday stressed that: "We've [the BLF] mainly encouraged residents to call upon more progressive architects who haven't got a particular definite interest with one of the big developers to assist them in formulating their ideas."¹¹ The issue also contained articles on two other initiatives that worked toward positive participation – the Autonomous House and the "Archanon II" collective.

Both of those initiatives point to a strong engagement by some in the profession with social and environmental activism in Sydney during the 1970s. The architect and activist Milo Dunphy even took the resolute step of leaving practice in 1972 to establish the Total Environment Centre, which would become one of Australia's key organisations campaigning on environmental protection issues in both the city and the country.¹² A significant part of architecture's engagement with positive participation during the period was connected to the University of Sydney's Faculty of Architecture. For example, students and supportive staff from the faculty were involved in Green Ban campaigns during the 1970s.¹³ By 1972, amid the milieu of University of Sydney student activism, architecture students and staff more openly pursued educational projects that addressed pressing social and environmental issues – including citizen participation (Hill and Stickells 2012: 75).

One of the most ambitious (and notorious) projects ran from approximately 1974 to 1978. The Autonomous House – a bricolage of alternative technologies on the lawn beside the architecture faculty – was one of the earliest experiments of its kind in the world.¹⁴ Designed and constructed by architecture students using recycled and donated materials, it employed passive solar strategies (including a Trombe beer bottle wall), and ambitiously aimed to generate its own power, harvest and heat its own water, produce its own food supply and recycle all of its waste (sadly, biogas production was thwarted by Council's refusal to allow pigs on campus).¹⁵ Far more than a technical exercise, the house was an experiment in rethinking design processes, community engagement and the mediation between people and environment. It was used extensively as an educational tool in this regard: "The four years of exposure with fairs and school visits did demonstrate the technological impact of solar and wind power, passive solar design, rainwater collection, productive gardens and recycling waste."¹⁶ Its meaning for the student inhabitants went beyond professionally proscribed notions of architectural design as a client-driven, building procurement – architecture was rethought as a process of people living creatively together.¹⁷

A key figure connecting this and similar activity was the architect/planner Colin 'Col' James, who had pursued an activist practice in Sydney since the mid-1960s.¹⁸ This included establishing the architectural cooperative Archanon (Architecture for the Anonymous Clients), whose second incarnation (Archanon II) was featured in the August 1974 issue of *Architecture Australia*. The group worked with clients such as a farming commune, the Aboriginal Legal Service and also planned a community "Architectural Shopfront" for South Sydney: "a free service that enables people to modify their own environment if they so wish with minimum of expenditure and fuss."¹⁹ James also worked as an independent advisor to the BLF on the green bans and as a government appointed 'resident advocate' during the controversial 1970s redevelopment of Woollloomooloo (James 1988; Devenish 1981).

By 1979 James was a Senior Lecturer in the University of Sydney's Faculty of Architecture, where he was active in linking teaching, research and socially engaged practice. During the 1970s, James and others in the School of Architecture operated an owner builders design advice service ('Designasaws Collective'), ran continuing education course on 'alternative' housing-construction methods, and (through the Ian Buchan Fell Research Centre) undertook research into 'alternative lifestyle' communities. James' activities are particularly significant for our discussion – involving many communities, innovative professional and political alliances, and work across multiple scales of planning and design. His work is also important for our discussion because its emphasis on co-producing projects and visions with communities operated in distinction to the more oppositional endeavours of fellow architects such as Milo Dunphy and Don Gazzard (which focused on conservation and preservation).

However, James was not the only design professional operating to effect positive participation. For example, the architect Morrice Shaw (who temporarily held a teaching position at the University of Sydney) deployed his experience in community architecture on the lower east side of New York to projects in Sydney. Shaw formed alliances with the Education Commission, school principals, local councils, and students to reimagine and rebuild poor quality playgrounds and parks.²⁰ Around the same time, another architect - Chris Johnson – working in the Schools Section of the Department of Public Works, was involved in preparing a "Playgrounds Self Help Manual", which highlighted ways in which teachers and pupils added to and moulded their own environments (Allen 1975: 93). This very limited selection of architectural ventures into positive participation again points toward the need we have identified for a fuller exploration of such activity in the 1970s.

5. Local government initiatives

In addition to the efforts by residents, community groups and unions to engage with experts through RAGs and green bans, and to those of experts to engage with communities through various architectural initiatives, examples of positive participation in Sydney during the 1970s can be found at the local government level. As the following section will explain, these were both more and less community-driven than the green bans and the RAGs (typically, participatory efforts by local governments were triggered by community action and particularly the election of RAG and other community members to local governments). They were also both more and less expert led, with some examples involving expert consultants, and others relying much more on community direction.

Urban planning and development was a major issue in North Sydney by the start of the 1970s. With Australia's post-war 'long boom' concentrated in Sydney, inner areas such as North Sydney were prime sites for redevelopment. Perceived over-development with high-rise flats and office blocks, coupled with concerns about traffic associated with the Sydney Harbour Bridge, generated increasing opposition among local residents. In 1971, local government elections resulted in the appointment of a number of aldermen on a "reformist-conservationist-social welfare-participatory program" (Sandercock 1975b: 48). Significantly, the new council expressed a commitment to public involvement in planning.

To give effect to this commitment, Council went beyond its statutory duties in preparing a new Outline Plan and Flat Code for the area (Sandercock 1975b: 53).²¹ This was done by appointing a planning consultant, Terry Byrnes, to prepare the plan and code in 1971-72. Byrnes' brief required

him to encourage public participation in their preparation, for which he relied primarily on system of precinct committees. These committees were tasked with conducting surveys, discussing ideas with community, and developing specific recommendations for Council to consider. They were formed by election at precinct meetings, to which all tenants and ratepayers were invited. It was envisaged that the committees would continue to operate after the completion of the plan and code, with a role reviewing development applications and proposals, and in projects such as the development of a foreshore walkway system (NSW Planning and Environment Commission 1975: 124). After Byrnes completed his work, Council then called a public meeting to discuss the draft plan.²²

According to Leonie Sandercock, Leichhardt Municipal Council was one of the first local government authorities in the world with a commitment to citizen participation (Sandercock 1975a: 4). As in North Sydney, this followed the election of a number of new aldermen at the 1971 election, which was triggered in turn by residents concerned about pressure for redevelopment at higher densities since the late 1960s (Sandercock 1975b).

The new council's first move to increase public participation was to open the meetings of council and all of its committees so that members of the public could speak (but not vote) at any time during meetings. Council papers were made available the day before meetings, and senior employees were given permission to speak to the press and the public on any matter.

In addition to surveys and public meetings, Council employed a number of innovations to engage the public in planning. These included an Open Planning Committee, open works inspections, and exhibition of policy options including visual materials and information on consequences (Sandercock 1975b: 55-7). Around 90 residents nominated to join the open planning committee, and up to 30 met fortnightly with planners and aldermen, helped planning staff execute detailed planning studies, and acted as a review committee for technical studies carried out by Planning Officers. The committee had no decision-making authority but, according to the planning officer, had great value in educating the planners. Open works inspections were held on the site of contentious proposals, and were held late in the afternoon to enable attendance by residents along with the council planner, the developer and architect. These were very well attended, and compromises were usually reached.

The plan prepared for Leichhardt was exhibited three times; the first at the policy stage, focusing on objectives. These were prepared by the Planning Committee, supported by technical studies (covering land values, residential development, shopping, industry, traffic, transport, open space, detailed environmental studies of 41 areas) prepared by the committee with the assistance of additional residents as well as students from the University of Sydney. Advertising went to local shops as well as newspapers; council planners were available to the public in person and by telephone, and addressed schools and other organisations on request. Significantly, the exhibition included not just one set of policies but, rather, a range of options. Photographs were used to explain these, and the consequences of each alternative policy.

Our third example took place at Lake Macquarie Shire Council. While located outside of Sydney (approximately 60km north of the Greater Sydney area), we believe it is important as an example of positive participation in a regional context. In contrast to North Sydney and Leichhardt, and to the areas where the green bans and RAGs were most active, the issues for communities in Lake

Macquarie were much less about redevelopment, and particularly high-rise development. Engaging the community in developing positive visions for the future was very clearly the focus of Lake Macquarie's experiments in public participation during the period.

Council used a number of innovative measures to engage the community in considering its draft planning scheme in 1973. This included advertising through pamphlets and advertisements in the press, local radio and TV, as well as displays in local halls and in private commercial premises. Significantly, Council constructed a special display caravan to take its proposals to small shopping centres and high schools (NSW Planning and Environment Commission 1975: 125). Comments were taken through written submissions as well as public meetings in local halls at the end of the displays.

Even more interestingly, for the less developed parts of Council to the west of Lake Macquarie, Council proposed a more innovative form of community involvement. Public forums were held at which residents were asked to form advisory groups for each district. Each group was tasked with preparing a plan for the district, which was to originate from the community itself, as an expression of the wishes of the community. Council staff were available to provide technical support and advice. As for the plans prepared in consultation with the precincts to the East, plans would be given to Council for consideration.

Conclusion

The 1970s was indeed a time of significant activism in Sydney. As this brief survey has shown, a very wide range of groups and individuals – from architects and planners to students, from unions to property owners, from councils to tenants – sought to engage in issues of planning and development during the period. Protest was just one way in which this engagement occurred. As the examples above have shown, many different activities took place during this period, from caravans taking planning to schools and shopping centres, to grassroots-initiated expert panels, to experimental housing, to open councils.

Significantly, many of these may be characterised as positive participation. As contemporary planning, architectural and environmental discourse is increasingly consumed by questions of governance – citizen engagement, outsourcing and panelization are today pressing questions – there is much that could be learned from a fuller survey of these activities.

¹ Robert Freestone, personal communication by email, January 10, 2013.

² "In the early seventies the few voices that had been raised in protest against the destruction of historical monuments were joined by the insistent demands of Resident Action Groups and by the militant forces of one of Australia's largest trade unions; the Builders Labourers Federation (BLF)." (p65)

³ Arnstein (1969) emphasizes that citizen participation is a 'categorical term' for citizen power: "the redistribution of power that enables the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future."

⁴ Concerns had been raised within the BLF about assisting middle-class housewives. Union secretary Jack Munday was a key figure in bridging the two groups, convincing BLF members to join with the argument that fights for higher wages and better conditions would be pointless if they lived in cities devoid of parks and denuded of trees.

⁵ One example where the BLF determined not to hold a ban based on these criteria was the redevelopment of an old dairy in Vaucluse: only 50 people supported the ban, and the area was already well-provided with public open space (Roddewig 1978: 31).

⁶ Examples of RAG successes include securing conservation zoning for an area of Victorian terrace houses in Paddington, preventing the displacement of residential tenants to make way for the proposed eastern distributor, and preserving an area of bushland on the Wollstonecraft Peninsula where 'bachelor flats' had been proposed (Nittim 1980: 232-3).

⁷ "Out West – wasteland, wantland: Summertime- but the living's not easy", SMH, February 8, 1973, p3.

⁸ While early members such as the Rocks RAG supported tenants groups and the Housing Commission, later members opposed Housing Commission and other government land resumptions, and sought to define the conditions and value of compensation. The limited scholarly attention that does exist on the RAGs has been mixed in its assessments. While conceding that RAGs do not always make a serious challenge to the dominant social order and are often driven by parochial aims, Costello and Dunn (1994) found RAGs can provide a voice to those who would otherwise be disempowered, and can challenge the social and spatial order. Nittim (1980) has similarly emphasised the importance of the radicalising experience of resident action.

⁹ *Architecture in Australia, Journal of the Royal Institute of Australian Architects*, no. 1, February, 1970, p71.

¹⁰ *Architecture in Australia*, v.63 n.1 (February 1974)

¹¹ *Architecture in Australia*, v.63 n.3 (August 1974), 61

¹² The Total Environment Centre is still in existence. <http://www.tec.org.au>

¹³ Col James, interview with Glen Hill, University of Sydney, 11 November 2011.

¹⁴ 'Australian Autonomy', (1977) 47 *Architectural Design* 15.

¹⁵ Col James, taped interview with Therese Kenyon, 9 August 1994

¹⁶ Col James, 'A Trickle Up Effect: Towards Affordable and Sustainable Housing' (Presentation to Shelter NSW, 12 November 2002), 2.

¹⁷ 'A Resident Reflects', in anonymous pamphlet describing Autonomous House project: '54 Alma St Darlington' (publisher unknown, c1978).

¹⁸ Col James died in early 2013. He had a long and distinguished career as an architect, educator, activist and community builder, including 40 years as Senior Lecturer at the University of Sydney. A fuller account of James' singular contribution to community engagement in architecture, particularly social housing issues, is yet to be written.

¹⁹ *Architecture in Australia*, v.63 n.3 (August 1974), 79-83

²⁰ "No room for the cheap and nasty", *Sydney Morning Herald*, June 9th, 1983; University of Sydney, Students at the University of Sydney, accessed 06 August, 2013

<http://sydney.edu.au/senate/students_early1_gallery_architecture.shtml>

²¹ At the time, these were limited to exhibition of completed planning schemes and hearing objections from those directly affected. Sandercock found that the process was limited by the attitudes and values of the consultant (who relied on the "traditional array of consultative techniques").

²² Assessments of the public engagement process in North Sydney have been mixed. It was presented in positive terms by the State government as one possible model for public participation (NSW Planning and Environment Commission 1975: 124.); it was also described as "pioneering extensive community consultation" by Robert Freestone (2010: 228). Leonie Sandercock was much more critical, but did acknowledge its significance as an effort by Council to go beyond its statutory duties (1975b: 53). Sandercock suggests that the failings in the process may have been due in part to the particular consultant selected, and notes that at the end of the process Council in fact went against his recommendations, particularly in calling a public meeting to discuss the draft plan.

