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Barriers and Enablers to Healthy Planning and Active Living Initiatives

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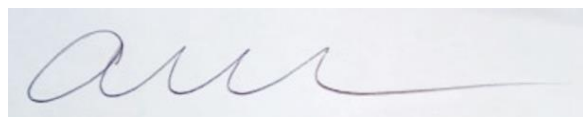
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DECLARATION

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made. The thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Human Ethics: The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) – updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262), Approval Number # RDHU-239-15 on 29 October 2015.

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ABSTRACT

Healthy urban planning and active living initiatives are considered effective in addressing rising rates of non-communicable diseases. This thesis adopts a socio-ecological perspective of health as an overarching theoretical framework and also uses multiple streams analysis (MSA) as a novel lens through which to examine barriers and enablers to Australian health-focused urban planning. The thesis is based on interviews and surveys with Australian advocates and practitioners, with the knowledge of these professionals being relatively under-researched to-date. A focus of this research on implementation is necessitated through the slower than expected uptake and implementation of healthy planning projects given the multitude of community health and other interrelated problems currently faced in Australia and other similar high-income settings in particular. When viewed through a socio-ecological lens, the important role of local government (LG) in implementing healthy planning projects becomes evident, particularly given this study's focus on initiatives that aim to increase physical activity levels.

In terms of barriers, an inconsistent policy setting across state and LG levels fails to provide an adequate mandate for the uptake and implementation of healthy planning and active living initiatives. Even where an adequate policy setting is evident, politicised decisions still have greater influence over project uptake and delivery. Concerns over the applicability of research, guidance and evidence to an Australian setting (whether real or perceived) also act as barriers to implementation. Healthy planning projects are considered to be popular politically, yet details of projects are generally avoided, which reduces the likelihood of policies or advocacy work then being implemented on-the-ground. This weak policy setting and political decision-making (and political concerns) present as barriers, but also provide the opportunity for policy entrepreneurs (such as advocates/champions) to have notable influence in the field. Yet the barriers to implementation are structural. Even though individuals can overcome these barriers and facilitate project implementation in one-off instances, structural impediments such as the lack of legislative backing, a continued reliance on advocates and a lack of funding in other instances will likely remain elsewhere.

In terms of enablers to project uptake, the presence of policy entrepreneurs (or champions, advocates), internal operations of the LG, partnership formation, a supportive policy setting and, the use of framing techniques (including the recognition and good news that projects can facilitate) are identified. So too are enabling factors such as the creation of a mandate for LG, resourcing and funding, the discussion of co-benefits and previous project success.

Addressing the longer-term barriers outlined above is likely to involve reaffirming the processes identified as impediments, at least in the short-term. For instance, the weak policy setting leads to an over-reliance on champions for project uptake and implementation, yet it will likely be the work of champions who will push to better integrate considerations of healthy planning into state and LG policy settings. Similarly, ad hoc project implementation is symptomatic of a system not yet set up to accommodate sustainable and evidence-based healthy planning consistently across LGs and states. Yet this research suggests that project implementation is a central way for processes to improve and to increase the likelihood of future project uptake.

Two primary approaches advocates might (and do) adopt to address the barriers identified are presented, one being health by stealth (that is the avoidance of mentioning the health benefits of projects, focusing instead on other benefits) and the other being centrally framing LG's operations around the health of communities. Australian failure to plan for and produce healthy environments is due to numerous complex, interrelated and embedded factors, and though there remain structural barriers the thesis suggests that various approaches are available to improve this setting and move towards more sustained and equitable delivery of healthy planning projects, particularly those that relate to physical activity.

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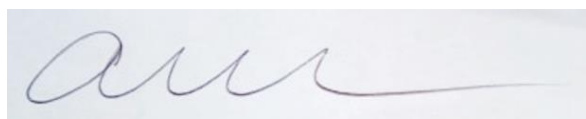
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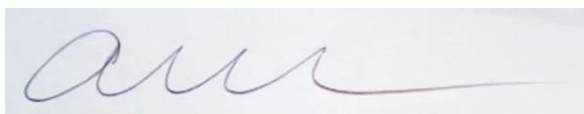
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STATEMENT OF CONTRIBUTION OF OTHERS

All of the written materials submitted as part of this PhD by Publication were conceived and coordinated by Anthony McCosker. The majority of the calculations and writings for each publication was undertaken by Anthony McCosker.

Signed detailed statements from each co-author relating to each publication are provided as appendices at the back of the volume (Appendix 2).

Signed:

Anthony McCosker, PhD Candidate

Professor Dora Marinova, Supervisor

Date: 16 August 2018

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1. INTRODUCTION

The profession of urban planning has strong roots in the understanding that the physical environment has an influence on human health (Heaton, Balbus, Keck, & Dannenberg, 2010; Newman & Matan, 2012). However, the challenges that faced society at the turn of the twentieth century, such as pollution and infectious disease, are vastly different to those facing high-income societies, such as Australia, today (McMichael, 2007, p. 42). Rather than communicable diseases exacerbated through industry and spread by overcrowding (Northridge, Sclar, & Biswas, 2003), challenges in high-income countries today more commonly relate to physical inactivity and associated noncommunicable diseases (NCDs) or 'diseases of civilisation' (Barton, Grant, Mitcham, & Tsourou, 2009, p. i91; Barton, 2007; Barton, 2017; Frank, Engelke, & Schmid, 2003; Southworth, 2005). These community health challenges currently faced make addressing sedentary lifestyles particularly important (Sarkar, Webster, & Gallacher, 2014), consequently, physical activity is one of the key determinants of community health (Kent & Thompson, 2014; Sallis et al., 2006).

There are multiple reasons behind the change in primary influences on human health, though it has been caused at least in part by transformations in our urban forms including a preference for private motor vehicles in the design of our cities (McMichael, 2007). In turn, as cars became increasingly common from the 1950s, development patterns which were able to disperse and lower densities became more frequent, especially in Australian and North American cities (Newman, 2005, pp. 128-129; Southworth, 2005, p. 247). While this helped to address community health issues exacerbated by pollution and overcrowding, it also led to what Australian sustainability and transport researchers Newman and Kenworthy (1999, p. 32) describe as the automobile dependent city, where 'use of an automobile became not so much a choice but a necessity'. Whereas zoning to separate industrial and residential land uses was highly effective in meeting the community health needs of nineteenth and early twentieth century communities, it 'was nonetheless sowing the seeds for future health problems associated with dispersed, car-dependent cities' (Freestone & Wheeler, 2015, p. 26). This has 'led to city sprawl, traffic jams, car-related air pollution, dead city centres, and general dehumanisation of the city' (Kleinert & Horton, 2016, p. 2849). It has also had a significant

impact on physical activity levels across populations (Australian Institute of Health and Welfare, 2017) and contributed to environmental challenges including climate change (Newman & Kenworthy, 2015). To this extent, the built environment today is seen to influence three key domains of health: activity levels (and so physical inactivity), community connectedness (and so social isolation) and healthy food options (and so obesity) (Kent, Thompson, & Jalaludin, 2011, p. 13).

Many cities globally are facing these challenges. Indeed, some of the very urban planning measures introduced during and since the nineteenth century as efforts to improve human health are now themselves causing new challenges in 'an epidemic of physical inactivity and poor nutrition' (Fenton, 2005, p. S115), most commonly in high-income societies but increasingly evident in the development patterns and health trends of medium- and low-income countries as well (Giles-Corti et al., 2016; Stevenson et al., 2016). The negative effects of preferencing private automobile travel in urban planning are multifaceted. As Newman (2005, p. 127) states, car dependence 'is not good for the economy of cities, the environment of cities or the community of cities.' Given the 'vehicle emissions, public health [impacts], social inequities and fossil fuel use' arising from automobile dependence (Falconer & Richardson, 2010, p. 1), promotion of active transport as an affordable (Southworth, 2005) and sustainable (Pucher & Buehler, 2010) measure to address these issues is an approach increasingly adopted by both the built environment and health professions. Active travel offers various environmental, social and health benefits (Newman & Matan, 2012; Southworth, 2005, p. 248) that align with society's (and urban and transport planning's) shifting focus towards sustainability (Edwards, 2005; Newman & Kenworthy, 2015; Newman, Matan, & Mcintosh, 2015).

Failing to act on these challenges 'will have dramatic longer-term effects on the ability of our settlements to support health and active living, with adverse consequences for community wellbeing and an exponential financial burden over time' (Thompson & McCue, 2016, p. 3). As such, 'there is a great need for programs, policies, and practices that build environments in which routine physical activity is essentially a way of life' (Fenton, 2005, p. S115). Yet the implementation of such policies and programs appears difficult and has been slower than might be expected (Thompson & McCue, 2016), particularly given the impact NCDs are having (and

are projected to continue to have) on community health, as well as the other social, economic and environmental benefits that projects can have (Giles-Corti, Foster, Shilton, & Falconer, 2010; Rissel, 2009).

Of the three tiers of government in Australia, the federal level has limited urban planning powers, and so responsibility for urban planning generally falls to the state and territory governments (Williams & Maginn, 2012). While Australian states and territories differ legislatively and procedurally, each state government has certain mechanisms whereby a significant portion of planning decisions can be made at the local government (LG) level (Williams & Maginn, 2012). Nevertheless, Australian LG is 'a creation of the states', with no formal recognition or role in urban planning (or other matters) aside from those delegated by the states (Williams & Maginn, 2012, p. 39). Australian LG has comparatively weak powers with regard to urban planning and other roles compared to local governments across the world (Aulich, 2015). However, this research places LG at the centre of the response to NCD prevalence. In Australia, LG has a longstanding role in sanitary and direct health service provision (Allender, Gleeson, et al., 2009) and increasingly its remit is expanding to include addressing global issues such as sustainability and rising rates of NCDs (Roberto et al., 2015). This is in part due to the reconvergence of the health and urban planning professions (Roberto et al., 2015) and the bottom-up (community-led) calls for action on these issues (Sarkar et al., 2014). It is also in response to (and in spite of) inaction by other levels of government regarding these issues (Stock et al., 2017).

Given the role of LG in Australia, particularly in managing the built environment, the response of this level of government to the challenge of increasing NCD prevalence will be an important one (Allender, Gleeson, et al., 2009), particularly as NCDs are now the leading cause of morbidity and mortality in Australia (having long overtaken communicable diseases), with cancer and cardiovascular disease the two most common causes of death (McNab, Huckel Schneider, & Leeder, 2014). Indeed, ninety-one percent of all deaths in Australia are caused by NCDs, with cardiovascular disease (thirty-one percent), cancers (twenty-nine percent), chronic respiratory diseases (seven percent), diabetes (three percent) and other NCDs (twenty-one percent) all being significant contributors to deaths in Australia, and with Australians now noted to have a nine percent chance of dying prematurely from one of these NCDs between the

ages of thirty and seventy (World Health Organization, 2014a). Also, NCDs do not just impact life expectancy, they affect quality of life, with over one-third of Australians living with at least one chronic disease (Australian Institute of Health and Welfare, 2014). The financial burden of Australia's high NCDs rates is significant, with cardiovascular disease alone accounting for over ten percent of Australia's health expenditure (Australian Institute of Health and Welfare, 2014). High NCD incidence is not a problem limited only to Australia, or even only to high-income countries, as 71% of deaths across the globe are caused by NCDs (World Health Organization, 2018). Given their prevalence and impacts, decisive action to address NCDs will be necessary.

Yet despite LG's apparent importance and the challenges faced by Australia and other high-income countries particularly with regard to NCDs, little academic attention has been afforded to local government in comparison to the state level in Australia. Where praxis or academic attention has turned towards changes to the built form to improve community health, results have been encouraging. These changes to the built form to encourage healthy living have been termed healthy planning, and associated programs are sometimes referred to as active living initiatives. For the purposes of this research, healthy planning is defined as *the management of natural and built environments to meet the health and well-being needs of current and future communities, including through improvements to economic, social and environmental conditions and striving towards more equitable distribution of these health improvements across populations*. Active living initiatives on the other hand are those *initiatives that encourage a way of life which integrates organised or informal physical activity into people's daily routines and aim to meet the health and well-being needs of current and future communities* (adapted from ACT Government, 2016, p. 6). At its core, a central aim of healthy planning is the creation of healthy built environments, or healthy neighbourhoods, which are those that are 'safe, attractive, socially cohesive and inclusive, and environmentally sustainable; with affordable and diverse housing linked by convenient public transport, walking and cycling infrastructure to employment, education, public open space, local shops, health and community services, and leisure and cultural opportunities' (Lowe et al., 2015, p. 8).