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Preserving Green Urban Landscapes

Regional public land acquisition in Perth and Sydney

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The focus of this paper is a comparison of the history of the governance and funding of regional public land acquisition in Perth and Sydney, with the case for the selection of these two cities established by a contrast of the methods used. Specifically the paper aims to review the governance approaches and planning and funding tools utilised in the two cities for the acquisition of regional public land, and to present the case for the extension of the model used in Perth of the Metropolitan Region Improvement Tax (MRIT). Contextualisation is provided by a consideration of initial ad hoc efforts to reclaim land for regional public purposes following the original alienation of Crown Land, and an overview of the introduction of metropolitan planning schemes and supporting legislation. Regional public land acquisition – primarily for open space – in Perth and Sydney are examined in detail. In the case of Perth, this includes an analysis of pre-Metropolitan Region Scheme (MRS) private land acquisition for regional public purposes, the introduction of the MRS and Metropolitan Region Planning Authority (MRPA), and the establishment of a hypothecated tax for regional public land acquisition – the Metropolitan Region Improvement Tax. Collection and management/spending of the tax are examined to demonstrate its success as a public land acquisition tool. A similar temporal approach is taken to the consideration of regional public land acquisition in Sydney, beginning with the situation prior to the County of Cumberland Plan and subsequent metropolitan plans for Sydney, funding schemes such as the Cumberland Development Fund, Sydney Region Development Fund, and Metropolitan Greenspace Program and betterment tax schemes such as the failed *Land Development Contribution Management Act 1970*. The main outcome of the comparison and contrast of the approaches taken in Perth and Sydney is the case for the extension of an improved ‘Perth model’ of the MRIT, to other Australian capital

cities. The benefit, from the perspective of the implementation of public policy and strategic metropolitan planning, of the availability and utilisation of a hypothecated tax for public land acquisition, is a key conclusion of this paper.

Keywords: Public land acquisition, regional open space, urban governance, metropolitan plans, planning tools, Perth, Sydney.

Introduction

Acquisition and protection of regionally-significant areas of open space and land for other regional infrastructure such as major roads has been a long-standing goal of spatial planning in Australian cities. Indeed, this aspiration predates the advent of numerous post-war metropolitan plans in Australia, though it has of course been formalized over time in different ways through such means as the Green Belt and district open space network of Sydney's statutory-based *Planning Scheme for the County of Cumberland* (1948), the Hills Face Zone and 'open buffers between districts' of the *Metropolitan Development Plan* (1962) for Adelaide, Perth's regional recreation reserves proposed under the *Metropolitan Region Scheme* (1963), and protected Green Wedges beyond Melbourne's urban growth boundary (UGB) introduced by *Melbourne 2030* (2002).

A body of recent academic literature has focused on the intersection of metropolitan spatial planning, regional open space planning and provision, and urban governance (see for example, Amati and Taylor (2010), Evans and Freestone (2010) and Thomas and Littlewood (2010)). In a regional/metropolitan planning context, consideration of regional open space which was centred particularly on the green belt concept has traversed to focus on concepts such as green webs and corridors or wedges and, in more recent times, to the broader notion of 'green infrastructure'. However described, the planning and protection of such regional 'green spaces', particularly in Australia's capital cities, has been of ongoing concern to successive State Governments. Moreover, efforts – albeit largely ad hoc – to reclaim land for public (including open space) purposes following the original alienation of Crown Land in Australia, were in evidence at State and local level prior to the introduction of metropolitan planning schemes and supporting legislation.

The focus of this paper is a comparison of the history of what may be broadly described as the 'governance' of regional public land acquisition in Perth and Sydney, with the case for the selection of these two cities established by a contrast of the methods used. Specifically the paper aims to review the planning and funding tools and administrative approaches adopted in the two cities for the acquisition of regional public land, and to present the case for the extension of the model used in Perth of a tax hypothecated (pledged) to fund such acquisitions, the Metropolitan Region Improvement Tax (MRIT). Beginning with a consideration of initial ad hoc efforts to reclaim land for regional public purposes following the original alienation of Crown Land, the paper provides an overview of the introduction of metropolitan planning schemes and supporting legislation in Perth and Sydney. Regional public land acquisition – primarily for open space – through these means is examined in detail.

Procurement and protection of land for regional open space and other regional infrastructure has arguably been most successfully implemented in Perth, due in no small measure to the adoption of the statutory-based Metropolitan Region Improvement Tax in 1959, which is discussed in more detail below. The benefit, from the perspective of the implementation of public policy and strategic metropolitan planning, of the availability and utilisation of a hypothecated tax for public land acquisition, is a key conclusion of this paper.

Early metropolitan planning and regional open space provision in Perth

At the establishment of the Colony of Western Australia, the Crown became the owner of all land and commenced a gradual 'alienation' of Crown land to fee simple (private 'freehold') tenure. Un-alienated Crown land remained the major source of land set aside for public purpose requirements in Western Australia from the beginning of settlement. Its reservation to the Crown for an existing or future public purpose was a relatively simple matter. It did not require any payment to be made from the colonial treasury, and nor did it require dealings for acquisition with a private owner of alienated land. In the laying out of fee simple lots for new towns and rural areas, the surveyors were instructed to reserve land to the Crown for roads, squares, parks, schools, public buildings and foreshore areas adjacent to water bodies. Further, from un-alienated Crown land a number of major parks were established in the 19th and early 20th centuries in what is now metropolitan Perth. These included Perth (later Kings) Park to the west of Perth (1871, expanded to 400 ha in 1890), John Forrest National Park in the Darling Range (1898) and what became Yanchep National Park (1905).

However the early subdivisions of rural land grants in metropolitan Perth before and during the gold rush of the 1890s did not require any planning or local government approvals, and consequently very large tracts of residential estates were created by speculators. Whilst usually re-dedicating public roads to Crown ownership, these private subdivisions were lacking in constructed roads and services and land re-vested in the Crown for parks, foreshore reserves and other necessary public purposes such as schools. Generally only areas of Crown land subdivided by the government in that period resulted in the reservation from sale of land for public purposes. For instance the process for the government's subdivision of Crown land to create the Subiaco/Shenton Park area from 1883 incorporated the reservation of land from sale of the necessary supporting public purposes such as civic facilities, schools and parks (local, as well as what is now a regional park – Subiaco Oval). In other government subdivisions such as the South Nedlands townsite (now Dalkeith), a wide foreshore reserve was set aside from Crown land next to the Swan River (Department of Lands and Surveys, 1920).

The satisfaction of community land needs over the following decades in those subdivision estates that were devoid of, or deficient in, local parks, foreshore reserves and other land for public purposes largely relied upon Crown land being made available for that purpose (including the reclamation of river foreshore areas such as in the creation of Perth's Langley Park), or alternatively, the use of municipal funds to acquire land for local and major parks. For instance, under the influence of its Town Clerk, William Bold, the City of Perth spent £37,000 up until 1918 purchasing land for parks and gardens, apparently much of it borrowed (Saw, 1918, pp.45-46). The State government added some private land to major parks, such as the expansion of Kings Park along the top of the escarpment of Mt Eliza by resumption in 1896 (Government of WA, 1896) and assisted the City of Perth to transform former clay pits in East Perth into Queens Gardens in the late 1890s.

Local government gained approval powers over the subdivision of land in 1900/1904 (Foley, 1995), although much residential subdivision of the rural landholdings around Perth and Fremantle had already occurred. In any event, local governments were often not sure what to do with these new powers, with one contemporary commentator stating that they all had “different ideas, and governed by guess-work methods” (Boas, 1931, p.144). Nevertheless, some local authorities secured from developers parks, foreshore reserves and other infrastructure in new subdivisions, often due to the persuasive efforts of town planning enthusiasts such as surveyor Carl Klem.

Community concerns at the lack of planning during the gold rush era led to the formation of the Town Planning Association in 1916 whose concerns included the deficiency of parks and playgrounds in many residential areas. As early as 1918, Association member William Saw was advocating a minimum of 10% public open space for parks, recreation and children’s playgrounds (Saw, 1918, p.45 & p.58). After much lobbying by the Association, the *Town Planning and Development Act 1928* was passed which enabled local governments to make town planning schemes to control private land use and development, and to re-subdivide and redevelop areas (by compulsion if necessary). It also centralised subdivision approval powers with a new authority called the Town Planning Board, which first met in 1929 (predecessor of the Western Australian Planning Commission [WAPC]).

One of the first tasks of the new Board was to draft, and have approved by the Governor, the Uniform General Bylaws for New Subdivisions and Re-subdivisions in January 1930 (Government of WA, 1930). These bylaws are arguably the first planning policies in W.A. They incorporated requirements for subdividers to provide land for foreshore reserves to water bodies, as well as parks:

3(g)... at least 100 feet reservation fronting seashore, lake sides, or banks of streams (exclusive of any road widths), and no rear of any lots shall abut such reservation unless expressly approved...;

3(i) spaces and sites for dedication to the local or other authorities for parks, recreation grounds, playgrounds, public buildings, schools, churches, memorials, or public services; ...

In addition to the Board, another planning body, the Metropolitan Town Planning Commission, had been established in 1928 under separate legislation, the *Metropolitan Town Planning Commission Act 1927*, to consider the planning of the whole of the Perth metropolitan area. The Commission reported to the State Government in 1930, and having completed its task, was disbanded (Boas, 1931). Its comprehensive report looked at a wide range of issues, and made many recommendations, including for a metropolitan system of regional roads, parkway belts, and river and coastal foreshores to serve Perth’s long term needs. It advocated the setting aside of government land for parks, the acquisition of private land by purchase or resumption for public purposes where necessary, possibly with the use of rating powers, and the obtaining of foreshore and local park reserves free of cost from subdividers.

However, with the scarcity of funds due to the onset of the Depression, and without the benefit of statutory regional planning measures such as a statutory plan, a specific funding mechanism and a dedicated authority to facilitate the report’s recommendations, the report sat on the shelf. Despite this, it did leave a legacy to the extent of clarifying the importance and need for State and local government to actively plan for the provision of land of all types of public infrastructure such as land

for recreation, including children's playgrounds, playing fields, foreshores reserves, regional parkway belts and National Parks. In the 1930s and 1940s, the Town Planning Board, under the leadership of Town Planning Commissioner David Davidson, appears to have been successful in negotiating and achieving parks and foreshore reserves in its approval of at least some new private subdivisions. For instance, in 1936, the developers of the Attadale estate, Sydney company T. M. Burke Pty Ltd, gave to the State and local government a mile-long stretch of the Swan River foreshore totalling 53 acres (21 ha), as well as another 10 ha of parks and government school site (The West Australian, 9 April 1936, p.23).

Local councils had continued their open space acquisition programs to make up the deficiencies of the subdivision estates created in the gold rush era, with the City of Perth purchasing more land for playgrounds, parks and recreation (City of Perth, 1936). Perth's purchases included large areas which would now be considered 'regional' open space, such as land next to Lake Monger and its surrounds (Boas, 1931, p.108). The City of Perth also set aside 'Bold Park' from part of lands 'endowed' to it by the State. Some local councils also sought to address the lack of a regional road system and hierarchy. In the absence of State government action, the City of Perth was active in this regard by, for example, resuming 29 houses in 1929 at a cost of some £20,000 to extend Cambridge Street to provide an improved major road system (The West Australian, 10 July 1929, p. 14). Overall, however, securing lands for public purposes to support the continuing metropolitan urban growth that was occurring was a continual catch-up game for State and local authorities in the absence of a systematic planning and acquisition program, particularly at the metropolitan regional level.

Regional public land acquisition in Perth

Planning at the metropolitan regional level was revived for metropolitan Perth in the early 1950s. In 1955, when anticipating a significant industrial and urban expansion boom in and around Perth fuelled by increasing post-war immigration and overseas investment, the Western Australian Government published the Plan for the Metropolitan Region: Perth and Fremantle. This became known as the 'Stephenson – Hepburn Plan', after its key authors. With a metropolitan population of 400,000 in 1955, the Stephenson - Hepburn Plan showed great faith in metropolitan Perth's future growth potential, taking a 40 to 50 year view and identifying land for future development and regional public purposes to accommodate a population of around 1.4 million. The report for the Plan undertook a comprehensive evaluation of outdoor recreation and open space. Public open space was divided into three distinct categories in the report: (1) Local Open Space; (2) District Open Space; and (3) Regional Open Space. Regional Open Space identified in the plan included a wide range of recreation functions including National Parks, river, lake and ocean foreshores, natural areas, picnic areas and camping grounds, areas of landscape value and open country, and regional sports facilities.

To implement the Stephenson–Hepburn Plan, the report recommended legislation to create a statutory metropolitan region planning scheme administered and kept under review by a regional planning committee. This would provide a broad legal framework within which the more detailed local government planning schemes would need to fit. Most importantly, however, it would 'reserve' land for a wide range of long-term future regional public infrastructure purposes to support the future population and economic activities. The public acquisition of the 'reserved' private land would be funded via a new land tax.

In 1959 the *Metropolitan Region Town Planning Scheme Act 1959* and *Metropolitan Region Improvement Tax Act 1959* were passed by the WA Parliament. They resulted in the creation of the Metropolitan Region Planning Authority (MRPA) in 1960 and the establishment of the recommended land tax, the Metropolitan Region Improvement Tax (MRIT). The MRPA was charged with preparing the Metropolitan Region Scheme (MRS). After reviewing the Stephenson–Hepburn Plan, the MRPA prepared a draft MRS which was advertised in 1962 and approved by the Governor in 1963. The MRS either ‘zoned’ land for essentially private development purposes such as ‘Urban’, ‘Industrial’ or ‘Rural’, or ‘reserved’ it for existing and future regional public purposes such as ‘Parks and Recreation’, ‘State Forests’ or ‘Important Regional Roads’. When land was ‘zoned’, the local government’s town planning scheme had to generally reflect the purpose of the MRS zone. For land that was ‘reserved’ in the MRS, the local scheme was automatically amended to include the MRS reservation. Importantly, the MRPA gained sole development control when land was reserved so that developments proposed on reserved land that would be incompatible with the long term intended public purpose could be refused or appropriately conditioned. The Act provided that private land reserved under the MRS could be purchased by the MRPA using the monies from the MRIT, and compensation for ‘injurious affection’ could also be paid if a claim was proved.

The MRIT was levied on the same properties as State Land Tax (and for convenience and efficiency charged on the same bill), and as a tax that was ‘hypothecated’ (pledged) for a particular purpose under its Act, the monies raised had to be transferred annually to the MRPA’s Metropolitan Region Improvement Fund (MRIF).¹ Receipts into the MRIF commenced in 1960. The MRPA worked alongside the Town Planning Board, which from 1956, had made and administered Interim Development Order (IDO) No. 1 for the Metropolitan Region under an amendment to the *Town Planning & Development Act 1928* to control development until the MRS was in place. This included compensation and acquisition powers, and from 1960, the MRPA commenced using the MRIF to acquire, and pay compensation for, private land ‘reserved’ in the MRS for future public purposes, including regional parks and recreation, roads and railways.