The perspectives of practitioners and advocates in this healthy planning field, though valuable sources of knowledge (Allender, Cavill, Parker, & Foster, 2009; Allender, Gleeson, et al., 2009;

Allender et al., 2011; Cleland, McNeilly, Crawford, & Ball, 2013; Whelan et al., 2015) are especially underexplored at a LG level. As a response to this setting, the overarching question to be addressed in this research is: *Why do we fail to plan for and produce healthy environments in Australia and how can this change?*

The research examines the perspectives of key actors regarding factors that influence healthy planning and active living initiative uptake and implementation in Australia. Through five publications, the study analyses the structural barriers and possible enablers for the implementation of urban planning that allows for healthy active living. Two approaches that might assist this in the future – health by stealth and framing health as a central part of local government functioning – are put forward.

The **first publication** seeks to clarify the role for LG through the socio-ecological approach to health and introduces a novel methodology – multiple streams analysis (MSA), to allow for the examination of barriers and enablers to projects at the local government level. The paper finds that LG's role is (and has been) central in shaping community health across a range of factors. Some preliminary barriers and enablers to the consideration of healthy planning and active living initiatives at the LG scale are also outlined. The paper finds that policies in the field of healthy planning are generally broad and insufficient to facilitate the consistent and sustainable delivery of initiatives. Champions can influence political considerations to encourage implementation (and overcome a policy void) and partnerships are found to have importance. Yet where champions are not present and where partnerships do not develop project uptake is unlikely. Discussion around co-benefits of projects and the way they are framed is central in whether they are adopted. An avoidance of details about what healthy planning and active living initiatives actually involve is also identified as a barrier to new projects' implementation.

Given the important role of local government identified in the paper above, the **second publication** explores in greater detail the perspectives of LG practitioners in both the built environment and community health promotion fields. Six main barriers and enablers to project implementation emerge. The internal operation of individual LGs, the mandate for action on LG (or lack thereof) in the field, and funding and resourcing can act as either barriers or

enablers (or both), while the promotion of co-benefits, partnership development and the value of good news and recognition act as enablers to projects.

The **third publication** seeks the perspectives of advocates in the field operating externally to LG. It identifies a relatively weak policy setting which sees a greater importance placed on politicised decision-making by individuals involved in project uptake, as opposed to preferable methods such as evidence-based decision making. An overreliance in the healthy planning field on certain factors to ensure project success is identified and is introduced in this paper as a healthy planning paradigm. Components of the paradigm include reliance on co-benefits, framing of projects and the 'problem' of health, and communication amongst stakeholders and advocates. There are numerous issues with this setting, which indicate some longer-term, structural reasons behind the slow delivery of healthy planning.

The **fourth publication** stems from findings of the above three papers including the importance of framing ideas (and a lack of agreement in the healthy planning field as to the best approach) in promoting changes to improve community health. This consideration has importance given political and attitudinal barriers to the uptake of healthy planning and active living initiatives, and the paper also stems from the identified need for the localised and contextually sensitive delivery of projects (even where the international evidence base might be replete with supporting evidence, the importance of local, micro-scale implementation remains).

In examining an Australian setting of walkable and bikeable communities this paper explores a potential, contextually sensitive way to address these identified needs and posits a potential setting (coastal communities) as a starting point through which this could be achieved through a health by stealth approach. Given the fact that most sustainability-oriented initiatives generate a range of co-benefits for human well-being, the health by stealth approach avoids direct mentioning of health-related advantages whilst instead focusing on other benefits. The paper provides an initial exploration of concepts that are particularly transferable to an Australian context. It also identifies some areas where an Australian coastal context presents a comparative advantage to other settings. While Publications 1-3 demonstrated the importance of framing and found that health by stealth was a common approach adopted by practitioners and advocates in promoting healthy planning, this publication builds on these findings by

examining a way in which healthy built environments might be provided in an Australian setting in a contextually appropriate (and applicable) way.

The **fifth publication** then uses the findings from Publications 1-3 to examine how projects might come to be more commonly implemented through a 'virtuous cycle'. Four elements of a virtuous cycle are identified, whereby the implementation of projects contributes to conditions that improve the likelihood of future projects or the consideration of healthy planning principles. The four elements include project 'wind-up', where projects exceed initial expectations once they are implemented; incidental partnership development which can improve the likelihood of future initiatives; improved internal functioning of stakeholder organisations as a result of implementing healthy planning and active living initiatives; and improved project sustainability. This paper indicates that enabling factors do not just assist project uptake, but they can also result from project implementation. Such an additional co-benefit of project uptake to date has been overlooked in the literature.

Overall, the research undertaken in this thesis evaluates reasons for the slow uptake of projects in which LG plays a role, but also examines factors that might enable healthy planning and active living initiatives to be undertaken. The thesis indicates that while certain actions or settings might be conducive to healthy planning and active living initiative uptake, various structural barriers preclude this from becoming more widespread. While progress has been made recently in the field in Australia, counterintuitively, the need for early adopters and one-off initiatives is found to remain key to addressing the ad hoc implementation of projects and to allow for more sustainable implementation into the future. Alternatively, health by stealth is an approach currently used in an effort to overcome the more structural barriers facing healthy planning, and given the difficulty in dealing with this in the short-term is likely to continue to have value.

1.1 Research Objectives

Various research objectives are identified which will contribute to addressing the research question. The research question and various research objectives are applied in this research to an Australian setting, however findings are likely to have relevance across the world,

particularly in contexts with similar governance settings and/or those places attempting to address similar global challenges locally, such as NCD prevalence, automobile dependence or planetary health. The research objectives are as follows:

1. Conduct literature review to define healthy planning, healthy urban design and active living initiatives, and to identify who is responsible for their delivery.

2. Undertake surveys and interviews with healthy planning practitioners and advocates to determine the barriers to uptake and implementation of healthy planning and active living initiatives.

3. Undertake surveys and interviews with healthy planning practitioners and advocates to determine factors that enable the uptake and implementation of healthy planning and active living initiatives.

4. Identify ways in which enablers could be better utilised to encourage the planning and production of health-promoting environments, particularly with regard to relevant barriers.

2. LITERATURE REVIEW

The lifestyle and health of Australians reflects trends also evident in many other high- and middle-income countries, whereby an increasing quality of life brought about by technological and medical advances has been accompanied by a change in the common causes of illness, shifting from communicable diseases and pollution to more complex, noncommunicable influencers (McMichael, 2007). As lower-income countries begin to exhibit similar development patterns (such as through a built form that preferences private automobile travel), they too are experiencing a shift in the factors influencing the health of their populations (World Health Organization, 2014b). As a result, life expectancies are likely to be lower for the current generation in comparison to their parents in North America (Olshansky et al., 2005) and Europe (World Health Organization, 2015), with Australia demonstrating a similar trend (Scully et al., 2012). Four-and-a-half million disability-adjusted life years (DALYs) are lost in Australia to premature death or illness, and with thirty-one percent of this disease burden being preventable (Australian Institute of Health and Welfare, 2018) the need for action is apparent. Yet high NCD prevalence presents a more complex health challenge than previous health issues faced (McMichael, 2007) and will be required to be dealt with and monitored in ways that more appropriately reflect this complexity (Northridge et al., 2003). In contrast, modernism and rationalist thinking has led to more siloed and specialist operations in both the health (Maddocks, 2016) and the built environment (Freestone & Wheeler, 2015; Kotchian & Laumbach, 2010) professions.

In the built environment field more siloed operations resulting from modernism have led to a disconnect in the planning and management of various aspects of the urban form, and consequently holistic considerations such as sustainability or human health can be overlooked (Freestone & Wheeler, 2015). In the health field preference of clinical care over preventative measures, as well as the separation of the two, and a budget system that generally emphasises clinical funding leads to limited uptake of more proactive, preventative health initiatives, despite their proven value (Buckenara, 2015). Yet, in Australia at least, a stakeholder that has retained responsibilities across many relevant fields in the face of increased departmentalism

resulting from modernism is LG, presenting an opportunity for community health to be addressed at this local scale.

This literature review begins by exploring understandings of the term 'health'. It then examines urban planning and urban design as interrelated built environment management processes, noting that neither have widely agreed-upon definitions. The review then combines these concepts to provide an understanding of what healthy planning and active living initiatives might entail. Furthermore, the complex relationship between the built environment and health professions is examined, and this understanding then contributes to the exploration of factors that can limit or promote the undertaking of healthy planning and active living initiatives. Finally, a socio-ecological perspective of health is examined alongside methods that are commonly used in research related to healthy planning and active living initiatives

2.1 Understandings of "Health"

Understandings of the term 'health' have changed since the late twentieth century. Earlier use of the term referred to an absence of disease and saw health professionals as the primary influencers of community health (Barton, 2005a, 2005b). Yet an increased focus on sustainability, attempts to overcome the challenges of modernism and changes in the very health challenges facing societies have led to (and necessitated) an expansion of that definition, allowing for a more holistic understanding (Barton, 2017). The oft-cited definition provided by the World Health Organization (WHO) is that health is 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (World Health Organization, 2006, p. 1). Adopting this more holistic approach ensures that both physical *and* psychological well-being are included in understandings of the term (Stokols & Clitheroe, 2010). The adoption of such a holistic definition also allows for temporal or social justice considerations regarding health to emerge, such as planetary health researchers Whitmee et al.'s (2015, p. 1973) perspective that 'we have been mortgaging the health of future generations to realise economic and development gains in the present.' Health in this sense is closely linked to notions of sustainability (Capon, Talley, & Horton, 2018; Whitmee et al., 2015). However, well-renowned healthy planning professor Hugh Barton (2007, p. 197) posits that the idea of

'health' might hold more political appeal than that of 'sustainable development', given its links 'to a clear base of evidence' and being 'less open to misinterpretation and false rhetoric.'

The WHO definition has also received criticism, however, such as the difficulties in defining and quantifying the term 'complete' and the increasing rates of people ageing with diseases (that is, not in a 'complete' state of health) who under the WHO definition would be classed as being 'unhealthy' or ill (Huber et al., 2011). Huber et al. (2011, p. 2) offer an alternate view on health, being 'the ability to adapt and self manage.' Such a definition, although broad, might be 'useful for management and [urban] policies' and could serve to encourage greater action in the health promotion field (Huber et al., 2011, p. 2). Concepts from both definitions, including the consideration of overarching well-being by WHO (World Health Organization, 2006) and the ability to adapt considered by Huber et al. (2011), have informed the understanding of health adopted for this research. Hence, health is defined in two ways: *Firstly, health is defined as resilience, or where a state of physical, mental and social well-being is able to be maintained. Secondly, health is defined as adaptiveness, or where capacity to improve one or more aspects of physical, mental or social well-being is realised.*

As mentioned above, the primary factors influencing health have changed, with 'crowding, squalor and industrial environmental blight' that led to 'infectious diseases and air pollution' (McMichael, 2007, p. 41) now less common, and with physical activity becoming a key determinant of community health (Giles-Corti et al., 2007; Sarkar et al., 2014). Physical inactivity has direct impacts on health such as through increasing the likelihood of diabetes, heart disease, osteoporosis, cancers and respiratory diseases (Falconer & Richardson, 2010; Southworth, 2005), as well as increasing the risk of weight gain and obesity, which in turn 'is a risk factor for overall mortality, cardiovascular mortality, diabetes, hypertension, depression, and gall bladder disease' (Heaton et al., 2010, p. 458). Such lifestyle diseases require new approaches to addressing public health (Sun, 2014), including through urban planning practice which has been slow to respond. The scope of this study is limited to physical activity, one of three domains (the other two being social interaction and healthy eating) whereby health is influenced by the built environment (Kent & Thompson, 2014). This is an important domain as physical inactivity is responsible for twenty-four percent of the cardiovascular disease burden in Australia, eighty percent of Australian children fail to meet national physical activity

guidelines and as thirty-six percent of Australian adults 'do very little or no exercise at all' (National Heart Foundation of Australia, 2014b, p. 3). High NCD prevalence is not a health challenge limited to Australia, with this being the highest cause of death worldwide (World Health Organization, n.d.).