Since 1963, the zones and reservations of the MRS have been regularly updated via amendments. When undertaking this review work, the MRPA could reserve additional private land with the relative confidence that its future acquisition and compensation payments could be secured by the annual amounts guaranteed to be transferred to it from the MRIT. The result has been that significant amounts of ‘reserved’ private land in the Perth Metropolitan Region have been purchased for future regional infrastructure needs, including for regional parks and recreation.

There are a number of advantages of the reservation system of future public land operating in Perth. Firstly, land is reserved well in advance of need which helps create certainty (that is, ‘people know where they stand’). Secondly, the Western Australian Planning Commission (WAPC) is able to use its development control powers to prevent incompatible development (though minor or temporary development may be permitted). Thirdly, as it is a land tax, as land values increase, the money raised also increases, which is crucial to ensure the annual amounts can keep pace with land value rises. Fourthly, land is gradually purchased as owners wish to sell: only in limited cases is land resumed (or ‘taken’, as it is now termed). Fifthly, the cost in real terms to the community is not high, as public works such as road widening or park creation can more easily take place because the land is there, that is, it has already been reserved and mostly acquired for that use. Finally, the WAPC is able to

get on with the task for public land acquisition without having to plead to Treasury each year (unlike the WA Department of Environment and Conservation when it tries to buy conservation land or for the Peel and Greater Bunbury region planning schemes which operate in the same manner as the MRS but for which a constant \$7 million annual Treasury allocation has been provided to the WAPC to fund both those schemes since 1997). Though there are some disadvantages of the reservation system (potential adverse effects on landowners; political costs; and non-purchase price acquisition costs can be high in situations of disagreement over 'injurious affection' compensation or determination of value when the WAPC 'elects to purchase' rather than resume) these are considerably outweighed by its advantages.

By May 2013,² some 112,000 ha of public and private land was reserved for 'Parks and Recreation' in the MRS (compared to 26,700 ha originally reserved in 1963).³ For comparison purposes, Perth's iconic Kings Park is 400 ha. Since 1960, around 26,000 ha of private land reserved for 'Parks and Recreation' has been gradually acquired by the MRPA and its successors, the State Planning Commission, and now the WAPC (mostly by private treaty with very little need for compulsory acquisition).⁴ Once land is in WAPC ownership, the WAPC has an interim management function until a sufficient amount of land has been acquired at which time park management plans are usually prepared and the land is consolidated into Crown reserves. Management is then transferred to a long term management body, most often local councils and the Department of Environment and Conservation. Examples of regional parks and areas that have been created solely or largely by acquisitions using the MRIT include Yellagonga, Beeliar, Herdsman Lake, Jandakot Botanic Park, Rockingham Lakes, Darling Range, Araluen, Whiteman Park, and the Swan and Canning River foreshores.

Whilst the 1955 Stephenson–Hepburn Plan itself has been influential on Perth's development, its report's implementation mechanism recommendations of a statutory region planning scheme accompanied by a hypothecated land tax with the ability for an independent planning authority to relatively easily reserve and acquire private land for regional purposes, has arguably been its key enduring legacy. This can be measured against the acquisition of land in the two other regions where statutory region planning schemes have since been instituted – Peel (2003) and Greater Bunbury (2007). As previously noted, in these two regions a hypothecated land tax was not included in the legislation and consequently the WAPC relies on annual Treasury allocations from consolidated funds which have remained constant, making the acquisition of land and payment of compensation an even more challenging task than in the Metropolitan Region.

Early metropolitan planning and regional open space provision in Sydney

The Colony of New South Wales followed a similar pattern to Western Australia of gradual Crown land alienation. However, as in the case of Perth, from un-alienated Crown land three major parks – the Royal National Park, Ku-ring-gai National Park and Centennial Park – were proclaimed in the late 19th century in Sydney. In addition, several large military reserves across the region were also proclaimed from the 19th century. Significantly, several of these located around Sydney Harbour were eventually to become 'surplus' to defence needs and, being relatively undeveloped, were fortuitously converted to significant regional public open space acquisitions in the latter decades of the 20th century. Little however was achieved by way of regional or local open space acquisitions in Sydney in the first half of the 20th century, despite the best efforts of groups such as the Parks and

Playgrounds Association (an offshoot of the Town Planning Association of NSW) and some ad hoc reservations by various authorities of smaller tracts of typically rugged land unsuitable for development (Evans and Freestone, 2010). A major reason for this lack of progress at this time was the absence of a spatial plan for Sydney and town planning legislation.

Comprehensive town and country planning legislation did not transpire in NSW until the enactment of the *Local Government (Town and Country Planning) Amendment Act 1945*, which inserted into the *Local Government Act 1919* a new Part XIA titled 'Town and Country Planning Schemes'. In this regard, NSW lagged behind a number of other Australian States, Great Britain, and certain States in the United States (Starke, 1966). However, the absence of comprehensive legislation did not infer a lack of concern with planning, as there had been a history of interest in the subject throughout the first half of the twentieth century in NSW (Winston, 1957). Pertinently, the 1945 Act made provision for a controlling planning scheme for the County of Cumberland. A Cumberland County District was provided by the Act, and was constituted by proclamation of 27 July 1945: the County consisted of local council areas in metropolitan Sydney and fringe local government areas such as Campbelltown, Camden, Liverpool, Penrith and Windsor. Under the 1945 Act the State Government established a formal metropolitan planning body, the Cumberland County Council, which was to prepare and submit to the Minister a scheme in respect of all land within the County District. Accordingly, the Cumberland County Council, which commenced work that year on Sydney's first spatial plan – the County of Cumberland Plan.

A draft of the County of Cumberland Plan was completed in 1948, adopted by the Cumberland County Council, and exhibited for public comment during the same year and again in 1949. Ultimately, the County Plan consisted of a report – *The Planning Scheme for the County of Cumberland* (1948) - a delegated planning instrument gazetted in 1951 that implemented the Plan, and accompanying maps. In the interim however, further progress with enacting the Plan between 1949 and 1951 was delayed. A major reason for the interruption in the operation of the County Plan was the refusal of the Commonwealth Government to make any contribution toward the cost of implementing the Plan, in particular its proposed open space acquisitions. These acquisitions consisted of both vacant and built-up land, and it had originally been assumed that financial support would be provided on an equal basis from Commonwealth, State and local levels of government. Commonwealth repudiation required the NSW Minister for Local Government to modify the County planning scheme by eliminating the provision for the acquisition of built-up lands, reducing the available open space acquisition budget by two-thirds (Evans and Freestone, 2010), with financial responsibility for the modified Plan having to be borne equally by the State and by local government. It was only after this crucial compromise was reached that the County Plan was able to come into force through Parliamentary enactment of *the Local Government (Amendment) Act 1951*. The County Plan was given legal effect, as a statutory instrument titled the *County of Cumberland Planning Scheme Ordinance*, which was set out in a Schedule of the 1951 Act, and became law on assent to that Act. The broad purpose and institutional arrangements of the County of Cumberland scheme were that it

... made provision for the reservation of land for the purposes of open space, county roads and railways, and for the zoning, on a more general basis, of land use. The Cumberland County Council was designated as the responsible authority for the control of the scheme in

respect of the reservation of land and the green belt and special uses zones, all development by the Crown, the payment of compensation, places of scientific or historic interest, and the control of ribbon development. (Starke, 1966, p. 43).

Defining characteristics of the County Plan included that it: (i) was implemented (and legally enforceable) through a statutory planning scheme (the County of Cumberland PSO); (ii) provided a fund – the Cumberland Development Fund – for the acquisition of (vacant) land reserved for public purposes such as open space, future roads and other needs; and (iii) prescribed the outer limits of urban growth and sought a compact city form: this was to be achieved through the concentration of city growth within the existing urban area, and the establishment of an encircling ‘green belt’ based on Sir Patrick Abercrombie’s Greater London Plan of 1944, to limit suburban expansion and link scenic and bushland reservations. In addition to the green belt, another noticeable growth management feature also proposed by the Cumberland scheme was a series of urban districts within the city separated by natural features, each serviced by a district centre. These districts, separated by areas of open space and girdled by a greenbelt, were drawn strongly from the Garden City concept of Ebenezer Howard. This web of largely existent district open space has generally survived intact to the present day (Evans and Freestone, 2010).

From its very beginning, the County Plan met with considerable institutional and stakeholder opposition. Constraints that the Plan imposed on landowners were felt to be troublesome; local councils resented and frequently defied the County Council; and State authorities were reluctant to be bound by the Plan (Ashton, 1988). These difficulties were compounded by physical challenges – in particular by a population growth rate in Sydney double that estimated by the Plan (Spearritt and De Marco, 1988). As a consequence of the demand generated by the unforeseen population growth, tremendous strains were placed on the Green Belt by both private and public sector land and housing developers (Stilwell, 1993; Spearritt and De Marco, 1988). Satellite cities needed to be established beyond the Green Belt to compliment the compact metropolitan core. Instead, in 1961 the Minister for Local Government announced, without consultation with the Cumberland County Council, the abolition of the Green Belt and ordered that large urban expansions be allowed. At this time the Minister foreshadowed the demise of the Cumberland County Council (it was replaced in 1963 by the State Planning Authority) and the preparation of a new metropolitan plan, which became known ultimately as the *Sydney Region Outline Plan*.

Pertinently, the Cumberland Plan suffered from a lack of funding (from the Commonwealth Government), particularly for the acquisition of land for open space and infrastructure corridors, and for new urban releases, particularly in proposed satellite towns beyond the Green Belt (Ashton, 1988). Perhaps most importantly, the County Council suffered from a lack of political power and fragmentation of decision-making within the political and bureaucratic structures of the day. This meant that efforts made by the County Council to adapt the County Plan to changing circumstances – to accommodate the rapid growth that was occurring in Sydney – was doomed to failure, so that, by the mid-1960s, the County Scheme was “crumbling at the edges” (Ashton, 1988, p. 25).

Regional public land acquisition in Sydney

Central to the County of Cumberland Planning Scheme’s federally-emasculated regional open space acquisition program was the Cumberland Development Fund (CDF). The CDF was established to

support the implementation of the County Plan by acquiring land reserved under the Plan for regional public purposes – green belt (Regional Open Space), parks, main roads and freeways. Funding of the CDF was sourced from local councils in Sydney being levied by the Cumberland County Council (and later by its administrative successors beginning with the State Planning Authority in 1963). Levy amounts were calculated as a percentage of councils' rate bases (unimproved property value) and adjusted annually for CPI. The State Government made substantial contributions (at least matching councils) and provided sizeable loan funds (Bob Waldron, pers. comm., 2011). In 1980 the CDF was superseded by the Sydney Region Development Fund (SRDF) which, similar to the CDF, is financially supported by State Government and local authorities, with the level of council contributions being determined by the unimproved value of all land in a local government area (DEP, 1987). In this regard the SRDF revenues are not a tax based directly on the improved value of urban lands such as Perth's MRIT.

Lands earmarked for acquisition under the SRDF were generally for regionally significant public purposes and were set aside as reservations in statutory planning instruments by both local councils and State authorities. Reservations created a legal obligation for the State Government – through the SRDF – to acquire this land. The timing of acquisitions was largely related to affected property owners approaching the Fund when they wanted to sell, though powers existed for more proactive resumptive action by the Fund where lands were needed more urgently. Funds raised through the SRDF were originally hypothecated for the agreed planning purposes and used for land acquisition, interest on loans and administration. By the late 1980s however fiscal constraints meant that the outstanding loans had to be placed on a more sustainable basis. Council contributions, matched by NSW Treasury, were used to meet interest and administration costs only. Future capital requirements (consisting mainly of ongoing acquisition commitments) were to be funded from a new program of asset sales.

The SRDF has continued to meet its acquisition commitments on this basis. Asset sales were a fortuitous and successful revenue source because many former (mainly road) reservations from the time of the County of Cumberland Planning Scheme were abandoned and large areas acquired in the 1950s and 1960s were no longer deemed part of the future planning needs of Sydney (Bob Waldron, pers. comm., 2011). Revenues from asset sales are hypothecated for the purpose of the SRDF (that is, for land acquisition, some property improvement and the occasional development project such as the Rouse Hill Regional Centre). However, while asset sales have met ongoing funding needs of the SRDF for the past 20 years or so, it is not sustainable in the long term. Given capital funding limits, Government reviews since the early 1990s have also limited the extent and ease of new reservations being created in the Sydney Region, the most recent being the revision of public land reservations in statutory planning instruments following amendments in 2006 to the compulsory acquisition provisions of the *Land Acquisition (Just Terms Compensation) Act 1991* (DoP, 2006). Limitation on funding has constrained the earlier freedom planners had to put new planning schemes in place, and has also led to the use of alternative mechanisms such as development contributions, voluntary planning agreements, conservation agreements and environmental zoning controls to secure local and regional public open space. Some of these other programs focusing on regional open space acquisition in the Sydney region are outlined below.

Various forms of levies on development have been attempted in NSW in order to capture for planning purposes such as public open space provision, part of the 'unearned increment' arising from 'betterment': that is, the uplift in property values caused by planning decisions that are financially beneficial to landowners. Part XIIA of the *Local Government Act 1919* allowed for the collection of betterment. Sections 342AF and 342AG empowered councils to levy betterment charges where the prescribed planning scheme expressly so provided. This charge was directed to the recovery of any increase in the value of land attributable to the operation of the prescribed scheme. However, the provision proved to be of little practical importance since only a handful of schemes under Part XIIA provided for recovery of betterment, as councils were reluctant to claim betterment charges due to its electoral unpopularity.