2.2 What is "Urban Planning" and "Urban Design"?

Improving human well-being (or health, as defined above) is a 'prime, anthropocentric reason for seeking social stability, a congenial and safe urban environment, and the maintenance of nature's life-support systems' (McMichael, 2007, p. 45). Efforts to manage our built environment, then, can be seen to have sustainability and human health at their core, and the urban planning profession has its origins in public health (Freestone & Wheeler, 2015). Yet the multifaceted and often siloed approach to modern day urban planning, as well as the complexity of issues and considerations that fall under its remit, lead to difficulties in establishing a widely accepted and inclusive definition for the profession. This is particularly the case as 'planning means different things at different times and in different places' (Gleeson, 2000, p. 12). At its core, urban planning seeks to ensure that 'all the services people need in a city are provided' (Gleeson, 2000, p. 12). While it is a built environment profession, urban planning should place the 'social nucleus as the essential element' of the city, with social considerations then informing other aspects such as design or economics (Mumford, 2007, p. 87).

Like health, understandings of 'urban planning' have changed over time, 'from the first attempts to control and beautify the industrial city, through the gradual evolution of a vision of comprehensive physical planning, to the eventual merging of the goals of physical design and social control' (LeGates & Stout, 2000, p. 312). Urban planning and health researcher Susan Thompson (2007) notes that early definitions of urban planning focus on the control of physical space, and that considerations of people only become evident in later definitions. Modernism, however, led to subsequent definitions that focused more on the processes of urban planning rather than the communities that were 'being planned' (LeGates & Stout, 2000; Thompson, 2007). It is particularly noted that although the term 'health' is regularly left out of definitions of urban planning, considerations such as the social nucleus and the services available to a community align closely with the notion of health provided above. Given that the built

environment impacts community health (Thompson & McCue, 2016) (see discussion in Section 2.6) and urban planning impacts the environment, by extension urban planning will influence health, though rarely is this relationship made implicit in general definitions of urban planning. Brown and Sherrard (1951, p. 3; cited in Thompson, 2007, p. 17) provide an exception to this, in positing that urban planning guides 'the direction and use of land to serve the economic and social welfare of a community in respect of convenience, health and amenity'. The American Planning Association (2006; cited in Thompson, 2007, p. 23) also provide a definition of urban planning that considers health and well-being, in stating that urban planning involves working 'to improve the welfare of people and their communities by creating more convenient, equitable, healthful, efficient, and attractive places for present and future generations.' For the purposes of this research, urban planning is defined as *the management of natural and built environments to meet the needs of current and future communities, including through improvements to economic, social, environmental and health conditions and striving towards more equitable distribution of these improvements across populations*.

Similarly difficult to pinpoint (and interrelated to an extent) is the concept of 'urban design'. Generally, urban design 'encompasses the material process of designing cities, urban spaces and places, as well as knowledge of the general economic and political systems that bring them into being' (Cuthbert, 2007, p. 263; cited in Matan, 2011b) and involves the control and adaptation of the environment (Moughtin, 2003; cited in Matan, 2011b). In examining Barnett's (1982) definition of urban design, Matan (2011b, p. 71) notes that the profession extends to include the natural environment, to the extent that 'urban design is an act practiced by all those involved in the environmental design fields, primarily architecture, urban planning and landscape architecture, and introduces the natural environment to urban designers' concerns.' Notably, urban design lacks a singular and unambiguous definition or theory, however this has some advantages for urban design (Matan, 2011b). Urban design, then, could be seen to 'be about the creation or improvement of cities for the betterment of people and the environment and the relationship between the built environment, people and meaning' (Matan, 2011b). Given the included activities and the fact that urban design praxis incorporates various fields as discussed above (Matan, 2011b), it can be seen to encompass urban planning. Similarly, given the broad definitions of urban planning adopted above, the profession of urban planning is likely to incorporate urban design. For the purposes of this study, then, the term 'urban planning' is used

to encompass additional terms for the profession, such as town planning, as well as urban design to the extent that it is undertaken as part of urban planning (i.e., excluding architecture and landscape architecture as these are separately defined professions). Notably, much urban design literature and guidance, particularly the foundational texts (for instance, refer to Matan 2011b, Appendix A), has come from Europe and North America (Holden, 2011). So too is Australian urban planning praxis based on American and British models particularly (Freestone, 2007). Yet the re-emerging field of urban planning for a healthy lifestyle (or healthy planning) varies to these broader professions in that the literature, research and implementation have emerged relatively recently, with a significant Australian contribution internationally (for instance, see Burton et al., 2009; Giles-Corti et al., 2013; Hooper, Giles-Corti, & Knuiman, 2014; Kent et al., 2018; Kent & Thompson, 2014; Kent et al., 2011; Turrell et al., 2018). This notion of healthy planning is examined in greater detail below.

2.3 What are "Healthy Planning" and "Active Living Initiatives"?

Applying a socio-ecological perspective (refer to Section 2.6 for more detail) to the definition of health adopted above places importance on the social, economic, political and built form settings in which we live and spend time. For instance, the built form influences health in the opportunities it affords people to be active, in levels of community connectedness and social interaction, and in the ability to access healthy foods (Kent & Thompson, 2014; Kent et al., 2011; Paine & Thompson, 2017). Most commonly, the term 'healthy planning' is employed in the literature in reference to efforts to address NCDs through the first consideration, encouraging physical activity, yet efforts to address community connectedness and access healthy foods also play an important role. Efforts to address all three domains will likely be the most effective (Kent et al., 2011), yet given the complex and interrelated nature of the interactions between the considerations, efforts aimed at one domain will generally have an influence (whether direct or indirect) to some extent over the others. As urban planning primarily influences the built environment (but has relevance to and influences other considerations, such as social opportunities, refer to Section 2.2 above), and as 'much daily human physical activity in cities takes place outside enclosed private spaces, areas influenced by urban planning and management' (Rydin et al., 2012, p. 2093), its role in influencing human health through these three areas in particular becomes evident.

Definitions of healthy planning partly overlap with those of urban planning explored above (particularly as the definitions of urban planning adopted for this study were selected given their consideration of health), indicating the difficulty in separating the two notions (McCue & Thompson, 2012, p. 11). Indeed, in many instances healthy planning requirements are simply 'examples of well established better practice urban design principles' (McCue & Thompson, 2012, p. 11). The common aim of contemporary urban planning to encourage active and public transport over private vehicle use align closely with the aims of healthy planning and active living initiatives (Falconer & Giles-Corti, 2008; Frank et al., 2003). The key elements of healthy planning are also noted to align closely with other concepts such as smart growth (Falconer & Giles-Corti, 2008), New Urbanism (Cozens, 2007) and planetary health (and also EcoHealth and sustainability) (Capon et al., 2018; Editorial, 2017; Lerner & Berg, 2017). Ultimately, much of healthy planning is the making explicit of what were previously implicit impacts that urban planning was having on health (Frumkin, 2010). However, given the relatively slow reaction of the urban planning profession to current community health challenges, the identification of a distinct idea of healthy planning is important.

Healthy planning[1] has previously been defined as 'planning for people and how they use different environments' by placing 'the needs of people and communities at the heart of the urban planning process and encourages decision-making based on considerations of human health and well-being' (Kent, Thompson, & Capon, 2012, p. 385; see also Barton, Thompson, Burgess, & Grant, 2015). Given consideration to Kent et al.'s (2012) definition of healthy planning and the definition of urban planning as adopted above, for the purposes of this research healthy planning is defined as *the management of natural and built environments to meet the health and well-being needs of current and future communities, including through improvements to economic, social and environmental conditions and striving towards more equitable distribution of these health improvements across populations.*

Practically, there may also be value in defining what heathy planning tries to achieve. Healthy neighbourhoods can be defined as those that are 'safe, attractive, socially cohesive and

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[1] Given the similarities between the definitions of planning and urban design outlined above in Section 2.2, and given the terms are regularly employed interchangeably (for instance, see Clifton, Smith, & Harrell, 2007; Kent et al., 2012), for the purposes of this study the same definition of healthy urban design is adopted as that for healthy planning.

inclusive, and environmentally sustainable; with affordable and diverse housing linked by convenient public transport, walking and cycling infrastructure to employment, education, public open space, local shops, health and community services, and leisure and cultural opportunities' (Lowe et al., 2015, p. 8). Given the broad range of programs and policies that could be included in the definition of healthy planning as adopted above, the need arises to limit the scope of this study to the first of those three domains defined by Kent et al. (2011) (see also Kent & Thompson, 2014): *efforts to improve human health and well-being through the encouragement of physical activity*. Adopting this focus on physical activity also allows for the conceptualisation of unhealthy environments, which can be seen to be characterised (at least through this narrowed focus on physical activity levels) by sprawl as well as 'separation of land uses through zoning…low density development…dispersion of activity centers…automobile-oriented transportation systems…[and] disinvestment in central cities' (Heaton et al., 2010, p. 456). These types of unhealthy built settings lead to 'obesogenic environments', or urban areas that play a role in 'promoting obesity in individuals or populations' (Boyd Swinburn, Egger, & Raza, 1999, p. 564; see also Sacks, Swinburn, & Lawrence, 2009).

Additionally, active living initiatives have been defined as those initiatives that encourage 'a way of life where people integrate organised or informal physical activity into their daily routines' (ACT Government, 2016, p. 6). Notably, the term 'active living initiatives' is not commonly employed in the academic literature (perhaps as initiatives, such as behaviour change programs, have emerged relatively recently, or perhaps due to a lack of academic focus to-date), which also presents difficulty in finding a commonly adopted definition. The term is however used in urban planning and health policy (ACT Government, 2016; NSW Government, 2013), and is adopted for this research given the scope (relating to those urban planning measures aimed at increasing physical activity) and given an identified need to also examine behaviour change programs that increasingly accompany urban planning initiatives (see, for instance Buckenara, 2015; Kent & Ampt, 2012). Given the definitions of healthy planning explored above, and adapted from the definition available by the Australian Capital Territory (ACT) Government (2016, p. 6), for the purposes of this study active living initiatives are those *initiatives that encourage a way of life which integrates organised or informal*

physical activity into people's daily routines and aim to meet the health and well-being needs of current and future communities.

Adopting such definitions of healthy planning (and active living initiatives) and limiting the scope to projects focused on the encouragement of active living inform the types of programs examined by this research. Nevertheless, this is unlikely to limit the study scope significantly given the overlap between each of the three domains through which the built environment influences health (being physical activity, community interaction and healthy eating) (Kent et al., 2011), and as the majority of healthy planning projects have at least a component of active living promotion. It is also noted that the above definitions are based on an assumption that 'the way people live in cities affects their health by influencing levels of physical activity, food choices, safety, social connection and participation, and exposure to pollutants' (Giles-Corti et al., 2007, p. 37). In short, a central assumption of this research is the relatively straightforward notion that 'first we shape cities – then they shape us' (Gehl, 2010, p. 9). These assumptions are based on a socio-ecological perspective, discussed in more detail in Section 2.6. The above also bears out another central assumption of this research, that healthy planning is good urban planning, and a desirable process to strive towards. As American climate scientist Paul Higgins (2005, p. 197) states, such changes labelled in this research as healthy planning could 'alleviate three of the most pressing problems that all countries face: oil dependence, climate change and health care', yet as addressed below there remain challenges in implementing healthy planning.

2.4 The Changing Relationship Between the Health and Built Environment Professions, Modernism, and Who is "Responsible" for Healthy Planning?

As healthy planning academic Hugh Barton (2007, p. 193) states, 'health and urban planning are intimate bedfellows', yet the relationship has undergone a cyclical pattern whereby 'the bonds were strongest in the mid-twentieth century, the early twentieth century, the 1940s and over the last two decades' (Freestone & Wheeler, 2015, p. 32). In postwar settings, for instance, the focus of the built environment (and other) professions turned largely to growth, with health being 'marginalised as a planning concern in the 1950s and 1960s' (Freestone & Wheeler, 2015, p. 29). Since that period, the built environment professions have tended to focus more

on environmental sustainability at the expense of human health (Northridge et al., 2003, p. 557; Wheeler & Thompson, 2010).