A later attempt in NSW to introduce a betterment tax – via the *Land Development Contribution Management Act 1970* – operated briefly between 1970 and 1973. This legislation, with its cognate statute *the Land Development Contribution Act 1970*, enabled the capture of 30% of the increase in value from the rezoning of rural land around Sydney for urban use or the sale of other 'declared land' that had not yet been rezoned, and raised some \$9 million for public works and services needed for the rezoned land (Day, 1995). The tax was collected either upon the granting of development consent, sale, or rezoning of land declared for urban release under the Act. The NSW Land Development Contribution statutes were hailed in some quarters as "... a brave attempt to achieve a worthwhile and workmanlike method of ensuring that the betterment achieved by zoning is returned to the community..." (Fogg, 1982, p. 521). However, the tax proved problematic due to the impediment it placed on new residential development at a time of extreme land shortages and inflationary pressure in the property market. The legislation was abandoned as developers either refused to develop land (so avoided the tax) or, if land was developed, passed on the cost to home buyers – both actions further exacerbating land supply shortages and inflation in land and house prices in Sydney (Williams, 2000).

The Metropolitan Greenspace Program (MGP) is a modest grants funding program for allocating part of the SRDF for planning and improvement of regional open space in the greater Sydney region. It is a partnership program involving State and local government to improve and extend regionally-significant open space for recreational purposes. Between 1985 and September 2012, the MGP has provided over \$32 million to councils for 539 projects across the metropolitan area through the SRDF (DoPI, 2012). All 43 metropolitan councils are eligible to apply for grant funding. Annually, approximately \$2.5 million is available, on a dollar-for-dollar matched funding basis. For a project to be eligible for MGP funding it must demonstrate both: matched funding – MGP funding must be matched dollar for dollar with cash funding; and the regional status of the open space – councils must demonstrate the regional qualities of the green space project for which funding is sought. While the MGP is used for the acquisition of new open space, much of its recent budget has been directed to capital works improvements to enhance the accessibility and connectivity of the existing network of regional recreational trails in Sydney (DoPI, 2012).

Conclusion

The key finding of this paper is the benefit, from the perspective of the implementation of public policy and strategic metropolitan planning, of the availability and utilisation of a hypothecated tax for public land acquisition. The benefit of using a hypothecated tax that will grow over time by being

related to (unimproved) land value is evident when compared with the approach utilised public land acquisitions in Sydney. The main funding source in recent decades for regional open space acquisitions in Sydney through the SRDF has been asset sales – that is, the sale of previously acquired public lands. Not only is this somewhat counter intuitive in the sense that public land sales are being used to finance new public land purchases, but it is also unsustainable in the long term as there is an ever-diminishing stock of saleable public land. Further, the monetary sums and hence physical size of acquisitions under the SRDF and schemes it sources such as the Metropolitan Greenspace Program (MGP) is relatively modest. The annual budget for the MGP for example is only \$2.5 million and much of this in recent years has been spent on improvements to the existing open space network, rather than new acquisitions.

Planning for future regional open space needs in particular in Perth, has clearly benefited from a hypothecated tax for public land acquisitions. But as discussed above the effectiveness of the MRIT is that it has also been used within the context of a robust strategic plan for Perth – in line with the key recommendations of the report accompanying the Hepburn-Stephenson Plan. The crucial mechanisms recommended for implementation of the Plan were the creation of a statutory region planning scheme accompanied by a hypothecated land tax with the ability for an independent planning authority to relatively easily reserve and acquire private land for regional public purposes. The combination of the Metropolitan Region Scheme (MRS), the MRIT/MRIF and the Metropolitan Region Planning Authority (later WAPC) provided these mechanisms.

The Perth model exhibits the following elements within its metropolitan planning, governance and funding system, to facilitate a successful regional public land acquisition strategy:

- (i) a sound spatial plan is in place which clearly delineates future regional public land/open space needs;
- (ii) that land is able to be reserved, thereby quarantining it from potential land uses detrimental to its future public acquisition and use;
- (iii) planning and acquisition is overseen by a suitably commissioned and empowered independent planning authority, and
- (iv) it possesses a guaranteed (and growing) stream of income in the form of an hypothecated tax linked to unimproved property values to realise this element of forward land use planning.

Crucial to the operation of this interconnected approach to regional public land provision is a hypothecated tax, the MRIT, which provides the essential funding for its realisation. It is a funding option which warrants consideration by other Australian cities.

¹ Subsequently renamed the Metropolitan Region Improvement Account, and now administered by the WAPC. In 2011-12, \$84 million was transferred to the MRIA: WAPC/DoP Annual Report 2011-12.

² Figure provided by Mapping and Geospatial Data, Department of Planning.

³ Metropolitan Region Planning Authority (1979) Annual Report 1979 (MRPA: Perth), p.12. By 30 June 1979, this amount of land reserved for 'Parks and Recreation' in the MRS had grown to about 32,000 ha, of which 18,000 ha was already in the Crown or local government estate. Of the balance 14,000 ha, the MRPA had acquired 11,017 ha at a cost of \$33.86 million (apparently actual dollars).

⁴ DoP estimate; detailed figures are unavailable at present.

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A Framework to Determine if Australia's Suburbs Have Ever Been Sustainable

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Australia is a suburban society. It has been since Europeans came. Unlike many other urban societies at the time, there was no existing hard infrastructure to provide the essential needs of human urban life - clean water, food, shelter and waste management. These had to be met by individual residents in the emerging cities and towns until infrastructure could be provided to local communities by Government. This reality led to Governor Phillip establishing the block size in Sydney as being large enough to provide food and treat waste within its boundaries. The block dimensions were a major influence on Australia's urban form for the next two centuries and with social developments not only led to low density urban form, but also fostered a strong connection with the backyard and a societal love of gardening at home.

Despite a push to densification in the past two decades, low density suburban form is physical and cultural and is likely to be dominant for the foreseeable future. Gardening at home is also likely to continue to be a favourite pass time. While some Australian research has started to explore the role of backyards and gardening in increasing urban sustainability, little work has been done on to what extent the suburban block has and can meet the core needs of people. Even less has been done on determining the impact of suburbs on underlying ecosystem services that provide these core needs.

This paper provides a brief history of backyards in suburban Australia, a conceptual framework for assessing the sustainability of Australian suburbs over time and a description of the major ecosystem types in what is now urban Geelong at the time of European settlement. It provides the foundation for future sustainability assessments of the residential block in various periods of suburban development in Geelong.

Keywords: urban sustainability, suburbs, backyard, gardening, core human needs, ecosystem services, Australia, Geelong

Sustainability of Australian cities

Despite cities covering less than 1.3 % of the Australian continent, Register (2006) states that designing, building, and operating cities has the greatest destructive impact on nature of any human activity. The magnitude of local impacts is relatively large, mainly because they involve more or less complete and permanent removal of habitat and fundamental changes to the physical environment, and because they are in relatively productive and fertile environments (Lindenmeyer, 2007).

A 2010 assessment of the sustainability of Australia's largest 20 cities found that Geelong was the second least sustainable city of all cities assessed (Trigg et al, 2010). This paper seeks to gain an understanding of why Geelong is so unsustainable by looking at how urban Geelong has developed since 1851, how and where people interact with the environment and how the underlying ecosystems work.

The design of cities is critical because design typically costs in the vicinity of 5% of total cost but locks in 80% of a products' environmental impacts (Natural Edge Project, 2007).

A central part of the design of cities is the provision of infrastructure. Traditional, also known as 'gray' or 'hard', infrastructure includes the water, energy, transportation and communications services required to support society needs. In recent times the concept of 'green' infrastructure has emerged. The Australian Institute of Landscape Architects (2009) defines green infrastructure as 'the network of natural landscape assets which underpin the economic, socio-cultural and environmental functionality of our cities and towns - i.e. the green spaces and water systems which intersperse, connect and provide vital life support for humans and other species within our urban environments'. Very little is known about green infrastructure in Australian cities.

Most of Australia's urban hard infrastructure uses nineteenth century technology (Troy, 1996) demonstrating that the design life of cities is often centuries. As such, in 2029, over 90% of infrastructure of Australian cities will have been built prior to 2010 (CoM & DoT, 2009). Therefore, getting the design of cities wrong has dire and long term consequences.

The sustainable cities concept has existed for over four decades. From a landscape architecture and planning perspective, it emerged in the 1960s with Ian McHarg's *Design with Nature* and later with Anne Whiston Spirn's *The Granite Garden* as part of what Wheeler (2004) identifies as a broader response to dramatic growth in understanding that modern development practices were leading to worldwide environmental and social crises. The concept of sustainability arose as part of this response.

The notion of sustainable cities gained widespread momentum following the release of the Brundtland Report *Our Common Future* in 1987 that defined the generally accepted meaning of the term 'Sustainable Development' as 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs'.

While there has been much conjecture around the notion of sustainable development, it has only been in the past decade that there has been significant definition of need, largely through the 2005 Millennium Ecosystem Assessment. The definition of human needs is critical in establishing humanity's fair share of resources that can be developed, and then determining whether the

ecosystems that provide these resources can provide them in a sustainable manner. Ecosystem services are what provide these needs.

From a landscape perspective, Steiner (2000) says that 'sustainability means maintaining the health of ecosystems, which provides a variety of benefits over time. This has parallels with the notion of green infrastructure.

Much of the focus on sustainable cities in Australia has been around density as the key sustainability determinant. However as Infrastructure Australia (2010) state, the opportunities of efficiency and reduced environmental impacts offered by more compact forms of urban living, inner city households of capital cities, followed by the inner urban suburban areas, feature the highest consumption of water use, energy use and ecological footprints even when reduced car use is taken into account.

This is important as Victoria's ecofootprint, which is largely invisible to most of us (Corste, 2003 in Franz & Papyrakis, 2009), is already three times that of resources available (CES, 2008) and over 80% of Victorians live in cities over 100,000 people.

A number of studies in the past decade have started to quantify the human impact on the environment through tools such as the Ecological Footprint and the Millennium Ecosystem Assessment.

The Millennium Ecosystem Assessment identified that 60% of the 24 critical ecosystems are either degraded or being used unsustainably (CES, 2008), including half of the provisioning services such as food and water supply and 70 per cent of regulating and cultural services (Washington, 2013).

While these sustainability assessment tools provide an overall understanding of human use and impacts on the environment, the focus is at best regional and often state or nationwide. The approach used is generally a top down one. It doesn't relate to the average citizen.

Good relationships with the average citizen are important because in cities like Melbourne and Geelong, the largest land managers are individual residents who are responsible for 70% of land (Melbourne Water and EPA, 2009). While individually residents manage very small parcels of land, cumulatively their impact on the environment is very significant. The Ecological Footprint assessment undertaken by the Victorian Environment Protection Authority in 2005 demonstrated that approximately two thirds of the Victoria's ecological footprint occurs at home. The Australian Bureau of Statistics also shows that the average person spends two thirds of their time at their home.

Hill (2008) believes that to make responsible choices, citizens must understand and own the environmental risks and solutions applicable to their neighbourhood, and exercise their choices through the democratic process.

Hough (2004) in his book *Cities and Natural Process* identifies that little attention has been paid to understanding the natural processes that have shaped the city's physical form and which in turn have been altered by it. While in Western society this is starting to change for government bodies responsible for land management, Hough (2004) believes that most residents are still unaware of

the natural processes lying beneath the surface of the city partly because humanity and nature have long been understood to be separate matters. It has also been exacerbated by drastic increase during the 20th century of people moving from rural areas to the city, meaning that most urbanites are now illiterate in reading and understand the local natural environment and its broader landscape. Hough (2004) believes that this environmental education begins at home.

Research shows that individual residents are hard to engage in environmental matters, particularly when using a top down approach. Part of the difficulty relates to a distortion between attitudes and actions (McKenzie-Mohr et al, 1999), part to a lack of information, part to the strong cultural factors that influences behavioural changes both at an individual and community/societal level, part to competing interests for our time. Given that individual residents manage 70% of our cities, any approach to creating a sustainable city must link to where people are at and what is important to them.

McKenzie-Mohr et al (1999) believes that if we are to make the transition to a sustainable future, we must concern ourselves with what leads individuals to engage in behaviour that collectively is sustainable, and design our programs accordingly. They emphasises personal contact because social science research indicates that people are most likely to change some behaviour in response to direct appeals or social support from others.

Nassauer et al (2009) explored how cultural norms for the appearance of landscapes may affect adoption of ecological design in exurban residential landscapes in Detroit, United States of America. They concluded that '... efforts to introduce ecologically innovative designs to metropolitan residential landscapes should approach change at the neighbourhood scale in order to enhance initial success and long term cultural sustainability. We also note that individuals who innovate on their own properties may want to enlist nearby neighbours in similar innovations to create a threshold of cultural sustainability'.

Nassauer *et al's* (2009) work supports findings from a recent gardening study commissioned by the Nursery & Gardening Industry Australia (Newspoll, 2009) that 75% of Australian's interviewed get their own inspiration for their own gardens from other peoples gardens, more than from gardening or lifestyle TV shows (68%) and from garden centres (53%).

Suburban Australia

Today three out of four Australians live in cities like Geelong with populations greater than 100,000 (DIRT, 2013). In 2006, 74 percent of Australians lived in detached houses, a figure that has only slightly reduced from 78 percent in 1976 (Kelly et al, 2012). Thus, as Lewis (1999) says, the suburban way of life and the aspiration to own and occupy a detached house have long been Australian characteristics. In fact, Davison (1994) calls Australia the first suburban nation. The suburbs have always been the dominant place where day to day living needs have been met.

Suburbs as we know them first appeared at the end of the eighteenth century, after the Industrial Revolution had brought masses of people into urban centres (Timms, 2006). The general character of individual Australian suburbs can be roughly divided into specific periods for identification. Each

has a particular urban flavour and is accompanied by distinctive characteristics and fashion in the surrounding gardens (Cox *et al*, 2011).

There are numerous ways to determine these periods (see Table 1). Freestone (2010) looks at suburbs through the lens of urban planning in Australia. In the United States, the Historic Residential Guidelines for Evaluation and Documentation for the National Register of Historic Places (2002) categorises suburbanisation along transportation lines. The Heritage Council of Victoria views suburban development through housing styles, while Aitken (2010) does the same through garden styles.

Table 1: Various ways to assess periods of suburban development in Australia.

Author	Focus	Era Name	Era dates
Freestone	Urban planning	1. Early History	1788-1900
		2. 1901-1945	1901-1945
		3. Post War	1946-2000
		4. New Millennium	2001
Historic Residential Guidelines (US)	Transportation	1. The Railroad and Housecar Suburb	1830-1890
		2. Streetcar Suburb	1899-1929
		3. Early Automobile Suburb	1908-1945
		4. Post World War 2 and Early Freeway Suburbs	1945-1960
Heritage Council of Victoria	Architectural	1. Victorian	1840-1900
		2. Edwardian	1901-1914
		3. Interwar	1918-1939
		4. Postwar	1945-1965
		5. Modern	1945-1970
		6. Contemporary	1970-
Aitken	Gardens	1. Embarking on the Australian bush	1780-1829
		2. Colonial Modernism	1820-1849
		3. Botanical and horticultural virtuosity	1830-1859
		4. Planting of scenic effect	1860-1889
		5. Cities, gardens and beauty	1880-1929
		6. Modernism, functionalism and naturalism	1920-1969
		7. Australian plant gardens	1920-1979
		8. So many gardens, so little time	1980-

Given the multifunctionality of suburbs, the proposed approach is to use a combination of the above investigate the impact of suburbia on sustainability in Geelong, Australia. Three distinct periods of urban development in Geelong since the state of Victoria was formed in 1851:

- Victorian (1851-1900),
- Garden Suburbs/City Beautiful (1901-1950) and
- Modern (1951-).

Each stage is associated with major changes in suburban land use modes of transport and major periods of architectural and landscape design.

The Victorian Era of suburban development was heavily influenced by urban development in the UK. The establishment of suburbs was small in scale and largely organic. Public infrastructure was limited to the supply of potable water and roads and the treatment of waste was the responsibility of individuals. Suburban blocks were of varied size, largely due to land speculation and associated subdivision (see Figure 1). This era covers the establishment of colonial capitals and spread of settlement, largely through the proliferation of grid iron towns (Freestone, 2010).



Figure 1: Newtown and Chilwell, Geelong's first suburb, 1866. Source: State Library of Victoria.

Beginning at the start of the 20th century, the Garden Suburb/City Beautiful era was influenced by movements originating from England and the United States respectively, the emergence of local government's role in planning at the suburban scale via the *Local Government Act 1915*; the widespread establishment of infrastructure such as sewerage services, tram networks and bitumen roads. Suburban blocks were now legislated to be a minimum of 150 m² and recommended by Melbourne's Metropolitan Planning Commission in 1929 to be a minimum of 372 m² (Dodson and Gleeson, 2007), but many continued to be a quarter acre until early post World War II when the

installation of sewerage and arrival of cars led to blocks of these size no longer being needed (Troy, 2004). Freestone (2010) says that this is the era where town planning began and represents the arrival of modern planning thought and planned communities.

The Modern Era is characterised by the widespread adoption of the motor vehicle as the primary mode of transport, the creation of large subdivisions, the introduction of industrialised food and substantial suburban population growth created by immigration and the Baby Boom. It covers the institutionalisation of planning at local, state or more cyclically federal levels, metropolitan planning strategies, regional development initiatives, and competing notions of both good planning and the good city (Freestone, 2010).

The backyard

Backyards have long been symbolic of Australian suburban life; indeed the word 'backyard' is an Australian one (Holmes et al, 2008).

The first Governor of the Colony of New South Wales, Arthur Phillip decreed that land blocks in cities should be a quarter acre in size, mainly to enable residents to be self-sufficient in providing food and treating wastes. Individual residents needed to be self-sufficient due to the lack of existing hard infrastructure typically found in European cities of the time and the large distance between England and Australia meant that there was a significant time lag in the delivery of key provisions. Hall (2010) says that despite the obvious 'cliché' of the 'quarter acre block' (1012m²), lots of this size although they exist, have never really been common place.

In 1996, Patrick Troy was one of the first scholars in Australia to suggest the backyard as a solution to the inherently unsustainable nature of cities. Troy (2004) believes that once developed, the effect of this relatively low-density form of development was to enable successive generations of households to attain a high degree of self-sufficiency.

In more recent times, Adams and Loader (2008) have echoed similar sentiments, that because cities contribute 75% of greenhouse gas (GHG) emissions, the need for transformational change within Australian city boundaries are significant. They argue that Australians have a love affair with the suburban block that is deep and not going to change in the short-term and by crafting the solution back into the Australian dream, 90% of the city, namely the suburbs, remain largely in their current although improved form. Noble & Martinelli (2009) identify that from the average home GHG emissions can be reduced by more than 75 % with energy efficient design and appliances.

Smith and Scott (2006) also identify that at the household scale, home choices add up to a major overall impact on the environment in urban areas. They identify basic choices of dwelling size, house orientation relative to the sun, the design of ventilation and cooling appliances, water capture and storage methods, and whether to buy a second, third or fourth car, are some of the decisions which make a big difference to the impact of the individual and family on the environment. While this is true, the home, particularly in Australia, is much more than these components. It also includes the landscape surrounding the house- the front, side and backyards.

Seddon (1998), the first scholar to really look at the Australian landscape and the post European arrival relationship to it in an integrated way, states that the instinct to garden and the human needs

met by gardens may be virtually universal. Similarly, Doolittle (2004) sees gardens as fascinating topics of study in no small way because they truly transcend time, culture, environment/nature, gender and thought. Australia has a very long gardening history that as Holmes et al (2008) says, began not with the arrival of Europeans but with Aboriginal land management practices shaped the landscapes that the colonists imagined as pure nature. In fact, gardening is identified as being the most popular leisure activity in Australia with 86% of Australians believing the health, wellbeing and relaxation benefit their garden provides being the top reason they spend time in their backyards (Newspoll, 2009). The Newspoll 2009 study also found that 57% of Australians grow their own fruit, vegetables and herbs. Gaynor's (2006) study shows that this has been a consistent trend from the 1850s onwards, with at least 50% of the Australian population grow fruit and/or vegetables in their backyard. The proportion of home grown food that is in the family diet though has changed over time.

Head and Muir (2007) elaborate on the positive impacts of the backyard including recycling, water collection, subsistence agriculture and environmental education and experiences, particularly for children. They also identify that backyards contribute to the direct negative impacts of suburban expansion- land clearing, quarrying, spread of pavement, increased car travel, and expanded habitats for feral animals.

Troy (1996) sees that a significant issue is that many of the previous solutions to pollution problems that have been proffered and adopted have done so with scant regard for scientific evidence either about the extent of the problems and their sources or any understanding of the history of the cities and why they take their form. Likewise Radovic (2009) states that a sustainable city has to be confident about its own past, exist in the present time, and project a multiplicity of trajectories towards possible, desirable future.

Since Troy's comments in 1996, there has been increasing scholarly research and understanding of the role of the suburban house and block in individual lives and Australian society more broadly. Authors such as Seddon, Davison, Head and Muir, Aitken, Gaynor, Timms, Hall, Ghosh, etc have all investigated various aspects of the suburban block and the backyard. While Troy in 1996 raised notions of the backyard as having a significant role to play in the future of sustainable cities in Australia, only Head and Ghosh (2009) have begun to look at the backyard in an integrated way. Head and Gosh's focus however has only been on the role of the backyard in providing provisioning services to households. Smith et al (2008) have undertaken similar work in the UK through their book *'Residential Landscape Sustainability: A Checklist Tool'*. They too only look at enhancing sustainability at the home scale and within the site boundaries, and do not consider the impact of the suburban block on the broader environment.

The lack of research undertaken at the suburban block scale on how the underlying ecosystem services function, how they have changed since European arrival and when most change and impacts occurred is a major concern. Understanding these elements individually and collectively is critical in understanding the carrying capacity of urban landscapes and how these landscapes can be managed in a sustainable manner in the future.

This situation regarding research into the impact of the suburban block on broader ecosystem services is now likely to change with the release of the American Sustainable Sites Initiative (SSI) in

2009. This tool is intended to foster a transformation in land development and management practices that will bring the essential importance of ecosystem services to the forefront (American Institute of Landscape Architects et al, 2009). They see land practices as sustainable if they enable natural and built systems to work together to “meet the needs of the present without compromising the ability of future generations to meet their needs”. They also see that any landscape, whether the site of a large subdivision, a shopping mall, a park, an abandoned rail yard, or a single home, holds the potential to regenerate the natural benefits and services provided by ecosystems in their undeveloped state.

While the work of the SSI is most welcomed, Hall (2010) has identified that since the start of the 1990’s, the size and function of the backyard in suburban Australia has undergone a radical transformation. Prior to this time general lot coverage of a house for the older suburbs is less than 30%, sometimes much less than this, meaning that the typical backyard is in the order of 200 m² (Hall, 2010). Since the 1990s, the average lot coverage in the examples from the new suburbs is in the range of 40-70% and that backyards now rarely creep above 100 m² and a very significant proportion is below 50 m² (Hall, 2010). This means that the suburban block is even less able to positively influence underlying ecosystem services than it does now.

Despite these recent changes, Davison (1994) sees that for over two centuries, our dreams of the good life have been shaped by a cluster of interrelated ideas we may loosely describe as the suburban ideal and that much of Melbourne’s designation as ‘the world’s most liveable city’ owes to the suburban form.

The Good Life

In 2005, the Ecological Footprint and Millennium Ecosystem Assessments identify basic human needs to be satisfied for people to live a healthy and fulfilling life. There is a very strong correlation between these basic human needs and those outlined by Abraham Maslow in the 1940s. Maslow’s hierarchy of needs echoed very strongly those espoused by Epicurus, the Ancient Greek philosopher and his notions of the Good Life.

Maslow’s Hierarchy of Need

Abraham Maslow, an American psychologist, released a paper in 1943 that had a pyramid of five levels of needs that is today referred to as ‘Maslow’s Hierarchy of Needs’.

Maslow (1943) identifies at least five sets of goals, which he calls basic needs: physiological, safety, love, esteem, and self-actualization. These basic goals are related to each other, being arranged in a hierarchy of prepotency (Maslow, 1943), or greatest influence. The home is the place where physiological, safety and love/belonging needs are predominantly met.

Epicurus

The link to Epicurus is particularly relevant to the contemporary Australian context in that Epicurus established his philosophical school in a private garden in the outer suburbs of Athens. He was the first suburban philosopher. Central to Epicurus philosophy was self-sufficiency, restraint and working closely with neighbours and friends. This was in contrast to Plato and Aristotle who had also

established their philosophical schools in gardens, but these gardens were public and in the middle of the city of Athens. From the very beginnings of Western society in Ancient Greece, there have been conflicts between the city and the suburbs as well as strong links between the suburbs and meeting basic human needs.



Figure 2: Maslow's Hierarchy of Need.

Ecosystem Services

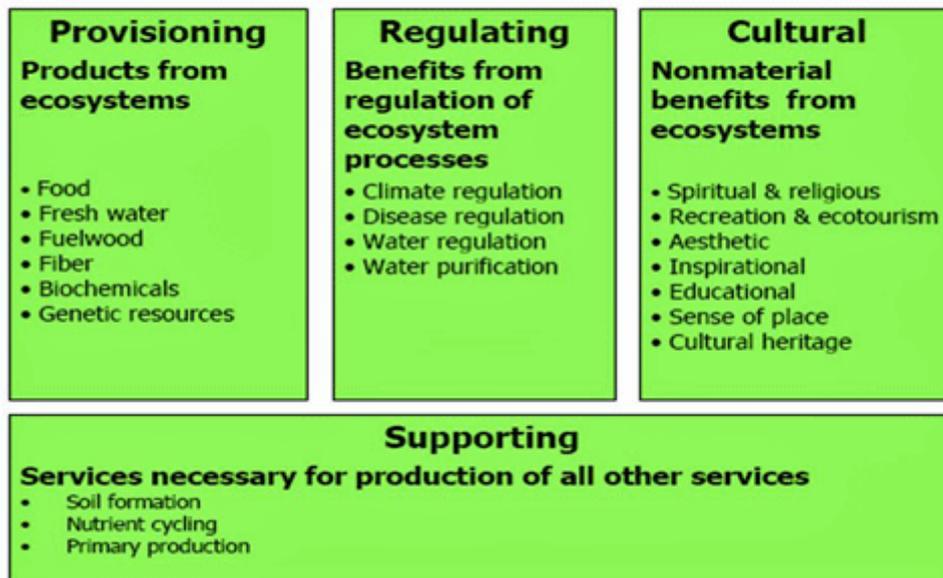


Figure 3: Ecosystem Services. Source: Millennium Ecosystem Assessment, 2005.

Ecosystem Services

Ecosystem services are commonly defined today as the direct and indirect contributions of ecosystems to human wellbeing (DeGroot et al, 2010 in Washington, 2013).

In 2005, the United Nations released the Millennium Ecosystem Assessment. This report identified four key elements of ecosystem services- provisioning, regulating, cultural and supporting (see Figure 3).

Ecosystems in Geelong

Before being able to look into the impact of suburbia on the Geelong environment, it is important to first understand the environment encountered at the time of European settlement. The rest of this paper aims to establish what the ecosystems around Geelong looked like at the time of European arrival.

Changes were so rapid to most Australian landscapes on the arrival of Europeans that it is very difficult to understand the structure and functioning of Australian ecosystems and the role that people had in it. An historical ecological approach will be utilised to provide a description of the key ecosystems found in and around current urban Geelong. This will be achieved by a combination of historic accounts and contemporary scientific understanding of these ecosystems.

Lunt and Spooner (2005) see historical ecology as a new interdisciplinary paradigm in which ecologists view ecosystems as historically and spatially influenced non-equilibrium systems that are complex and open to human inputs. While historical ecology is relatively new in Australia, it has been used in the US since the 1960s.

The historical ecology perspective highlights the overriding influence of land-use history in creating past, current and future patterns of biodiversity across a range of spatial scales (Lunt and Spooner, 2005). It allows more realistic goals to be set for future research and restoration activities (Lunt and Spooner, 2005).

Major historical ecology approaches in Australia include *'The Future Eaters'* (1994) by Prof. Tim Flannery and *'The Place for a Village- How nature has shaped the city of Melbourne'* (2008) by Dr Gary Presland. While Presland (2008) looks at how urban development has been influenced by nature, my interest is more about how urban development impacted on nature.

There are three main ecological vegetation communities in urban Geelong around the Barwon River. These are plains grasslands, grassy woodlands and riparian forests.

Prior to European settlement, temperate woodlands such as Grassy Woodlands occupied over 7 million ha in Victoria, or 32% of the state, grasslands 8% of Victoria and riverine grassy woodlands such as riparian forests about 4% (Lunt and Bennett, 1999). Hence not only were these vegetation communities very common in what is now urban Geelong, they were also very common in Victoria.