Also during the post war period, modernist thinking led to sub-professions that focused on specific components of environmental health[2]. Such professions often struggled to see the 'big picture…and were also not as effective as they might have been in addressing the overall connection between health and environment because they focused on one isolated component' (Kotchian & Laumbach, 2010, p. 987). As urban planning has reflected these trends of modernism and become increasingly broken up into more specialised elements or sub-fields, the profession has had reduced ability to undertake an overarching approach to well-being. Consequently, complex (and often interrelated) problems have been broken up into fragmented and oversimplified technical complications (Freestone & Wheeler, 2015, p. 25; Natrasony & Alexander, 2005). In the field of urban planning in North America this has created a 'blueprint for placelessness' and mass-produced sprawl (Natrasony & Alexander, 2005, p. 414), and Australia can be seen to have followed a similar development path. The reductionist approaches of modernism and rationalist thinking reflect moves in wider society for departmentalism, or specialisation (Giles-Corti et al., 2013; Perdue, Stone, & Gostin, 2003), yet societal challenges faced today have arguably become harder to address through policy (Sanders, 1998). Such siloed operation or departmentalisation in the face of increased complexity means that the nuanced responses required to address multifaceted challenges such as high NCD prevalence are unlikely to be provided. One example of this reductionist thinking is the focus within transport and urban planning on mobility (physical movement) rather than accessibility or access (being able to reach activities and services) (Matan, 2011b). This is now common amongst the built environment professions and leads to decisions and infrastructure spending that preference automobile travel over other transport modes, such as public transport, walking or cycling (Falconer & Giles-Corti, 2008). Yet while accessible and health-promoting communities are in demand (and have been for some decades) (Jones, 1989, p. 69; National Association of Realtors, 2015; National Association of Realtors & Portland State University, 2015), urban planning systems are failing to provide this (Schilling & Linton, 2005). The need to overcome these siloed operations in both the health and urban planning professions has been

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[2] Environmental health is noted by Kotchian and Laumbach (2010, p. 983) to traditionally have a broad scope encompassing such activities as 'food protection, water sanitation, air quality protection, safe and healthy housing, occupational health, injury prevention, and healthy community design'.

noted (Capon & Dixon, 2007; Maddocks, 2016), but this has been harder to achieve in practice due to engrained organisational structures, existing legislative frameworks, the multiple professions and sub-professions involved in shaping the built environment and the complex and 'wicked' nature (see discussion below) of problems being faced (Schilling & Linton, 2005; Thompson & McCue, 2016).

Given the broad range of factors that influence human (and environmental) health, it is unsurprising that numerous stakeholders across various fields and at multiple scales have contributory roles. The prevalence of NCD is a wicked problem, or a problem with a boundary that is difficult to define and no clear cause or solution (Thompson & McCue, 2016). As a result (and contributing to the wicked nature of the problem), no single agency is responsible for worsening rates of NCD prevalence (Kearns, Beaty, & Barnett, 2007) as the 'practice of environmental health is carried out in a variety of settings, from local and state governments to federal and tribal governments and also in medical facilities and both the private and non-profit sectors' (Kotchian & Laumbach, 2010, p. 984). Similarly, research and action in the NCD field must also be multidisciplinary to address such a complex challenge. The Australian Institute of Health and Welfare supports this, outlining that 'public health and epidemiology, the biological and chemical sciences, urban planning, demography, sociology and psychology…All levels of government, the private sector and not-for-profit organisations may play a role in research, evaluation and the dissemination of results' (Australian Institute of Health and Welfare, 2011, p. 7). In researching healthy placemaking[3], recent United Kingdom (UK) research posited that 'architects, landscape architects, town planners, highway engineers, mechanical and electrical engineers, developers, project managers and consultants across a mix of specialisms' among others had a role to play in influencing community health (Design Council & Social Change UK, 2018, p. 24). In all the study concluded that twenty-three defined job roles along with an 'other' category (itself with over fifty unique job roles) made a contribution to healthy placemaking (Design Council & Social Change UK, 2018).

To examine the state of the relationship between the health and the built environment professions currently, recent healthy planning and active living guidance can provide an indication of the key stakeholders advocating for change in the field, and their targets.

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[3] Placemaking is included in this research as having the same definition as 'urban design', refer to Section 2.2.

Overseas, health departments (for instance, NHS London Healthy Urban Development Unit (HUDU), n.d.), research bodies (for instance, in the United States, Robert Wood Johnson Foundation, 2018), private companies (for instance, Nike, 2015), metropolitan governments (for instance, City of New York, 2010) and collaborations between the above types of groups (for instance, Alliance for Healthy Cities, 2007; World Health Organization, 2008) represent just a few of the authors of guidance on healthy planning and active living projects in recent years.

In Australia, the National Heart Foundation of Australia[4], a national health promotion charity, has been prevalent in providing such guidance. Some examples of their guidance include Australian case studies of implementation as part of the Healthy Active by Design online resource (National Heart Foundation of Australia, 2017b), providing awards to LGs identified as engaging in best practice in the healthy planning and active living field (National Heart Foundation of Australia, 2014a, 2015a, 2017a), and undertaking surveys on the public's preferences regarding government spending on active transport infrastructure and more health-promoting urban environments (National Heart Foundation of Australia, 2011a; National Heart Foundation of Australia & Cycling Promotion Fund, 2015). The Heart Foundation has also produced walkability checklists able to be completed by members of the public (i.e. not community health or built environment professionals) and submitted to governments to encourage action in the healthy planning field at a neighbourhood scale (National Heart Foundation of Australia, 2011b). It has commissioned studies into the co-benefits of creating more health-promoting environments, such as the economic benefits (Tolley, 2011), as well as undertaking and publishing studies that have helped to build the Australian evidence base on creating more walkable, health-promoting environments, including the role that density plays (Udell, Daley, Johnson, & Tolley, 2014). The Heart Foundation is also involved in advocacy work, such as calling for a national physical activity action plan (National Heart Foundation of Australia, 2015c) and outlining key actions that government and the community should take in promoting physical activity (National Heart Foundation of Australia, 2014b). One of the most important contributions the Heart Foundation has made to the re-emerging healthy planning field has been direct practitioner guidance. Such guidance has been provided nationally, such as the Healthy Spaces and Places resource (Planning Institute of Australia, Australian Local

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[4] Henceforth 'the Heart Foundation'.

Government Association, & National Heart Foundation of Australia, 2009), and on a state-by-state basis, such as the Healthy by Design resource with state-specific editions published for South Australia (National Heart Foundation of Australia, 2012b), Tasmania (National Heart Foundation of Australia, 2009) and Victoria (National Heart Foundation of Australia, 2012c; National Heart Foundation of Australia (Victorian Division), 2012). The Heart Foundation has also produced specific guidance relating to particular elements of healthy planning and active living initiative delivery, such as identifying certain legislation in Victoria that can be leveraged to deliver more health-promoting environments (National Heart Foundation of Australia, 2013) and creating an active living checklist for developments in the ACT (National Heart Foundation of Australia, 2012a).

However, healthy planning and active living guidance has also come from other sources, such as urban planning bodies including the Planning Institute of Australia's (PIA) Planning for Health and Wellbeing professional development and capacity-building project (Planning Institute of Australia (Victoria Division) & VicHealth, n.d.) and PIA's publications focusing on the role of urban planning in delivering health-promoting urban environments (Planning Institute of Australia (Victoria Division), 2003). Regional health networks have also provided locally-based guidance, such as the Northern Sydney Central Coast Health Promotion Service's 'UP4Health' Urban Planning for Health resource (Northern Sydney Central Coast Health Promotion Service, 2009), and educational settings such as the University of New South Wales' Healthy Built Environments Program, which was central in developing and extending the Australian evidence base on healthy planning and active living initiatives (Kent et al., 2011; Thompson, Whitehead, & Capon, 2010). The development sector has also produced guidelines for the creation of health-promoting urban environments including Landcom in New South Wales (Landcom, 2010), and private developers have proven eager to align themselves with the delivery of such places, such as developer CIC in the South Australian Lightsview project (for instance, see National Heart Foundation of Australia, 2015b) and Urban Pacific Limited alongside the Western Australian Department of Housing and Works in delivering the Somerly Clarkson residential estate, based on the Western Australian Government's Liveable Neighbourhoods principles (as discussed further below) (for instance, see National Heart Foundation of Australia, n.d.).

State government departments have similarly played a role in providing guidance in the healthy planning and active living field, such as the Premier's Council for Active Living (PCAL) in New South Wales (NSW Premier's Council for Active Living, 2010; Wiggins, 2013). The implementation of Western Australia's Liveable Neighbourhoods guidance (Western Australian Planning Commission & Department for Planning and Infrastructure, 2007) has in turn allowed for extensive monitoring of the impact of this state government policy (Christian et al., 2013; Giles-Corti et al., 2013; Hooper et al., 2014; University of Western Australia, 2015). The Western Australian state government's Physical Activity Taskforce was also involved in providing guidance and advocating for the delivery of more health-promoting built forms (Government of Western Australia, 2011). Such re-emergence of the relationship between health and urban planning has also led to a recent rise in research on this link by built environment professionals and researchers (see, for example, Burke, Hatfield, & Pascoe, 2008; Thompson & Kent, 2014), health professionals and scientists (see, for example, Cavill, Kahlmeier, & Racioppi, 2006) and increasingly in collaborations forming between the professions (see, for example, Giles-Corti & Donovan, 2002; Giles-Corti et al., 2006).

Stakeholders in the built environment professions will generally have greater ability to influence development and shape the urban form than stakeholders from the health profession. Resultantly, the guidance produced, as outlined above, is most commonly aimed towards built environment practitioners. Such guidance includes the national Healthy Spaces and Places (Australian Local Government Association, National Heart Foundation of Australia, & Planning Institute of Australia, 2009) and Healthy Active by Design (National Heart Foundation of Australia, 2017c) resources. However guidance is also targeted at political decision-makers, developers and business owners, such as a New South Wales Premier's Council for Active Living active living checklist for developers (Lette, 2011), a Heart Foundation guide to creating healthy towns for leaders (National Heart Foundation of Australia, 2014c) and research into the most useful indicators for policy makers (and also practitioners) interested in creating healthy and sustainable environments (Paine & Thompson, 2017). A clear economic rationale for more walkable places has also been provided to business owners, developers and city leaders through Heart Foundation sponsored research (Tolley, 2011).

Additionally, guidance has come from local health areas, such as tools to assess liveability and encourage the health profession's cooperation with LG (Hunter New England Population Health, 2012a, 2012b) and guidance on ways to plan for health-promoting environments in specific localities, such as in Northern Sydney (Northern Sydney Central Coast Health Promotion Service, 2009). Guidance has also been targeted towards members of the public to encourage community-led change. Such guidance includes a series of questions allowing for the walkability of a neighbourhood to be assessed (Matan, 2011a) (having value to both built environment professionals as well as members of the public), with some checklists explicitly aimed towards those outside the built environment professions (National Heart Foundation of Australia, 2011b). There are similar overseas examples of walkability checklists (Partnership for a Walkable America, Pedestrian and Bicycle Information Center, U.S. Department of Transportation, & United States Environmental Protection Agency, n.d.).

Given this broad range of stakeholders and the disparate roles they play in influencing healthy planning and active living research and practice, the question of who is responsible for the re-emergence of the relationship is a different one to who is responsible for its implementation. The responsibility for the re-emergence of the fields appears shared given the overlapping interests and the ways in which healthy planning serves to benefit the interests of both professions, and is based on the cyclical relationship as outlined above (Freestone & Wheeler, 2015). There has also been a noted 'paradigm shift' (O'Donnell, 2003) in the health profession's perspective on the way the built environment can shape health (Capon & Dixon, 2007). This includes an aligning of the discourses of health workers on 'urban health' and urbanists on 'sustainable cities' (Capon & Dixon, 2007, p. 37). It is also increasingly recognised that medical professionals have the ability to prescribe physical activity as a highly effective 'non-pharmacological treatment' (Green, Engstrom, & Friis, 2018, p. 242) and the advocacy work by the health professions towards the built environment professions has been an important catalyst for change in healthy planning, particularly with regard to planetary health (Capon et al., 2018).

Separately, the built environment professions are evidently those more likely to implement healthy planning and active living initiatives (though there are increasingly exceptions, such as the English National Health Service (NHS) partnership in delivering 'healthy towns' (NHS

England, 2017)). The brief examination of healthy planning and active living guidance above presents a diverse and multifaceted array of stakeholders in the field, and particularly given the specialisation of roles as a result of modernism, no singular body or level of government is responsible for the delivery of healthy places. Furthermore, a single choice at one stage of the design process can lead to reduced health outcomes for an entire community, presenting a challenge in a field with multiple decision-makers often with competing interests, and where the economics of projects is generally a key consideration (particularly recently) (Design Council & Social Change UK, 2018; Freestone & Wheeler, 2015).