Basalt Plains Grasslands

The vegetation of south western Victoria was dominated by grasslands from 16,000 years ago to present, (Jones, 1999). This include the vegetation of inner and western Geelong.

Foster Fyans was the first police magistrate of Geelong and later Commissioner for Crown Lands. His guide on his initial explorations of the Geelong region was William Buckley, 'The Wild White Man' who escaped from the first Penal Colony at Sorrento in 1803 and lived with the local Wathaurong until meeting John Batman, the founder of Melbourne, in 1835. On his first trip as Land Commissioner, Fyans found that his 'thoughts were often carried away with the extreme beauty of the country ...abounding in rich pasture, the plains covered with flocks of bustard, and emu in great abundance' (Shaw, 1996).

Natural temperate grasslands are essentially treeless communities that were dominated by perennial tussock grasses such as *Themeda*, *Austrodanthonia*, *Austrostipa* and *Poa*, with inter tussock forbs, smaller grasses and sedges (Lunt & Morgan, 2002). Gammage (2012) says that the grass originally grew in large tussocks, standing from two to twenty feet apart, according to circumstances and bore no resemblance to a sward.

Naturally low in nutrients- up to 12 times lower in extractable nutrients such as N, P and K than rainforests (Wijesuriya, 1999), grasslands occupy mostly freely draining red loamy basalt-derived soils in areas receiving at least 500 mm annual rainfall (DSE, 2004a). Burrowing animals (Wong and Morgan, 2007) and human intervention through fire and cultivation played an important role in nutrient cycling and creating gaps for herbaceous plants (see Figure 4). These relationships meant that soil was soft enough to push a finger into and water was able to soak in rather than runoff and that less rain sustained more plants (Gammage, 2012).



J.H.W. Native Women getting Tam bourn Roots 27 August 1835.

Figure 4: Wathaurong women cultivating yam daisy roots from grasslands around Geelong. Source: Brown, 1989.

Kangaroo Grass roots played an important role in enhancing soil health and structure by binding and aggregating soil particles, increasing soil porosity, cycling nutrients, increasing soil organic matter and supporting a large number of soil organisms (Cole, 2003).

Fire frequency has the most profound influence on grassland composition and structure, (Lunt & Morgan, 2002). The absence of low intensity fire increased perennial shrubs and small trees in some areas (Flannery, 1994; Lindenmeyer, 2007) and reduces plant species richness (Wong and Morgan, 2007). Absence of fire in Themeda grasslands for three years provides few gaps for non-grass species to germinate or thrive (Gott, 2005). Once the inter-fire interval reached 11 years few live tillers or tussocks remain and that below ground biomass has been reduced and that a single fire 12 years after last burn did not immediately return the grassland to a good state (Morgan and Lunt, 1999).

The absence of fire creates litter accumulation, which ties up nutrients or blocks seedling growth, limits their net productivity (Raven & Johnson, 1989 in Phillips, 2000).

Almost all early Europeans commented on the amount of previously burnt country in both grasslands and woodlands on either side of Port Phillip Bay (Jones, 1999). Mature grasslands were described less often, although Gellibrand reports waist high grasses travelling from Melbourne to Geelong in 1836 (Billot, 1979 in Jones, 1999).

These fires were the result the traditional owners of the land- the Wathaurong, and their intimate knowledge and understanding they had developed over thousands of years in managing their land.

Gammage (2011) describes that in 1788 most were 'cool', whereas today they are 'hot'. Cool fire could burn one species without much harming another, let people hunt close up and manacle hot fire by restricting fuel while hot fire cleaned country and helped needful plants regenerate (Gammage, 2011). Regularly burnt grasslands provided refuge for flora, and vertebrate and invertebrate fauna (Wong and Morgan, 2007).

Fires occurred in late summer/autumn every 3 to 5 years when most grassland species are dormant (Lunt & Morgan, 2002). Consequently, Lunt & Morgan (2002) identify that 92% of all perennial grassland plants resprout after annually burning in western Victorian grasslands.

Grassy Woodlands

Exploring the Bellarine Peninsula, John Batman found well-grassed land 'of a most superior description- beyond the most sanguine expectations- excellent and very rich' (Shaw, 1996). Lunt (1998) estimated that in the early 1800s there were less than 20 trees per hectare (Gott, 2005). This is the same vegetation community that was found in the higher parts of Geelong.

DSE (2004b) describes the grassy woodlands around Geelong as follows:

A variable open eucalypt woodland (*Eucalyptus ovata*, *E.radiata* and *E.viminalis*) to 15 m tall or occasionally Sheoak/Acacia woodland to 10 m tall over a diverse ground layer of grasses and herbs. The shrub component is usually sparse. It occurs on sites with moderate fertility on

gentle slopes or undulating hills on a range of geologies. The overstorey density was 15 % tree canopy cover and a density of 15 trees per hectare. It had a 20% organic matter cover.

White (2012) states that Western Plains Woodland like those found around Geelong were dependent on fire. Cheal (2010) identifies that the minimum fire interval for low severity fire is 4 years and for high severity fires is 30 years; the maximum fire interval is 12 years (White, 2012). Fires were typically patchy, high severity fires rare and recovery from high severity fires slow (White, 2012). Jones (1999) describes that the result of this regular burning regime was the constant mentioning by early settlers of the resemblance of the woodlands surrounding Port Phillip to parkland.

The loam to loamy clay soils were fertile, moist in winter and parched in summer (White, 2012). The ecosystem productivity is relatively high (White, 2012) compared to other ecosystems. However high forb diversity requires low soil nutrients (Prober et al, 2002).

Under forested conditions, daily rainfall of 10-30 mm would be required to produce runoff, which would occur about 5 to 15 days per year (Ladson *et al*, 2006). This meant that in undisturbed natural catchments, trees, shrubs and grass intercept flow and less than 20% of annual rainfall became surface runoff (Argue, 2004 in Parker, 2010).

Floodplain Riparian Woodland

DSE (2004c) describes the Floodplain Riparian Woodland as:

An open eucalypt woodland to 20 m tall over a medium to tall shrub layer with a ground layer consisting of amphibious and aquatic herbs and sedges. They occur along the banks and floodplains of the larger meandering rivers and major creeks, often in conjunction with one or more floodplain wetland communities. Elevation and rainfall are relatively low and soils are fertile alluviums subject to periodic flooding and inundation.

Eucalyptus camaldulensis (Red Gum) and *Eucalyptus ovata* (Swamp Gum) occur at a density of 15 trees per hectare and comprised a tree canopy cover of 20% (DSE, 2004c). Organic litter component of 40% (DSE, 2004c).

Floodplain Riparian Woodland occurs in the broader ecosystem type defined by White (2012) as 'Riparian Forest'. Flooding is the main regeneration event (Cheal 2010) in riparian forests with the desired interval between floods varying between 5-10 years. (White, 2012). GHD (1982) found that generally 75 mm of rain from the Barwon, Leigh and Moorabool catchment over three days on a wet catchment or 150 mm rain on a dry catchment will cause significant flooding in Geelong.

Floodplains are crucial for the ecology of Australian rivers, being significant sources of carbon and nutrients for the river ecosystem (Davis and Koop, 2006).

While fire does occur in riparian forests, White (2012) identifies that this ecosystem type is flammable only occasionally, and fires tend to be low severity and patchy. The minimum frequency for low severity fires is 10 years and for high severity fires it is 30 years (White, 2012).

The riparian zone, the interface between rivers, wetlands and their terrestrial catchments (Boulton and Brock, 1999) plays a critical role in these and other ecosystems. Although only occupying a small proportion of the landscape, riparian areas are among the most productive ecosystems on earth (Lovett & Price, 1999). They are extremely important in landscape scale processes as they allow the movement of energy, materials and living organisms through the landscape (Ede & Hunt, 2008).

Riparian vegetation has a controlling influence on ecosystem function by reducing solar radiation and therefore limiting in-stream primary production (Boston & Hill, 1991; Cummins et al 1995 in Deegan and Ganf, 2008, p.680). Riparian cover upstream of an area may have more influence on local water quality than local riparian cover (Death & Collier, 2010 in Thomson et al, 2012).

Barwon River

South east Australian rivers are characterised by low but highly variable flow, high colour and turbidity, high salinity and low nutrients. Flows in Australian rivers and streams are nearly three times more variable than the world average (Boulton & Brock, 1999). As Otto (2011) describes a 'once in a hundred year' Australian flood is on average five times, but sometimes twenty or thirty times, the size of an annual flood; whereas in the rest of the world a hundred-year flood is usually only two or three times the annual average size'.

The aquatic environment encountered by Europeans was not in stasis; rather it was dynamic and under influence of, among other influences, the dominant humans of the time (Humphries, 2007). In Geelong this was the Wathaurong. The dynamic nature not only occurred within the year, but as Barmuta (2003) suggests, over years, decades and centuries for elements such as flow and salinity levels.

In August 1836, on the first launch of a European boat on the Barwon River, Captain Edward Primrose Tregurtha, described it as having '...a depth of $2\frac{1}{2}$ -4 fathoms (4.57-7.3 metres), with a moderate tide, and free of snags, and stumps, a most lovely country and the river itself alive with wild fowls of all descriptions'. A year earlier, John Helder Wedge, in his explorations of the Geelong region with William Buckley recorded that on 24 August 1835 that the Barwon was little more than knee deep near just above its entry to Lake Connewarre (Brown, 1989).

However water was not always plentiful, or visible, and its lack was a frequent observation for early European explorers around Geelong. Matthew Flinders, in climbing the You Yangs at the beginning of May 1802 and returned to the coast having "walked twenty miles without finding a drop of water" (Edmonds, 2004). Likewise in the major drought of 1837-42, the Barwon River dried up to a series of small pools (Edmonds, 2004).

With the Barwon River being a lowland river in Geelong, flow would have been slow except in floods when the water would have had a turbid appearance. However, as Otto (2011) says of the Yarra River in Melbourne, that while the water may look dirty, in terms of pollutants or harmful bacteria, it is comparatively 'clean'.

At the other end of the hydrological spectrum, just before pools in ephemeral wetlands and rivers dried up, water quality for salinity and nutrients was extremely poor (Boulton and Brock, 1999). This natural drying of pools is critical in enabling bacteria to rapidly take up soluble phosphorus and

making it unavailable until rewetting (Boulton & Brock, 1999). This meant that algal blooms were a natural feature of Australian rivers and wetlands (Boulton and Brock, 1999).

Wetlands

Boulton and Brock (1999) define a wetland as '... any area of temporarily or permanently waterlogged or inundated land, natural or artificial, with water that is standing or running, ranging from fresh to saline, and where inundation by water influences the biota and ecological processes occurring at any time'

At the time of European settlement wetlands covered 3.5 % of the Victorian landscape. The wetlands of the Barwon River floodplain around current day urban Geelong were ephemeral. They would usually dry in summer and refill in winter or spring (Boulton & Brock, 1999).

Straddling aquatic and terrestrial environments, wetlands are one of the most productive ecosystems on Earth. Wetland plants are among the most important primary producers in the wetland ecosystem, providing support for nearly all wetland biota (Tucker, 2003). The flora in these wetlands were more diverse than the adjacent river (Boulton & Brock, 1999). Connectivity between river channels and adjacent refuge wetlands was important in providing area to recolonise following long dry periods (Nielsen and Brock, 2009).

Hydrology is the most significance influence on the functionality of wetlands in Australia. Under natural conditions, much of the rainfall in the wetland catchments was trapped and salts were drawn down into groundwater aquifers. Water was either transpired by deep rooted vegetation, (keeping the groundwater aquifers well below the soil surface) or evaporated. The salts entering the wetlands were concentrated by evaporation, and flushed from the wetlands during the next high flow events (Nielsen and Brock, 2009). Rainfall (Pittock, 2003) and salinity has been variable and changeable over thousands of years (Nielsen and Brock, 2009) as well as during seasons and across years, decades and centuries. Biota of rivers and wetlands either tolerate these fluctuations or move to more suitable habitats. Biota that stay are tolerant to high levels of pollution while those that move are sensitive to it (Thomson et al, 2012).

Flooding releases a pulse of nutrients that, together with light and water, provide the resources for germination and growth of both micro and macro photosynthesizers (Boulton and Brock, 1999). Hence, natural wetlands were fertile environments that became more fertile with time, as nutrients were washed in from the terrestrial systems surrounding them (Romanowski, 2009).

Erosion of soil and sedimentation of wetlands is a natural process. It may occur as slow removal by gentle sheet flows or rapid loss during torrential downpours or landslides and comes from two main sources: catchment and channel (Boulton and Brock, 1999).

Conclusion

Contemporary cities have arguably the biggest impact of all human land use. From recent eco footprint and ecosystem services assessments, it is clear that the current mode of suburban living is not sustainable and cannot continue without dire consequences. Australians have a strong cultural and physical attachment to low density living in the suburbs. The suburban house and backyard is

where Australians spend most of their lives, and hence get their core human needs met. However there is a very low visibility, literacy and understanding within Australian society of the ecosystem services that underpin the provision of these core human needs. Gardening forms a critical part of the suburban experience and individual residents are most influenced by the gardens of other people, principally their neighbours. For many urban Australians home gardens/ backyards are the only place that they can connect with the outside environment on a daily basis. It is also the place from which a renewed environmental and landscape literacy can emerge. For Geelong, this paper has provided the first steps towards making the ecosystems that existed, and how they functioned, at the time of European settlement visible. It also provides an insight into what were the influences on suburban form in Geelong over time. Such an understanding is needed to start to determine the impact that suburbia has had on the Geelong environment in the past and thereby help determine the ecological limits that we must operate in to enable a sustainable future.

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Representation of Multiculturalism in Urban Green Spaces

A review of immigrants' experiences in Australia

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Rapid population influx due to migration in Australia has produced diverse cultural landscapes, which become visible in cities as physical forms, settings and symbols produced by different ethnic communities. Scholars have argued that people moving away from the country of their birth, whether this be a necessary migration, labour mobility or voluntary migration, results in a difficult process of resettlement for families and individuals. To provide a cohesive multicultural society for all citizens, it is essential to understand how immigrants perceive their new environments and how they make connections in a new land in the process of cultural renewal. While the policy of 'multiculturalism' has had a rocky road since the optimistic 1970s, a drive through many suburbs in Australian cities shows buildings, festivals and communal gatherings of people that express and refer to diverse cultural backgrounds.

Urban green spaces, ranging from private home gardens to public parks and botanical gardens, play an important role in the life of immigrants. Besides psychological and the restorative effects of urban green spaces, these spaces are public places that provide opportunities for recreation, social gatherings, and the celebration of collective cultural values and events such as festivals for many communities. This study aims to raise awareness of ethnicity as an important issue in park settings and spaces. It investigates the interrelationship between these cultural practices in the urban park environment, in relation to ethnic and cultural identity and physical settings. The concept of transculturalism – reinventing a new common culture as a result of migration to a new place – can help the analysis of the affects and the perception of urban green spaces. The paper will review different experiences of immigrants in relation to the use and perception of urban green spaces, developing alternative perspectives about the Australian landscapes.

Keywords: Immigrants, Urban green spaces, Perception, Australia

Introduction

Australian cities are facing rapid increases in cultural and ethnic diversity due to migration and various lifestyle patterns. The park environments in Australia are areas where people from different cultural backgrounds can experience each other's distinctiveness thereby staging temporary habitats for cultural diversity. In this sense, urban parks as public spaces provide the setting in which the first encounter of Australian nature is experienced by many migrants (abi, 1358, Denis Byrne et al., 2013). Parks are places in which family and community gatherings occur enabling the fostering of deeper bonds between people, and with the places. This perspective looks at park visitation by recent migrants through the lens of place-making, and allows us to see that recent immigrants in Australia use the park spaces not just for recreation but also for building up personal associations with particular places (Denis Byrne et al., 2013).

The migrant experiences of parks can result in greater social attachment to parklands. If cultural and ethnic groups are restricted in their use of parks, then the opportunity to make relationships between places and the communities who use them is missed. Parklands must be socially, as well as biologically, sustainable to survive, thus the social relations in parklands are considerable issues in park design and management (Goodall et al., 2004). According to Eisenhauer et al (2000), participation in meaningful social interactions is more effective for building attachment to places, in contrast to scenic beauty dominated by visual and aesthetic senses or accessibility. Their study indicates that local socio-cultural differences in the use of public lands influence emotional attachments to special places. The development of such bonds is a combination of personal experiences in places, cultural influences, and local community orientations to the public lands (Eisenhauer et al., 2000). Goodall et al (2004) believe that parklands which have no social value will not survive, and the most effective way to enhance community level support for sustainable use is to ensure that parklands are valued and enjoyed by diverse groups of people. So how can migration be used as a lens to examine and understand the different views and use of urban parks by diverse ethnic groups?

Although each of us as human being has specific personalities which affect the way we see our environment, the term "migration" in the above question refers to the experience that all immigrants, such as the English and Irish who arrived Australia in the late 18th century, the Italians and Greeks who came in the 1950s, the Vietnamese who arrived in the 1970s and many others who have migrated to Australia recently, share in common: "they were all, voluntarily or otherwise, 'displaced'" (Denis Byrne et al., 2013). Thus, in the process of "place making" in a new context, the immigrants recall their memories of the past, their personal and cultural values, and form social and personal relations in new physical environments. Therefore, one way to answer the above question is to investigate the cultural background of a specific community group, the history of park creation and park visitation by them, and then study their views and use of urban parks after migration. These processes can be considered both transcultural in that they mediate at least two cultures, and translocal in two ways: the locality of the park is produced by individuals and groups who have particular kinds of park use and experience in their homeland, and by interactions of the diverse

communities within the park. A larger scale research project would undertake such studies of each different culture, enabling a complex system of comparison and layering of data. In addition it would require extensive research on Australian parks and landscape and a study of the history of migration and landscape perception. The current study presents a focussed case towards highlighting the debate, issues and contradictions of cultural diversity and the approach towards park design.

Immigration in recent decades is an important issue in many countries. Increasing cultural diversity in multicultural societies will result, in some cases, relying exclusively or semi-exclusively on oral traditions (Sandercock, 1998). Architects and urban planners will need to consider cultural issues and perspectives in planning urban spaces in order to avoid creating what Relph (1976) has called “placelessness”, or lacking sense of place and inauthentic physical environments in urban spaces (Relph, 1976). Relph examined the concept of place in relation to people’s identity of and with place. Identity of a place, as Relph states, is “persistent sameness and unity which allows that [place] to be differentiated from others” (Relph, 1976). This identity is described in relation to three factors: (1) the physical setting of that place; (2) the activities, and events which take place there; and (3) the meanings that are created by individuals and groups through their experiences and intentions. Identity in relation to place thus refers to more thoroughly understanding the places as important centres of our prompt experiences of the environment. So if place was integral to a person’s identity and experienced through attachment, how does sense of place evolve into a different future that adapts to a new place? What is the role of culture, customs and values in this process of forming relationships with new places?

The idea of sense of place, in the case of perceiving and experiencing urban parks by immigrants which is the focus of this paper, refers to the way individuals and communities see and interpret the park spaces. Part of this interpretation and perception involves the pragmatic habits particular to communities - the act of going to the park, cultural and recreational activities, the ways that food is prepared, transported and shared, that result in “imprinting the park with a group’s identity” (Denis Byrne et al. 2013). It is through such acts that humans have made themselves ‘at home’ in new environments. And it is arguable that human life is dependent on having at least some places where people are at home.” The migrants’ effort of home-building illustrates their sense of belonging and feeling homely in the new country as a process of settlement (Hage, 1997, Lozanovska, 2011).

Relph addresses this lived intensity of meaning, between a person and place, through the conception of “insideness” which is the level of attachment, importance and involvement that a person or group has for a special place. “Insideness” and “outsideness” were used by Relph (1976) and Tuan (1974, 1977) to describe people’s feeling of being part of a place. Tuan (1974, 1977) argued that “sense of place” and “rootedness” are different concepts, where sense of place is a description of an awareness of a positive feeling towards a place, and rootedness is a feeling of being home (Hauge, 2007, Tuan, 1974, Tuan, 1977). This definition of “sense of place” refers to a positive feeling towards a place which makes that place enjoyable based on the feeling and activities provided by that place, but the emotions of each individual towards the place can be either negative or positive according to their particular mood, memories, and personality.

“Insideness” based on Relph’s point of view, is a person’s feeling and perception inside a place when he or she is safe, enclosed, and comfortable. The greater the feeling of insideness in a place, the stronger the identity is with that place. In contrast, “outsideness” is the mode of separation and

isolation in a place, when people feel a lived division between themselves and the world. The highest level of sense of place experience is existential “insiderness”, or a deep merging with the place and the experience of home in the community and region. On the other hand, existential “outsiderness” is a sense of “strangeness and alienation” such as the feeling which new comers experience in a place (Seamon.D and Sowers.J, 2008). Understanding whether it is “insiderness” or “outsiderness” that is affecting individuals or communities needs a deep socio-cultural investigation in relation to the place and the specific groups or individuals.

Newcomers may experience strangeness and “outsiderness” in a place, but whether the specific social and individual relationships in a place affect these experiences has not thoroughly been investigated by Relph. How could places that Relph emphasized be created after migration and geographical mobility? (Seamon.D and Sowers.J, 2008). Place identity can also be defined as aspects of identity which are linked to place (Hauge, 2007), and can be described as part of self-identity. In addition “if self-identity is related to the fundamental question ‘Who am I?’ then place-related identity provides a perspective on this question from the standpoint of ‘Where am I?’ and ‘Where do I belong?’” (Abrahamson, 1996, Altman and Low, 1992, Main, 2008). There is increasing interest in the subject of how immigrant communities can make sense of place and sense of belonging to new locations as an aspect of place identity theory (Macfarlane.R et al., 2000, Rishbeth, 2001, Roe.M, 2012).

Different concepts of place such as “sense of place”, “place attachment”, “place-identity”, and “place dependence” are difficult to separate and are linked to each other in relation to positive effective ties to a place (Hauge, 2007). However, the need for conceptual clarity still exists in the interdisciplinary work on place with various epistemological traditions and focus (Patterson and Williams, 2005). Place, in environmental psychology, has developed through different perspectives of place. It has evolved from “physical determinism” which includes the environment, dimensions, forms, and colours and their effects on behaviour, to a people-environment relationship view, as dynamic and interactive. Dynamic and interactive perspective of place comprises the cultural, psychological, and social aspects of place, which can be expressed in philosophical and poetic forms (Hauge, 2007).

Sense of place is also defined as an experimental process that is, created by the contribution of setting and what is brought to it by individuals. So places in this perspective are dependent on the persons who use them (Steel, 1981). Sense of place is often related to an emotional and effective bond between a place and an individual; this bond ranges in intensity from immediate sensory delight to deeply rooted attachment (Tuan, 1974). These views illustrate that places can be perceived differently by their users, in terms of the kinds of ideals and values they bring to them, and their rootedness in the place. However, mobility is a considerable issue in sense of place studies. Members of these societies need to “renew their ties to place” to achieve sustainability, and “reconnect with that place they call home”, to develop local ecological knowledge and to create sustainable communities, through valuing their heritage and developing a rooted sense of place (Hay, 1998). Thus, how social and cultural relationships and activities in spaces, as significant factors in giving meaning to them, may affect place identity?

Cultural landscape

The terms “place” and “landscape” are used to express the combination of physical and non-physical qualities of a locality (Stephenson, 2010). Landscape is given value by having physical, perceptual, natural, cultural, spatial, and temporal components and is likely to have different forms of meaning and significance for various groups and disciplines (Schama, 1995, Soini, 2001, Tilley, 1994, Tuan, 1974). Similarly, place is a physical space credited with meaning, value and contestation (Altman and Low, 1992, Crang, 1998, Ingold, 2000, Relph, 1976, Stephenson, 2010).

Parks and gardens play an important role in the life of immigrants, and different views of nature can be discovered by understanding different perceptions of these spaces. Rapid population migration in Australia has caused diverse ethnic landscapes, which are seen in cities as physical forms and symbols produced by different ethnicities. Sandercock (1998) in her book *Towards Cosmopolis* suggests that “transnational migration, post-colonialism, and the rise of civil society” are three socio-cultural forces which contributed to placing the concept of “difference” on the planning and design professions agenda (Sandercock and Lysiottis, 1998). Helen Armstrong argues that the future of Australian cities depends on how much we can depict our differences in terms of migrant contribution to Australia’s cultural pluralism, and how much we can consider the traditional and cultural values and their subsequent evolution into an “Australian way of life” (Armstrong, 2001). How can ethnic communities transfer their culture and adopt it to a new form of life? Or, on the other hand, change the Australian way of life (as their practices eventually come to influence other people/previous immigrants)? And where is the place of the immigrants’ cultural landscape today?

Research on differentiation in natural landscape uses and preferences only begin to give an understanding of the way in which the cultural differences, socioeconomic status and physical context, influence place meaning and attachment. (Main, 2008). Do the natural environment design and form have different influences and meanings for various users? To explore the meaning of place, and how it develops, Main (2008) in her study about the importance of public space in an immigrant neighbourhood, suggests two concepts to consider in the relationship between design and the meaning of places. First, meaning of place is constructed by people within specific social and cultural context and is not inherent in the physical design of place, and second, the specific design, qualities, and characteristics of the physical landscape influence the meaning which is constructed by people (Main, 2008). How are urban park spaces given meaning by ethnic minority users? Does culture affect the use and understanding of urban green spaces after migration?

Some cultural geographers such as Kay Anderson (1995), argue that suburban backyards, as private green spaces where people make their more routine interventions in nature by arranging space for “gardens” have also become very important in environmental issues (Anderson, 1995). Since gardens are carriers of meaning, research on the importance of gardens opens a door to environmental and other cultural values (Seddon, 1998). Recent research in these issues in Australia includes the Trigger and Mulcock’s study in (2005), which investigated the way citizens perceive the concept of “indigeneity” by implication ideas of fertility in association with different species of plants and animals. Their research studies people’s cultivation of species, pet keeping, and desires for “nativeness” in public parks and private gardens, and asks “why certain sectors of the community value some plant and animal species over others, and how attachments to particular landscapes are given expression through modification of those places” (Trigger and Mulcock, 2005). Head’s

investigation in Sydney and Wollongong also indicates the relationships between urban biodiversity and attitudes and practices in backyards and native planting, by using the knowledge of the biogeographical and ecological literature and the experiences of suburban backyarders (Head and Muir, 2004). In both projects, the cultural assumptions refer to the kinds of animals and plants that belong to the Australian landscape and the role of the multicultural human belonging within the Australian nation in using and interpreting them.

Examining people-place relationships from a cognitive perspective, as an approach to the way places influence individuals' action, arose in the mid 1970s in human geography (Golledge and Rushton, 1976, Relph, 1976, Tuan, 1974), as well as in cognition studies in environmental psychology (Canter, 1977, Moore and Golledge, 1976). This approach indicates that the way people value places, and their behaviour in places, is the result of processing information about a geographical setting by the human mind (Burnett, 1976, Cheng et al., 2003). Figure 1 shows a cognitive model of geographic decision making adapted from Burnett (1976) and Canter (1977).