Given the definition of health adopted above, and the specific definition of healthy planning used in this study with a concerted focus towards the promotion of physical activity, the most consistent and widespread influencers and managers of these matters (in Australia at least, and likely also to be the case for other high-income, democratic western societies) will generally be governments. This reflects findings from comparable governance settings overseas, such as in the UK and the United States of America (USA), where local authorities can have a role in place shaping (Lyons, 2007) and in healthy planning delivery (Design Council & Social Change UK, 2018, p. 27; Lee, 2012), and whereby it is governments who are generally responsible for the undertaking (and enforcement) of urban planning (Freestone, 2007; Hamnett & Freestone, 2017). Noting the predominant flow of influence, with the health profession providing the majority of guidance and built environment professions largely charged with implementation, some authors have expressed concern that health will be seen to impose its priorities on other sectors, rather than forming genuine partnerships (Nutbeam, 1997). Relationships and meeting of common interests are commonly mentioned approaches to overcome the risk of this (Kent et al., 2011; Moodie, 2009).

As governments will likely be the responsible for ensuring healthy planning is undertaken, questions around the level of government likely to have the most influence become important. In Australia, the federal government plays a relatively limited role in the shaping of urban places (Williams & Maginn, 2012) and also currently in active living initiative provision (National Heart Foundation of Australia, 2014b, p. 5). The state level plays a significant role, and while differing between each state, the responsibility for 'health, education, planning, transport and sport and recreation' generally all fall to this level (National Heart Foundation of

Australia, 2014b, p. 6), with LG powers also being defined primarily by state government legislation (for instance, see Thompson & Maginn, 2012; particularly Williams & Maginn, 2012). Metropolitan planning has seen varied adoption across urban settings and is also primarily defined by Australian states (Crommelin et al., 2017). The importance of state urban planning policy has been noted by practitioners in the field (Allender, Gleeson, et al., 2009), and the legislative setting has changed recently in some states to provide more of a mandate for action from this level. Such changes have been evident in Western Australia's new *Public Health Act* (Government of Western Australia Department of Health, 2016) which mandates the creation of public health plans by LG (reflecting requirements of some overseas settings such as the Netherlands (Hoeijmakers, De Leeuw, Kenis, & De Vries, 2007)), South Australia's new *Planning, Development and Infrastructure Act* and *Public Health Act* (Government of South Australia, 2011, 2016) and where considerations of health have been included in an update of the state's urban planning legislation (Government of New South Wales, 1979; Harris, Kent, Sainsbury, & Thow, 2016; Kent et al., 2018).

However, even where states have relatively supportive policies, they generally require local implementation, such as the Liveable Neighbourhoods initiative in Western Australia (Western Australian Planning Commission & Department for Planning and Infrastructure, 2007, p. i), implemented by the state government yet focused on the 'design and assessment of structure plans (regional, district and local) and subdivision'. This transfer of responsibility also results from the formal governance setting of Australia, whereby the states are able to devolve some urban planning responsibilities to LG (Aulich, 2015). Indeed, while the strategic direction and larger scale urban planning decisions are generally made by Australian states (and in some instances regionally, see for instance Abbott, 2012; Greater Sydney Commission, n.d.), reflecting the English model (Bligh & Dollery, 2011) many of the day-to-day urban planning functions and service delivery fall to LG (Grant, Dollery, & Kortt, 2016; Williams & Maginn, 2012). Australian LG can be considered a determiner of well-being and as playing a notable role in 'place-shaping' (Ryan, Hastings, Woods, Lawrie, & Grant, 2015, p. 13). Additionally, given the importance of the local, streetscape scale and of micro level design features when walking (or cycling) (see Gehl, 1987; 2010), both large scale interventions and small scale measures have importance in creating environments that support and encourage active living, and a mix is likely to have the best results as changing one environmental characteristic (such

as increasing density) is insufficient to create positive built form and community health outcomes (Dovey & Symons, 2014; Kent, 2015). With its day-to-day urban planning roles such as shaping land uses (Sclar & Northridge, 2001), in Australia LG is 'the only locally based structure with a mandate that encompasses the natural, built, social and economic environments in which people live' (Harris & Wills, 1997, p. 409). Yet this important role whereby 'the activities of local government affect individual, organizational, community, social and environmental determinants of physical activity and health' (Thomas, Hodge, & Smith, 2009, p. 354) sits in contrast to their limited formal powers (or even recognition) under the Australian governance setting (Aulich, 2015).

In contrast to the above, though understandable to an extent given the healthy planning field is emerging and as states have a broader range of influence (geographically, at least) and more defined powers than LG, the state level has generally to-date received more attention in advocacy efforts (Harris et al., 2016; Kent et al., 2018) and widespread intervention studies (Christian et al., 2013; Giles-Corti et al., 2013; Lowe, Whitzman, & Giles-Corti, 2013). Yet the local level and micro scale should not be ignored in this field, particularly against an international trend whereby the remit of local government is expanding and LGs are increasingly tackling global issues (Hambleton, 2011; Pugalis & Tan, 2017; Stock et al., 2017). Urban planning in Australia by LG has always had public health at its core (Freestone & Wheeler, 2015) and LG is the closest form of government to the community, as well as being a significant land and asset manager. Due to this, LG can play a significant role in the healthy planning and active living field. Advocacy efforts have helped to more clearly define this important role (Australian Local Government Association et al., 2009; National Heart Foundation of Australia, 2016, 2017a; National Heart Foundation of Australia (Victorian Division), 2012) and Australian LG is also identified as one of the few in the world having a 'lifestyle coordination' role to allow for 'a broader co-ordinating role in supporting citizens' changing and developing lifestyle choices' (Stoker, 2011, p. 22).

In summary, there is not a single agency responsible for the delivery of healthy planning and active living initiatives, both reflecting and contributing to the complexity of healthy planning. The health profession is responsible for the majority of existing Australian guidance (including in partnership with built environment stakeholders), however ultimately the built environment

professions will continue to be those largely responsible for the on-the-ground development and implementation (or lack of implementation, refer to Section 2.5, below). Given the nature of initiatives examined as part of this study, while there is significant market demand for healthy planning and as private stakeholders increasingly become aware of these economic benefits, ultimately the widespread regulation, encouragement and delivery of healthy planning would be expected to come through governance (i.e. public over private). The above then also finds that given the nature of healthy planning and active living initiatives, while the state level in Australia plays an important role within the Australian legislative setting, it will ultimately be LG that could be considered most responsible (although the other levels and other stakeholders clearly retain significant influence) for the delivery of healthy planning and active living initiatives on-the-ground.

2.5 Limited Implementation of Healthy Planning and Active Living Initiatives

Growing concerns over sustainability, climate change and population health including NCD prevalence in high- to mid-income countries (and increasingly in low-income countries), have led to the re-emergence of the relationship between the health and built environment sectors as discussed above. Yet to-date, urban planning's response to modern health concerns has not been as extensive as that to communicable diseases and pollution (for instance land-use zoning, now a ubiquitous part of most western democracy's urban planning systems, which separated conflicting land uses) (Freestone & Wheeler, 2015). Although there is a recognised need for urgency in bringing urban planning and health together to address some of these issues, 'its activation is slow and difficult' (Thompson & McCue, 2016, p. 1). Similarly, healthy planning as a concept has not been adopted by the built environment professions as quickly as some other considerations, such as crime prevention through environmental design (CPTED) (Kent & Wheeler, 2015). Yet while the motivators behind the improvement of health in urban planning in the nineteenth century (Freestone & Wheeler, 2015) are similar to those evident today (McMichael, 2007, p. 43), original attempts to improve health through changing the built environment did not face the additional challenge of being implemented in a societal context of neo-liberalism (Kent et al., 2011). To-date it could be argued that there has not been a proportionate response to the pervasiveness of the problems (including to both human and planetary health) currently faced.

This slow uptake in healthy planning and active living initiatives is despite a conclusive (and ever-expanding and strengthening) evidence-base. Some authors, however, continue to question the relationship between built form, travel behaviour and health (Eid, Overman, Puga, & Turner, 2007; Evans, Crookes, & Coaffee, 2012), perhaps because the evidence on the relationship between these elements has become conclusive only relevantly recently (for instance, see Carlson, Aytur, Gardner, & Rogers, 2012; Frank, Andresen, & Schmid, 2004; Humpel, Owen, & Leslie, 2002; Turrell et al., 2018; Van Cauwenberg et al., 2011). A common criticism of research in the healthy planning field is that 'people who are more likely to be obese (e.g., because they do not like to walk) are also more likely to move to sprawling neighborhoods (e.g., because they can more easily move around by car)' (Eid et al., 2007, p. 19). Yet, despite some researchers questioning the relationship, the creation of more settings that facilitate greater use of active living and active transport (even if some people are more predisposed to living in those communities) and the reduced use of automobiles is unlikely to have negative consequences. Nevertheless, this is a topic that has long been of academic interest (Rydin et al., 2012) and the relationship between built form, travel behaviour and health has now been proven (Carlson et al., 2012; Matan & Newman, 2014; Matan, Newman, Trubka, Beattie, & Selvey, 2015; Boyd Swinburn et al., 1999; Thompson & McCue, 2016), with some of the more influential researchers in the field being Australian (Capon & Thompson, 2010; Gebel et al., 2005; Giles-Corti et al., 2015; Giles-Corti et al., 2016; Harris, Friel, & Wilson, 2015; Harris et al., 2016; Kent et al., 2018; Kent et al., 2011; Lowe et al., 2015; Lowe, Whitzman, & Giles-Corti, 2018, among others). These authors have shown that social and environmental factors can be as important as personal characteristics in terms of walking rates, though such influences are highly complex (Carlson et al., 2012; Giles-Corti & Donovan, 2002).

Yet despite many prominent researchers and advocates in the field coming from Australia, contrastingly, adoption of healthy planning and active living principles into policy and practice has been slow. As New South Wales-based healthy planning academics and advocates Susan Thompson and Peter McCue (2016, p. 2) state, 'given the compelling nature of the evidence, it is difficult to understand why healthy built environments are not everywhere', and the authors ask 'why are they hard to activate on the ground?' The international team of healthy urban

planning and active living researchers comprising Billie Giles-Corti et al. (2016) discuss difficulties in implementing healthy planning, and the update of practice in the field appears particularly slow in Australia (Kent et al., 2018). Largely as a result of the current built environment management systems in place (or not in place), high-income nations in particular continue to build unhealthful environments (Sallis et al., 2016; Thompson & Kent, 2014). The answer to Thompson and McCue's (2016) question is likely a complex and multifaceted one. For one, a disparity between knowledge and implementation has been noted, as urban planners generally know what qualities healthy built environments have, though 'there appears to be a gap between policy and policy implementation' (Giles-Corti et al., 2013, p. 26). This is also true of the current research setting, whereby 'the values and principles underpinning the 'what' and 'why' of healthy placemaking are generally well known. However, the practical 'how' that enables those values and principles to be practically implemented is often missing' (Design Council & Social Change UK, 2018, p. 60). Yet surprisingly, attempts at identification of overarching barriers to implementation are rare, especially in an Australian setting and with a focus to LG. Obesogenic environments (caused at least in part by unhealthy urban planning practice) are multifaceted in causes and can be considered wicked problems as they cross 'spatial, temporal and discipline boundaries', with some barriers to physical activity being 'attitudinal, while others relate to the built environment and to the biophysical environment. Some are highly influenced by political decision making, others by economic conditions and social norms' (Kent et al., 2011, p. 47). While much attention to-date in the healthy planning and active living field has focused on the relationship between urban form, travel behaviour and health, less academic attention has been placed on these attitudinal and political influences.

It is important to highlight two main types of research, evidence and knowledge identified by this literature review. The first type is work that examines the relationship between the built environment, behaviour and health. This relationship (addressed above) is conclusive and is outside the scope of this research. The second type is work that takes more of an overarching view and looks not at what changes to make, but at ways these changes might come to be made. Despite the importance of such research, and calls for physical activity researchers to engage practitioners, learn about their needs and who they then need to convince (such as by Moodie, 2009), this knowledge has been relatively slower to emerge. Nevertheless, some barriers and enablers to implementation of healthy planning and active living projects (although not always

labelled as 'barriers' and 'enablers') are touched on in the existing literature, or are able to be deduced, as briefly examined below.

A recent study in the UK found that practitioners attempting to implement healthy placemaking faced a multitude of barriers, with developer and political requirements, funding, time and other priorities that drive programs identified as the top barriers faced (Design Council & Social Change UK, 2018). Notably, national or local policy did not make the list (Design Council & Social Change UK, 2018).

Barriers are also likely to stem from the current organisational and legislative settings evident in the health and planning professions that have resulted from modernism, as outlined above (see Section 2.4). For instance, siloed operations (Giles-Corti & Whitzman, 2012; Kent & Thompson, 2012; Thompson & McCue, 2016) largely the result of modernism, and an ongoing primary focus (in Australia at least) of research on states at the expense of the LG level are possible reasons for slower uptake of projects than might be expected. It is noted in the literature that siloed policy settings are also prohibitive to healthy planning (Lowe et al., 2018), and add to the lack of incentive to collaborate (Giles-Corti et al., 2016) or feelings of powerlessness amongst practitioners to make change (Allender, Gleeson, et al., 2009).