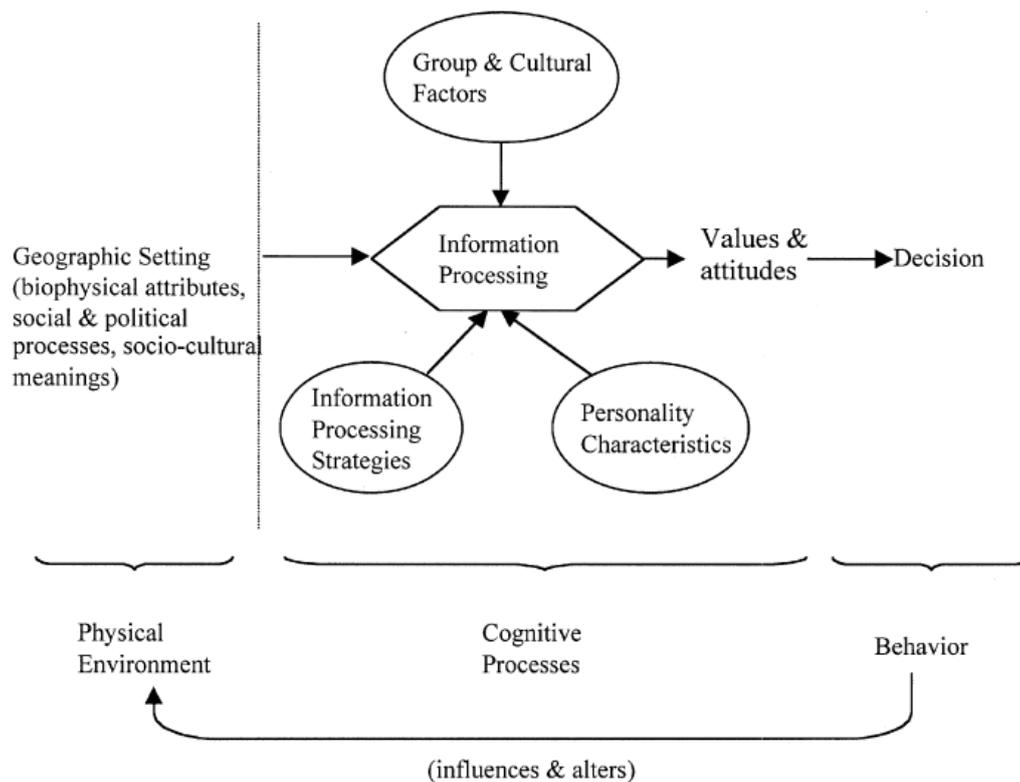


Figure 1: A cognitive model of geographic decision making adapted from Burnett (1976) and Canter (1977), Source: Cheng, Antony, Kruger, Linda, & Daniels, Steven. (2003): "Place" as an Integrating Concept in Natural Resource Politics.

According to Cheng et.al (2003), the cognitive model shows that information about the place is categorized by the human mind based on "certain cognitive strategies (heuristics)", "personality", and "social and cultural factors". This model has been applied in two fields of place-based inquiry.

First understanding the links between the way people classify places and their behaviour, and how individuals categorize places in terms of satisfying their preferences (Canter, 1977, Kaplan and Kaplan, 1989); and second, focusing on how cognitive strategies develop and transform in people and place interactions (Moore and Golledge, 1976, Proshansky et al., 1983). The result of this process, which is human behaviour as shown in Figure 2, can influence and alter the physical environment.

Immigrants and Urban Green Spaces

Recent research in plants, belonging and boundaries often constitutes cultural geography, migration, and identity. Graham and Connell (2006) examined the connections between identity for Greek and Vietnamese migrants' gardens in Sydney and their taxonomy of belonging of various kinds of fruits and vegetables (Ghosh and Head, 2009). Since new migrants in Australia seek a place and space to have symbols of homeland and destination, gardens frequently have been used differently from what urban planners and house builders had schemed (Graham and Connell, 2006, Morgan et al., 2005). As Graham et al. noted in their study, gardens are physical settings that develop creativity, connect persons to their personal history, reflect one's identity, and foster a sense of place within the broader urban environment. Creating a garden helps migrants to become settled and recreate an environment similar to their home country (Graham and Connell, 2006).

Garden creating by migrants in Australia is very significant and considerable, because the design of home gardens influences urban landscape, sense of place and the understanding of the changing patterns in the Australian urban landscape. Graham et al examined gardens as places to show relationships between immigrants and their origin country as well as their new country, in relation to the influences of the country from which migrants had emigrated. They found that Greek immigrants' gardens reflect a greater Australian culture than those of Vietnamese migrants, which is due to the longer residence times of Greeks in Australia. Although the longer residence times may also result in assimilation, especially in the next generations of immigrants, this study demonstrated that the migrant's relationship to their origin country affects the environment that they create around their homes in Sydney. The relationships result the gardens and the gardens support the relationships, and through this cultural garden design Australian landscape is increasingly influenced. Future urban development planning needs more attention, in terms of the specific role of gardens and migrants' experiences within Australia (Castles, 1993, Graham and Connell, 2006).

For the majority of Australians, who live in cities and suburbs, backyard gardens are places where key environmental involvements occur, and they are valued as havens of privacy and freedom, and have capability for research into migrant engagements with place as sites where people do their traditions from their homeland and maintain their cultural identity (Armstrong, 1999, Head et al., 2004). A study about immigrants' gardens and backyards, in Fairfield, Sydney, found that many migrant symbolise connections both to homeland and to Australia and even other cultures in their backyard gardens. Generally, immigrants from urban backgrounds turn their gardens into collections of objects to symbolise self and a sense of cultural belonging (or longing) rather than planting and cultivation. These immigrants use their gardens to exhibit their cultural, national or spiritual continuity in a more public way, while the cultural transactions are seen in their backyard activities. This study also illustrates the variety of gardening traditions among immigrants who grow plants from their homelands and try to symbolise transitions and contrasts. This suburban creativity for

symbolising homeland results in a blend of symbols of Australian and other cultures. This study emphasises cultural identity and multiculturalism in semi-public backyards spaces, and indicates the role of garden in connecting nature and culture (Morgan et al., 2005).

These investigations represent the way immigrants in a new place reconnect to their past memories and try to maintain their cultural identity by practicing, symbolising, and expressing their cultural values in their home gardens. As Breakwell (1996) asserts, they try to compensate for the reduction of the support of the familiar places for identity structure and struggle with the challenges of identity in different new environments (Breakwell, 1996). Cultural and religious practicing socially and personally, planting and cultivation familiar products, and illustrating an icon or icons of their originality and cultural values in their gardens, are all found as ways to achieve these goals in their studies.

Some important ethnographic studies in Australia have examined how immigrants' communities such as Macedonian and Vietnamese interact with the environments of the New South Wales National Parks and wildlife service. The cultural beliefs and practices in both groups grow out of the understanding of nature in both Australia and their own countries. These studies demonstrate how Vietnam's high population and agricultural base cause people to understand that landscape is a place for "social relations, personal experiences, and human engagement", full of smells and sounds. For the Macedonian, landscape is also a place for socialising, but distinct from any notion of a "wilderness". In both immigrant groups understanding the park is dependent on a cultural history, which is involved in the daily integration of people with the environment (Head et al., 2005).

The Macedonians have a tradition of socialising that has developed in outdoor recreational settings, such as the huge annual Macedonian picnics in the Royal National Park. This allowed them to expand their national feelings, gather in their language, and for the new comers it was an introduction to the people, which all lead to social cohesion. Study of environmental perception revealed that the majority of Macedonians insisted that the Australian bush is bereft of smell to them. It is argued that the priority for ethnic communities primarily, is their value for social gatherings (Thomas and Wales, 2002). Since parks and public green spaces are known as places for recreation, relaxation and restoration, they seem to be important places for immigrants across different ethnic groups to have family and friends' gatherings, cultural celebrations, and festivals.

This study also reveals how we might better address the cultural complexity of contemporary Australia, and how parklands and other open spaces play an important role in consolidating the feeling of being Macedonian in Australia. One of the significant issues in parklands is that people could be together, speak their language, drink their grappa, sing, and dance. This research reveals how the Macedonian landscape continues to influence the younger people's perception of the environment, and the sensory stimulus such as the sense of smell, is mediated by cultural experience. It is concluded that our public demand and our community standing can be enhanced if the social values of the landscape is considered as our significant priorities (Thomas and Wales, 2002).

The study of Arabic immigrants and the urban environment along Sydney's Georges River compares environmental knowledge and practices, which immigrants bring from their homelands, with their experiences in Australia. Arabic immigrants have come to Australia from countries such as Lebanon,

Palestine, Syria and Iraq, and lots of them have settled in the industrial, working class suburbs along the northern bank of the Georges River in Sydney. They are frequent users of a series of parklands along the river, and the river itself for relaxation fishing, Jet Ski and other recreation. Arabic Australians have brought their homeland environmental cultural knowledge to build attachment to their new homes in the conditions of local environments and socio political tensions of contemporary life. They also use park spaces in various religious ceremonies such as Eid-ul-Fitar in Ramadan. It is argued that people who migrate grieve for their losses for many years, even for the physical environments with which they were familiar. Such memories can affect their lives and also lives of their children (Goodall, 2012).

This study reports how cultural difference shapes environmental relationships in Georges River area in urban Sydney. Indigenous, Anglo-Irish, Vietnamese and Arabic Australians have been interviewed as resident nearby to learn how they understand and use the river and its surrounding parklands and how they interact with each other in these natural settings. This study then focuses on Arabic Australians of Georges River, looking at what they bring to the river and how they actually experience the parklands and river. This study also demonstrates that people bring with them, and also pass on to their children, memories of place and environment (Goodall, 2012).

The cultural constructions of open spaces have also been examined in a study of Vietnamese communities' interactions with the environments of the New South Wales National Parks and wildlife service which documents the differing experiences of Vietnamese-Australians. In this research the range of Vietnamese understandings of the natural and cultural environment, both in Australia and in Vietnam, have been investigated, and it has been found that Vietnamese people not only enjoy contemplating landscapes, but interacting with them based on their cultural determinants (Thomas, 2002).

Some of the other Australian studies have focused on comparing the aboriginal and other relations to the same natural environment. Palmer (2004) has examined the use of Kakadu National Park in Northern Territory in relation to two groups of users; the recreational fishers and bush walkers who see the landscape as a place for recreation and leisure, and the traditional Aboriginal owners who perceive the landscape as a connection to the both material resources for practical usage and intelligent spirituality (Palmer, 2004).

Cory et.al (2009) in a study of barriers and incentives to urban park use in Melbourne among Chinese, Italian, Vietnamese, Greek, and Indian ethnic communities has identified that second generation Australians, who generally speak a language other than English at home, have low participation rates in urban parks. This study reviews three categories of barriers to participation in leisure activities in Melbourne's urban parks which have been investigated in literature before: 1- "intrapersonal (personal) barriers" such as low personal interest in leisure; 2- "interpersonal (interactional) barriers", such as a lack of people to accompany; 3- "structural (supply) barriers", such as not having an appropriate location, and lack of existing opportunities, time, season, and financial resources. This study also emphasises the role of culture in using urban parks and acknowledges differences in leisure patterns and recreation activities (Croy and Glover, 2009). Thus more consideration in terms of ethnic minority groups and their interactions with urban parks is required to identify different ethnic views of urban parks in Melbourne, and the role of urban parks' physical environment in responding to these views. More research is needed in this context to

evaluate and examine these three categories in relation to different ethnic groups and find solutions for better participation of immigrants in our urban green spaces.

Conclusion

Parks and gardens both represent nature within urban contexts and have a wide range of benefits for human wellbeing. They contribute to the positive aspects of the life of urban dwellers, both physically and psychologically. Urban green spaces, ranging from private home gardens to public parks and botanical gardens, play an important role in the life of immigrants. Understanding how immigrants perceive their new environments and how they make connections in a new land in the process of cultural renewal is essential in order to provide a better multicultural society for all citizens. The combination of physical environment and human complexities in urban milieus, and the rate of change of these factors, illustrate the important issues of “place and placelessness” of cities according to Relph (1976), and how social identity can be understood and addressed, in personal responses to place and in the design of the public realm (Rishbeth and Finney, 2006). Since recent research in Australia mostly focuses on social activities and cultural practices in urban green spaces and cultural constructions, the role of design and characteristic of the physical environment in these spaces needs more investigation.

Main (2008) states, these issues address the needs of some specific cultural groups in a global city, and indicate the importance of meaningfulness of places to the people who use them. This meaningfulness of place is often referred to as a “sense of place” by urban planners. This approach seeks the “meaning” of places in their physical design and by deeper understanding of complex meanings of place, makes some alterations through urban redevelopment efforts (Main, 2008). Therefore, it is essential for urban planners and landscape designers to be aware of various place meanings by different ethnic perspectives and the ways landscapes develop meanings for their users in global cities. To investigate these meanings it is essential to focus on both concepts of ethnicity and place. Social and cultural approaches have traditionally viewed that physical sites are places to which people, groups, and cultures become attached due to their experiences, memories, feelings, and interactions (Goffman, 1959). Place attachment, in this respect, means a “symbolic relationship formed by people giving culturally shared emotional/affective meanings to a particular space or piece of land that provides the basis for the individual’s and the group’s understanding of and relationship to the environment.” (Low, 1992).

To understand the perception, experience and needs of diverse cultural groups in urban green spaces, as architects and urban planners we need to know the characteristics of different communities and focus on a particular community. The concept of “ethnic community” is complex and includes the notion of “shared identity” on the bases of country of birth, language, ethnicity, and religion, etc. One of the important means for a group to gain representation and to counter marginalisation is the community identification and cohesion, and the idea of “cultural landscape” suggests that nature is a realm which is experienced and produced by people and invested with cultural values and meanings (Thomas, 2002). This needs to be considered in the design of parks in multicultural Australian cities, to be open to a wider variety of uses and cultural purposes even for future immigrants and users; instead of focusing only on the existing cultural groups near a particular park.

According to Downing (2003) one of the primary biological needs in humans is expressing their selves such as desires, values, and enthusiasm, and their cultures such as language, physical features, and consciousness of common identity. People have individual memories of places, others, experiences and events, which with each act of remembrance they are faced with their individuality and connectedness. Each person also shares the specific constructs of the world with other humans so, a socially constructed selfhood is the human existence reality. 'Although each individual image of place is unique, patterns of recurring domains emerged from this process; the secret place, the Arcadian place, the ancestral place, the shared place, the alone place, the intimate place, the gregarious place, places that stretch to meet the horizon line, and places that enclose and protect. Domains are symbolic of a quality of life; contact, retreat, participation, identity, love, grace, sensuousness, intelligence, fear, intimacy, growth, expansiveness, reflection, communing, and loss.' (Downing, 2003).

Thus, how are individuals' selves and cultures expressed in a new place as a result of migration? And to what extent can a place of origin be emulated in a place of migration? How do different migrants perceive and use existing public green spaces in Australia? And how might these spaces better facilitate a variety of immigrant preferences and uses particularly in a multicultural society? A comprehensive study on communities as well as the role and impact of the design, form, characteristics, settings, and built and natural environments of green spaces in multicultural cities is required to answer these questions. This will also include a wide understanding of the community history of use and perception of these spaces before and after migration, along with studying the design history of global cities' green spaces and the meaning that they have produced over time.

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Manners St. Wellington, looking west.

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