Additionally, and multiplying the above barriers is the complexity of the relationships as discussed above, and the wicked problem (van Beurden & Kia, 2011, p. 83) that high rates of NCDs present. It is an issue that 'defies traditional categorisation, it embraces several knowledge disciplines, it crosses professional jurisdictions and it is relevant to the government, private and not-for-profit sectors' (Thompson & McCue, 2016, pp. 2-3). Addressing wicked problems is made particularly difficult in professions that demonstrate siloed operations (Thompson & McCue, 2016). Exploring ways for practitioners and decision-makers to best respond to this complexity and ways to overcome siloed operations will in turn assist in the delivery of more health-promoting environments.

Data and evidence can also be a barrier, as although the relationships between the built environment, travel behaviour and health have been proven, there can be difficulties in communicating them as well as ongoing challenges in gaining 'insight into the complexity of

the cause and effects of the various elements of a multi-component intervention, and the complex nature of both proximal and distal determinants of physical activity' (Shilton, 2006, p. 121). The type of data available perhaps 'fails to acknowledge the difficulty in evaluating success (also relying on problematic measures such as BMI [body-mass index]) and thus presents problems to urban planners who must adapt such models to place-time specific structures and contexts' (Evans et al., 2012, p. 102). However, research generally indicates that the current evidence base is sufficient (Matan & Newman, 2014; Matan et al., 2015), though opportunities for guidance to be improved (Lawless, Lane, Lewis, Baum, & Harris, 2017), particularly for local implementation (Allender, Gleeson, et al., 2009), have been identified. Yet even with the relation between human health and the built form being proven, challenges remain in moving 'from vision to reality' and also in demonstrating the impact of projects, particularly as 'health or social interaction are quite intangible and can be hard to measure' (Design Council & Social Change UK, 2018, pp. 30, 33). Similar challenges have been identified in an Australian setting (Harris et al., 2015), and the unique opportunities and potential novel forms of evidence necessitated can themselves be difficult compared to more traditional evidence (Rydin et al., 2012). Where concerted efforts to monitor projects have been made, such as the longitudinal study of the Liveable Neighbourhoods policy in Western Australia (Christian et al., 2013; Giles-Corti et al., 2013; Giles-Corti et al., 2007, p. 238), many of those barriers identified above regarding evidence have been able to be overcome.

Societal attitudes and entrenched thinking and practices can also pose a challenge to healthy planning, particularly around overcoming automobile dependence (Newman & Kenworthy, 1989, 1999, 2015) and automobility, where 'a "multilinear ensemble" of commodities, bodies of knowledge, laws, techniques, institutions, environments, nodes of capital, sensibilities, and modes of perception' are all present (Seiler, 2008, p. 6). Automobile dependent suburbs are those that offer few services or 'places' readily accessible by non-motorised transport (walking or cycling), while at the same time providing few motorised alternatives to the car, such as public transport, with such development patterns becoming prevalent in the postwar period (Newman, Kosonen, & Kenworthy, 2016) and strongly associated with modernism and rationalist thinking as touched on above. A preferencing of cars as standard practice in built environment professions largely results from the legislative and regulatory settings in which professionals operate in, even if the professionals themselves do not preference cars (Design

Council & Social Change UK, 2018). Additionally, the dominance of cars (and urban planning for cars) in the public realm is another challenge to healthy planning, with a professional divide between practitioners who support overcoming automobility such as through healthy planning practices and those who do not (Design Council & Social Change UK, 2018, p. 37). Although the impacts of automobile dependence are now declining across many societies (Newman & Kenworthy, 2015), Australia particularly (as well as north America, notably similar to Australia in an urban planning sense) retains its strong car culture (Kent, 2013) and that continues to extend into (and result from) the practice of the built environment fields (Hynes, 2017).

In addition to practice generally, individual practitioner training and perspectives can also be prohibitive to project uptake. This might include instances where certain measures might not be considered viable or desirable by practitioners (Cleland et al., 2013) or where knowledge on the key principles and effectiveness of projects might be lacking (Design Council & Social Change UK, 2018; Lawless et al., 2017). On the other hand, where provided, professional development and training are also noted to enable projects (Design Council & Social Change UK, 2018; Thompson, Kent, & Lyons, 2014) and this has been found to be true at a LG level in Australia (Australian Local Government Association et al., 2009).

Difficulties in actual implementation of guidance have also been found to be a barrier to the delivery of healthy places locally, such as where 'design guides do not always translate well into what schemes actually end up being', including 'local politics chipping away, fundamentally undermining the final product' (Design Council & Social Change UK, 2018, p. 49). Challenges in actually enacting processes have been shown to be prohibitive to integrated urban planning for health at a state level in Australia (Lawless et al., 2017). Related to this, the allocation of resources has been noted to significantly influence the uptake and implementation of healthy planning and active living initiatives (Design Council & Social Change UK, 2018; Lawless et al., 2017), including at the LG level (Allender et al., 2011).

In contrast to the above barriers, some factors also assist the likelihood of project uptake and implementation. One example of an enabler is the use of co-benefits, or instances where 'benefits across multiple policy areas are considered concurrently' (Giles-Corti et al., 2010, p. 124). Co-benefits make the relationship between the built environment and community health

highly 'synergistic' (Patrick & Smith, 2011) and 'complimentary' (Lowe, 2014, p. 23). It is noted that community health can improve as a result of projects implemented with other (nevertheless related) focusses, such as Smart Growth[5] (Heaton et al., 2010). The benefits of active transport extend to 'health, economic, social, environmental and traffic management perspectives' (Giles-Corti et al., 2010, p. 122), and 'to present the rationale for increased focus on physical activity purely in health terms is to inadequately represent the broad benefits' (Shilton, 2006, p. 120). Discussion around co-benefits can also facilitate in breaking down siloed operations, contribute additional considerations to cost-benefit analyses (Giles-Corti et al., 2010) and can ultimately assist projects with community health benefits to be implemented (Capon & Rissel, 2010; Giles-Corti et al., 2010; Rissel, 2009) including at the LG level in Australia (Australian Local Government Association et al., 2009).

Additionally, collaboration and partnership development are seen to enable considerations of healthy planning (Sclar & Northridge, 2001, p. 1013), including in Australia (Kent & Thompson, 2012; Thomas et al., 2009; Thompson, Kent, & Lyons, 2013; Thompson et al., 2014). Collaboration at the LG level has been specifically noted to have importance in the field (Lawless et al., 2017), as have partnerships at a LG level (Australian Local Government Association et al., 2009; King, Hawe, & Corne, 1999; Thompson & McCue, 2016). The challenge to achieving successful partnerships in the healthy planning field in Australia has been noted, however, for various reasons including the multiplicity of relevant stakeholders and the complex relationships necessitated (Thomas et al., 2009). Yet practitioner guidance generally focusses on the importance of this collaboration (Thompson & McCue, 2016), or on what changes to make to the built environment (National Heart Foundation of Australia, 2012c, 2018), rather than on ways such partnerships might be fostered.

Yet while some barriers and enablers can be inferred from practice guidance or are provided in an ad hoc manner across academic studies, factors that encourage or detract from the likelihood of project uptake and success will likely be a central part of professionals' empirical knowledge, and aside from a few notable exceptions this knowledge base has not been explored

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[5] The key principles of Smart Growth have a notable overlap with those of healthy planning and include the provision of mixed land uses, efficient use of land through compact design, housing diversity proximate to transport and services, designing places with high pedestrian connectivity and provision of numerous transport choices (Mead, Dodson, & Ellway, 2006, p. 81).

in-depth in the literature. Where such studies have attempted to address a comparable question or sought the knowledge of built environment or health practitioners operating at a LG level, their methodological approaches to doing so are briefly explored below.

2.6 A Socio-ecological Perspective of Health and Methods Used in Research Related to Healthy Planning and Active Living Initiatives

The health sector in Australia has employed various approaches in attempting to improve the health of Australians, including the ''old public health' approach, with an emphasis on regulation and monitoring of the natural environment and control of infectious disease', more statistical population-based approaches based on 'levels of mortality and morbidity', and the 'new public health' approach with 'an emphasis on … strengthening community action, developing health-promoting environments and healthy public policy' (Harris & Wills, 1997, p. 405). Most recently adopted has been a socio-ecological approach 'which stresses the importance of understanding the interrelationship between health, the environment, and use of resources' (Harris & Wills, 1997, p. 405). This shift, from the 'old public health' model to socio-ecological thinking has been particularly promoted by The Ottawa Charter for Health Promotion (Patrick & Smith, 2011, p. S28), and represents a notable shift in emphasis from the health field, and is an approach increasingly considered in the built environment field also (Freestone & Wheeler, 2015, p. 32).

Such an approach moves emphasis away from individual actions and instead views human health as existing in a complex setting where multiple factors at various levels interact to impact health (Sarkar et al., 2014, pp. 52-53). Under this perspective individuals exist in an ecological system (McLaren & Hawe, 2005) and their behaviours (and so by extension their health) are influenced by various built and natural environmental factors as well as sociocultural and institutional settings (Barton & Grant, 2006; Sallis et al., 2006). Multiple levels – 'the individual, social and environmental' (Kent et al., 2011, p. 47) – therefore all play an interactive role in influencing community health as part of a 'larger social system' that 'underlie[s] health outcomes' (Golden & Earp, 2012, p. 364). A socio-ecological approach to health is illustrated in Barton and Grant's health map (Barton & Grant, 2006; Barton & Grant, 2013, p. S131) (reproduced in Publication 1), whereby people and their individual characteristics exist

embedded within considerations of their lifestyle, community, local economy, activities, the built and natural environments and the global ecosystem. Considerations such as macro-economics, politics, culture and global forces are also noted (Barton & Grant, 2013). Australian academics Newell, Proust, Dyball, and McManus (2007, p. 215) view this relationship in terms of feedback loops and systems thinking, whereby 'a large number of 'parts' that interact, via a network of feedback loops, to influence and constrain one another's behaviour' and where the 'human-urban system comprises the city's inhabitants plus the ecological, cultural, social and economic entities that make up their environment.' A role for the built environment professions, particularly urban planning, is evident when such an approach is adopted (Barton, 2017), particularly given various built environment considerations such as buildings, places, movement networks and streets are all seen to play a role in impacting health (Barton & Grant, 2013). An important impact of this is that policies and programs that aim to influence community health through changing the built environment will necessarily have to 'consider interventions at multiple levels – the individual, social and environmental' (Kent et al., 2011, p. 47). Thinking about the influences on health in this holistic way presents health 'at the very least … as providing a version of social sustainability [and at] most…health could be considered as a proxy for sustainable development as a whole' (Barton, 2007, p. 197). Such thinking also influences the type of responses necessary to then address NCDs, which will 'require leadership, coordinated multi-stakeholder engagement for health both at government level and at the level of a wide range of actors' (World Health Organization, 2013, p. 12).

As discussed in Section 2.4, the important role of LG presents itself in this regard. Such a complexity of influences evident in the socio-ecological understanding of health presents a 'systems effect', whereby human physiology and psychology interact with urban environments, and in the face of such complexity unwanted and unexpected results can also result from policies (Newell et al., 2007, p. 214). Newell et al. (2007, pp. 214, 215) suggest that we should look for 'leverage points' ('where pressure on selected variables (or the severing of selected causal links) will produce the desired outcomes.') to help communities address health challenges such as obesity. It is therefore important for research in this field to consider a broad range of influencers on health and the settings that influence health, and the socio-ecological perspective allows for 'a mix of social, economic, political and built environment policies … required to positively influence levels of physical activity' (Kent et al., 2011, p. 47)

to be examined. The perspective has also been employed in examining LG health policy development and is noted to have particular relevance 'to health policy in the public sector' (Hoeijmakers et al., 2007, p. 113).

Yet with regard to this research, the socio-ecological model presents more than just a relevant lens through which to view the multitude of impacting factors on health 'that are contributing to the rise of overweight and obese people in increasingly dysfunctional urban environments' (Kearns et al., 2007, p. 50). The approach is also a relevant model through which the 'disparate disciplinary backgrounds and research traditions spanning the physical and social sciences' (Thompson & McCue, 2016, p. 4) might be addressed, being familiar enough to community health practitioners and demonstrating a clear area of influence that the built environment (and so built environment professionals) has over community health. A socio-ecological perspective therefore presents a potential tool by which the theoretical divides of the two professions might be bridged (Browne, Davern, & Giles-Corti, 2016; Kent & Thompson, 2012), the establishment of which is important given 'the ties between [health and urban planning] have been strongest 'when upheld by converging theories and commonly perceived problems'' (Sloane, 2006, p. 10; cited in Freestone & Wheeler, 2015).

Ultimately, adopting a socio-ecological perspective leads to a central understanding underpinning this research, that a dual relationship exists whereby 'while our places shape us, by our activity and often our passivity we also shape our places' (Dredge, 2014, p. 510) (mirroring the idea that 'first we shape cities – then they shape us' by Gehl (2010, p. 9)) and whereby '…healthy places nurture healthy people, and … public policies should aim at sustaining both healthy people and healthy places, not one or the other' (Lucy, 1994, p. 305; cited in Freestone & Wheeler, 2015, p. 30). In turn, such an approach presents a complex, interrelated and dynamic set of influencers of community health. A theoretical framework capable of aligning with and addressing this complexity is therefore required to be adopted, as discussed in Section 3.1.

While a commonly accepted theoretical framework in the field has not yet emerged, an examination of research related to healthy planning and active living initiatives reveals some commonly employed methods. In examining Australian LG capacity for partnerships in

promoting physical activity, King et al. (1999, p. 40) undertook qualitative research employing semi-structured interviews selected via purposeful sampling. The study also involved document analysis of council urban planning documents (King et al., 1999), allowing for the triangulation of data with the semi-structured interviews. Similarly, another study examining a nominated community health initiative used semi-structured interviews, while 'an analysis of project progress reports and relevant council urban planning documents was [also] undertaken' (Thomas et al., 2009, p. 355). Interviews with practitioners are common in other healthy planning research focused at the LG scale (Allender, Cavill, et al., 2009; Allender, Gleeson, et al., 2009), and the literature review undertaken by Jennifer Kent et al. (2011, p. 99) supports this, finding where research examines 'influencing and implementing policy' and is 'based on studies that explore stakeholder perspectives of healthy built environments', interviews are a common and effective data collection method, particularly when interviewing 'local government staff'. In addition, in Australia the Heart Foundation (National Heart Foundation of Australia, 2014d) has conducted telephone interviews with practitioners from local government regarding active living initiatives (however with mainly quantitative results), while in Queensland a survey was used to gain the perspectives of LGs regarding provision of supportive environments for active living (Cole, Burke, Aspinal, Hunter, & Bichel, 2010). Yet while the attitudes of built environment professionals have been touched on and suitable methods of data collection have been established as above, knowledge surrounding the barriers and enablers that increase or decrease the likelihood of initiatives being implemented continues to be scarce, and there remains the need for a more detailed and nuanced understanding of the relationship between the community health and built environment professions and practice in Australia, and the challenges the healthy planning field is facing.

2.7 Literature Review Summary

The literature as examined above has focused more on the relationship between the built environment, people's behaviour and health and the interplay with initiatives, than between the built environment and health professions, and the way initiatives come about. For instance, this has previously been identified in the obesity prevention field where the focus has 'generally been defined in terms of 'what' needs to be done while neglecting 'how'' (King, Gill, Allender, & Swinburn, 2011). There are some exceptions, with the need for collaboration (Thompson &

McCue, 2016) and specific or partial components of healthy planning, such as obesity prevention (King et al., 2011), gaining particular attention. Some barriers (such as siloed operations, difficulty in evidence translation and application and entrenched practices that preference the automobile over other forms of travel) and enablers (such as partnership formation and the use of co-benefits in promoting future projects) are indeed able to be identified. A socio-ecological perspective of health also emerges as a valuable theoretical approach both for healthy planning practice and research, and qualitative methods including semi-structured interviews and surveys are noted to be the most commonly employed methods in healthy planning research. Yet given the importance placed on multidisciplinary and collaborative research and practice as well as the need for evidence-led action (Clark et al., 2013), there is relatively little research into the implementation of healthy planning and active living initiatives. While the health discipline in particular places a high value on project evaluation upon implementation, review of initiatives and the conditions that allowed them to be undertaken is less common in practice (Smith, 2011, p. 165), whereby 'there are numerous, although by no means exhaustive, proposals for regulatory intervention to prevent obesity. Very few studies, however, have considered the practicalities of implementing such changes' (Allender, Gleeson, et al., 2009, n.p.n.). Turning an academic focus to the implementation of healthy planning and active living initiatives is therefore an important next step.

Furthermore, the above literature review has outlined an important role for the LG level in Australia, however has identified that of the limited research focusing on implementation of healthy planning and active living initiatives, much centres on the state level. The study of barriers and enablers to healthy planning and active living initiatives at a local level is also likely to have relevance to contexts facing similar challenges to Australian communities, or for those with comparable governance and urban planning structures.

Where this knowledge is not sought, it is likely to be a missed opportunity for 'practitioners…agencies…funding bodies and, of course, the population groups that may not benefit from the improvement and ongoing implementation of health promotion strategies' (Smith, 2011, p. 165). Furthermore, actions and project implementation in the healthy planning field will directly impact the extent to which obesogenic environments are addressed, so given contemporary community health and sustainability challenges the uptake of initiatives becomes

an especially important consideration (Sacks et al., 2009, p. 76). There is a lack of evaluative insights into such initiatives (Christian et al., 2013) and this study, then, represents an attempt to avoid further missed opportunities in this emerging field.

3. RESEARCH DESIGN AND METHODOLOGIES

This chapter outlines the research design and theoretical underpinnings of the thesis and the methodologies employed. Table 1 below provides an overview of the research contribution of each publication with regard to each of the research objectives of the thesis, as well as the methodologies used.

Table 1: PhD research design

Research Question	Research Objectives	Paper 1	Paper 2	Paper 3	Paper 4	Paper 5	Exegesis	Methodologies/approaches
Why do we fail to plan for and produce healthy environments in Australia and how can this change?	Conduct literature review to define healthy planning, healthy urban design and active living initiatives, and to identify who is responsible for their delivery.	Primary					Primary	Literature review
	Undertake surveys and interviews with healthy planning practitioners and advocates to determine the barriers to uptake and implementation of healthy planning and active living initiatives.	Partial	Partial	Partial				Document, Policy Analysis
		Primary	Primary					Surveys
		Partial		Primary				Interviews
	Undertake surveys and interviews with healthy planning practitioners and advocates to determine factors that enable the uptake and implementation of healthy planning and active living initiatives.	Partial	Partial	Partial				Document, Policy Analysis
		Partial	Primary					Surveys
		Partial		Primary				Interviews
	Identify ways in which enablers could be better utilised to encourage the planning and production of health-promoting environments, particularly with regard to relevant barriers.				Primary			Literature review
					Secondary	Primary		Findings
					Primary			Cases

Primary contribution · Secondary contribution · Partial contribution

3.1 Multiple Streams Analysis (MSA)

In the absence of a theoretical framework that is commonly employed across studies in the health, urban planning and healthy planning fields (aside from the socio-ecological perspective of health, as examined in Section 2.6), the need (and opportunity) to select a novel framework for this study arises. The use of analytical frameworks is important, as it allows for 'the complexities, ambiguities and driving forces of multi-faceted phenomena such as public policy-making and policy processes' to be examined (Howlett, McConnell, & Perl, 2015b, p. 273), which is necessary given recent trends towards increased intricacy and political contestation in policy settings (Zohlnhöfer, Herweg, & Rüb, 2015). Finding a suitable theoretical framework is particularly important in the healthy planning field. As discussed in Chapter 2, there is extensive research on the relationship between the urban form, travel behaviour and health, and there is existing (predominantly grey literature) guidance into implementation of healthy planning and active living initiatives. However, limited academic attention has been afforded barriers and enablers to implementation of healthy planning projects. Additionally, where time constraints limit options and where there is ambiguity as to what these choices might even be, rational models of policy and decision making are decreasingly relevant to examine such settings (Zohlnhöfer et al., 2015, p. 412), with some frameworks being better able to capture particular components and implementation of policy than the 'textbook process' (Nakamura, 1987, pp. 145-146). The rational approach 'is a very instrumental view of policy' and 'is profoundly criticized in contemporary political science', and changes that encourage healthy planning are unlikely to come through incremental shifts more commonly examined by such approaches (Hoeijmakers et al., 2007, p. 113; see also Barton, 2007; Barton, 2017; Craig, Felix, Walker, & Phillips, 2010).

American political scientist John Kingdon's (1984, 2003) Multiple Streams Analysis (MSA)[6] presents one such analytical framework that overcomes at least some of these criticisms. The framework develops on the 'garbage can' model of organisational choice (Cohen, March, &

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[6] Variously called multiple streams approach (Béland & Howlett, 2016; Cairney & Jones, 2016; Kingdon, 1984, 2003), multiple streams framework (Herweg, Huß, & Zohlnhöfer, 2015; Zohlnhöfer, Herweg, & Huß, 2016; Zohlnhöfer et al., 2015) or multiple streams analysis (Henstra, 2010; Zahariadis, 2016), or alternatively named selectively in reference to elements of the theory such as policy windows or policy entrepreneurs (Craig et al., 2010). Given this research uses the framework as an analytical methodology, the term multiple streams analysis is used for consistency, including when referencing authors who use other terms.

Olsen, 1972; Olsen, 2001; Sager & Rielle, 2013) in conceptualising how problems come to be identified, reasons they come to be added to the decision agenda, and ways in which they come to be joined to policy solutions (Henstra, 2010, p. 241). This model sees choices 'as a garbage can into which participants who drift in and out of decisions, dump largely unrelated problems and solutions' (Zahariadis, 2007, p. 66). Instead of being a 'complete' conceptual model sufficient to base a study on, the garbage can model is a starting point, used 'to encourage colleagues to play with the basic ideas, rather than defend them endlessly' (Olsen, 2001, p. 192). The garbage can model is therefore used in this study as a theoretical consideration that leads to the more conceptually detailed framework of MSA. Yet key elements of this model, which was first proposed in 1972 (Cohen et al., 1972), are noted to have applicability to the level of governance and ideas examined in this research. For instance, the model was introduced as a way of examining decision-making structures and processes in 'organised anarchies' (portrayed, in the initial study, as universities). It allows for a conceptual shift away from the rational choice and bounded rationality models of policy formation, and focuses instead on notions of decision making in complex organisations and individuals within organisations regarding 'interpretation[s] of what they are doing and what they have done while in the process of doing it' (Cohen et al., 1972, p. 2).

The model posits four streams ('problems, solutions, participants, and choice opportunities') as having relevance to organisational choice (Rawat & Morris, 2016, p. 610; see also Cohen et al., 1972). Such a model is based on the notion of organisational anarchy, or a setting whereby participation is fluid and multiple players and nongovernmental actors 'exercise a significant influence over the form certain decisions will take' (Zahariadis, 2014, p. 27). Problematic preferences are addressed (such that 'people often don't know what they want […] [organisational anarchy is] a collection of ideas [rather] than…a coherent structure') and where technological processes are unclear, 'trial-and-error procedures' make for 'indispensable learning tools' (Zahariadis, 2007, p. 67). The relevance of the model to healthy planning and active living initiatives at the LG scale (and so to this research) is noted, such as the influence of (particularly health) nongovernmental actors in the field (refer to Section 2.5) reflecting fluid participation, potential 'solutions' to health and NCD prevalence being subject to problematic preferences and ambiguity in framing such problems (for example, whether community health is seen primarily as a product of the built environment (Barton & Grant, 2006) or as an

accumulation of individual responsibility (Eid et al., 2007; Evans et al., 2012)). Local government has previously been seen to reflect the characteristics of organisational anarchy (Sager & Rielle, 2013).

Building on the key elements of the garbage can model, MSA presents an influential policy theory in which four streams are reduced to three – problems, policy and politics, and where the fourth stream – opportunities, is instead presented as a policy window (Cairney & Jones, 2016; Rawat & Morris, 2016). Under MSA, the streams are as follows:

- *The problem stream*: In this stream conditions come to be seen as 'problems' when it is considered that they are negative and can be acted upon (Kingdon, 1984). Such a perception can change due to 'focusing events' (one-off events that bring attention to a condition), due to feedback from already implemented policies or where there is 'the sense that a well thought out solution already exists' (Cairney & Jones, 2016, p. 40; Embrett & Randall, 2014; Kingdon, 1984; Sabatier, 2007; Zahariadis, 2014). To be considered, these problems must also be viewed as being desirable to address (Embrett & Randall, 2014; Sallis et al., 2016) and 'public', whereby 'government action is needed to resolve them' (Béland & Howlett, 2016, p. 222; see also Knaggård, 2015). The framework recognises that 'problems are not objective facts' (Herweg et al., 2015, p. 436), while certain actors (who Kingdon (1984) calls policy entrepreneurs) work to bring problems to policy-makers' attention (Knaggård, 2015, p. 452). Under MSA, policy makers feel compelled to act upon such problems, regardless of whether they have relevant and suitable policy options (Kingdon, 1984).

- *The policy stream*: This stream involves the narrowing down of a multitude of policy actions in response to the problems to a few feasible options (Béland & Howlett, 2016). Such options come from 'experts and analysts who examine problems and propose solutions' (Béland & Howlett, 2016, p. 222). Kingdon (1984) describes this stream as a 'primeval soup' of possible policy options, or the select ideas on policymakers' radars. Criteria used to determine policy alternatives that are considered generally include 'technical feasibility, value acceptability, and resource

adequacy…[while] alternatives that do not conform to prevailing norms or the values of policymakers are less likely to be considered for adoption' (Zahariadis, 2014, p. 33).

- *The political stream*: This stream relates to the prevailing public mood or public opinion (Henstra, 2010), 'executive or legislative turnover, and interest group advocacy campaigns' (Béland & Howlett, 2016, p. 222).

The above three streams generally operate on paths independent to each other (Howlett et al., 2015b; Kingdon, 1984) (refer to Figure 1), that is, policies are constructed by policymakers and often exist separately from political context or perceived problems. Likewise, politics and public opinion exist largely independently of current policy choices or problems. Finally, problems arise and exist largely independently from the other two. However, the streams can be brought together to form a 'policy window' at certain opportune moments. A 'policy window' is a chance to put forward a preferred policy by a 'policy entrepreneur' at the agenda setting stage (Kingdon, 2003). These policy entrepreneurs can be individuals or groups who attempt to join (or 'couple') the three streams, especially through the use of 'manipulating strategies' (Zahariadis, 2014, pp. 35, 36).

As Henstra (2010, p. 242) states, policy windows generally open, allowing them to reach the decision agenda, for those issues that are perceived to be:

- 'salient' (relates to the 'problem' stream: the problem is deemed to be 'important and deserving of government attention');

- 'urgent' (relates to the 'political' stream: the problem is deemed to 'command priority relative to other problems competing for attention and resources'); and

- 'solvable' (relates to the 'policy' stream: 'there must be an available solution that is deemed feasible and acceptable').

Policy windows represent a fleeting opportunity as they 'open'[7] for a relatively brief period. It is during this time that 'the conditions to push a given subject higher on the policy agenda are right' (Kingdon, 2003, p. 88) and present an 'opportune moment' for policy-making (Hoeijmakers et al., 2007). The policy windows present opportunities where compromise is necessary, even beneficial, where 'rigid adherence to one's original position would cost one dearly' and where 'consensus is built, sometimes very rapidly, by cutting in many and diverse interests' (Kingdon, 2003, p. 161). Generally, 'a decision is made to act on an issue (the issue has reached the policy agenda) when all three streams are coupled' or when 'a problem has been recognized, there is an acceptable solution available and the political climate is right' (Hoeijmakers et al., 2007, p. 114).
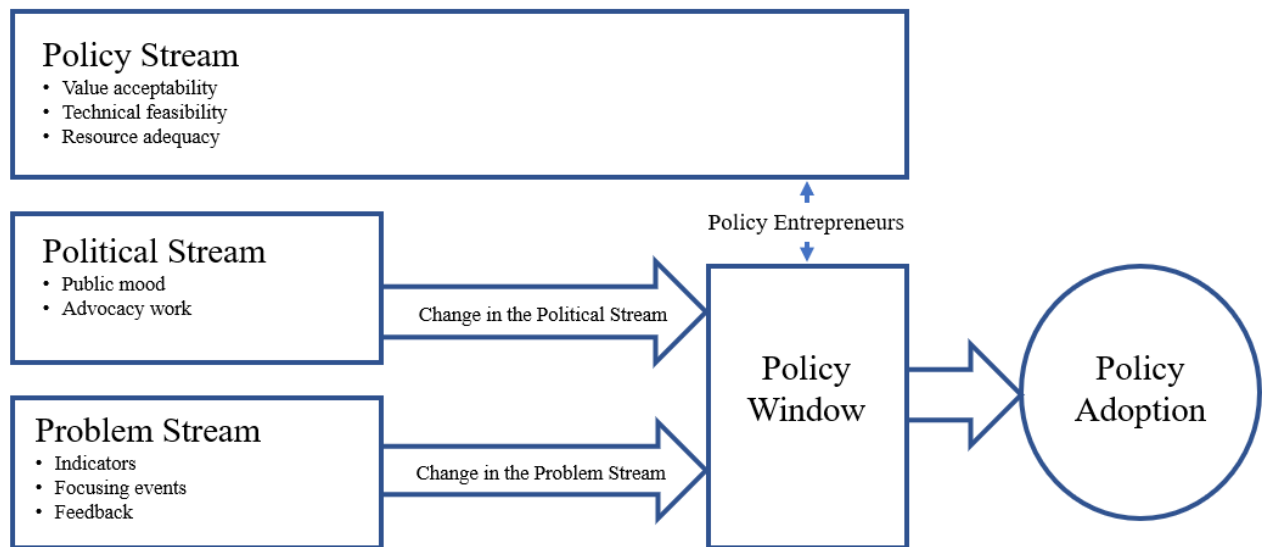
Figure 1: The multiple streams framework (adapted by the author from Craig et al., 2010, p. 2048; Béland & Howlett, 2016; Henstra, 2010; Zahariadis, 2014, p. 31).

As used in this thesis, MSA originated in studies on agenda setting in transport and health policy at the national level in the USA (Kingdon, 1984), causing some authors to question its appropriation and application across varying institutional., governance and national settings (Béland & Howlett, 2016, p. 224; Herweg et al., 2015). However, MSA has been shown to be

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[7] The 'opening' and 'closing' of policy windows are terms employed by Kingdon (1984) and others (Dudley, 2013; Exworthy & Powell, 2004; Hoeijmakers et al., 2007), and refers to situations when opportunities for agenda setting and policy uptake are increasingly likely (an 'open' policy window) or when the likelihood is again reduced, and policy focus turns elsewhere (a policy window that has 'closed').

applicable to the wider policy process (Zohlnhöfer et al., 2015) and though there are commonalities with rational models of the policy process (Howlett et al., 2015b, p. 274; see also Cairney & Heikkila, 2014; Haynes et al., 2011), it has various advantages over rational policy theories (Buse, Mays, & Walt, 2001; Embrett & Randall, 2014; Kingdon, 2003; Zahariadis, 2008). For instance, MSA more closely reflects policy processes and implementation in practice (Nakamura, 1987, p. 146) and the non-chronological and dynamic relationship between practice and policy (Meiburg, 2010, p. 1064) whereby '[t]he formation of policy agendas and the determination of agendas from which final choices are made are not tidy and tight' (Kingdon, 2003, p. 222). The 'fluidity' and 'messiness' (Ripley, 1995, pp. 161-162) of practical policy-making, such as in the health or built environment field, are more appropriately viewed using a MSA framework rather than through those models that view 'the policy process as a succession of stages' (Craig et al., 2010, p. 2049).

Further, while originally used to examine agenda setting, MSA is also posited to be able to 'elegantly help to describe the fast-paced and muddled experience of a policy design and installation' (Craig et al., 2010, p. 2049), having being successfully employed in examining different policy phases including implementation (Rawat & Morris, 2016), with the policy stream and the problem stream noted to have particular relevance (Boswell & Rodrigues, 2016). In examining implementation some authors have claimed the need to add streams [for instance Howlett et al. (2015b, p. 282) put forward a five-stream model of the policy process that adds considerations of 'process' and 'programme' to the original three streams and combines the approach with critical juncture theory (see also Howlett, McConnell, & Perl, 2015a)], add to the number of policy windows or coupling events examined (Herweg et al., 2015; Zohlnhöfer et al., 2015) and a general need to 'further theoretical specification in order to be usefully applied to explain implementation across units or sectors it' (Boswell & Rodrigues, 2016, p. 508). Yet such modifications have not seen such widespread adoption as Kingdon's (1984) original theory. Three streams have been shown to be an appropriate analysis of implementation (Boswell & Rodrigues, 2016; Zahariadis, 2003, 2008) and are considered appropriate particularly for use in exploratory research such as this and when applied as a sensitising concept (refer to Section 3.2).

Where implementation is examined it is important to consider institutional settings (Zohlnhöfer et al., 2016), and the selective use of certain parts of the framework only, although noted to be common, is a particular criticism of the framework (Zohlnhöfer et al., 2015, p. 413). In focusing on implementation, the agenda setting and decision-making processes are able to be merged conceptually (Zahariadis, 2003). The separate streams of MSA are also seen as a strength in examining implementation, making it 'well suited to analyse how policies are applied and implemented across space and over time' (Boswell & Rodrigues, 2016, p. 507), with numerous examples of the successful adoption of the framework in policy implementation studies available (see, for instance, Bache & Reardon, 2013; Boswell & Rodrigues, 2016; Exworthy & Powell, 2004; Howlett et al., 2015a; Zahariadis, 2003). The point of implementation has been identified as providing the opportunity for healthy planning to be incorporated into existing practice (National Heart Foundation of Australia (Victorian Division), 2004, pp. 33-34), and so is advantageous to examine.

Also, MSA has relevance across fields and professions wider than health and transport as originally examined (although commonalities between those fields and the fields encompassed by healthy planning is noted) (Rawat & Morris, 2016). Specifically, Sallis et al. (2016) note the applicability of MSA to examining policy in the urban planning and health fields and Craig et al. (2010, p. 2051) state, 'public health professionals can use Kingdon's Multiple Streams Framework as a roadmap for improving the health and well-being of the population'. It is also appropriate for this re-emerging field as it allows for conditions of ambiguity (Herweg et al., 2015, p. 467) and time constraints (i.e. where there are a large range of considerations and an inability to consider them all) to be examined, making it 'more relevant and suitable than ever before for the analysis of policy making' (Zohlnhöfer et al., 2015, p. 412).

Further, although the original level of analysis was a national government, MSA has since been adopted to larger (e.g. transnational) or smaller (e.g. local) governance scales (see, for instance, Liu, Lindquist, Vedlitz, & Vincent, 2010; Robinson & Eller, 2010) by 'adjusting the lens to focus on … the municipal level' (Henstra, 2010, p. 242). According to political and social scientists Reimut Zohlnhöfer et al. (2015, p. 414), the framework 'not only travels well to different policy areas and stages of the policy cycle, but also to different units of analysis', be that a change of country (Breeman, Scholten, & Timmermans, 2015; Hoeijmakers et al., 2007;

Rawat & Morris, 2016; Secchi, 2010) or institution examined (Zohlnhöfer et al., 2016). The need for researchers to take care in turning MSA's focus away from the national scale has been explained (Cairney & Jones, 2016), though it is possible to apply MSA to varying settings with limited need to alter the framework (Zohlnhöfer et al., 2015).

Reflecting this transferability are calls for the role of ideas and ideational analysis at a local level to be better examined using the framework (Béland, 2015), while the multiplicity of factors impacting (or impeding) LG's ability to deliver healthy planning and active living initiatives (King et al., 1999, p. 39) makes a framework sensitive to complexity not just valid, but necessary. Of particular relevance, Hoeijmakers et al. (2007, p. 115) use MSA to examine 'the drivers and barriers of health policy development at the local level', though they do so in the Netherlands.

As discussed in Chapter 2, there is a need to adopt theories and frameworks that bridge the theoretical gap between the health and built environment professions that currently exists. Additionally, Australian researchers Jennifer Kent et al. (2011, p. 59) criticise analysis in the field, identifying that 'research to date generally fails to articulate frameworks to explore … policy mix and the synergies between actors influencing health and the built environment' and that 'economic, political and popular agendas must be pieced together alongside scientific evidence to effect change'. Research and literature on the socio-ecological determinants of health (see Section 2.6) has been criticised for not employing recognised policy theories, and healthy planning advocacy has also been criticised whereby 'there is a general lack of appreciation for the role of policy analysis and a misguided belief that advocacy based on evidence alone is sufficient to move an issue to the policy agenda' (Embrett & Randall, 2014, p. 154). Yet to-date, no well-established theory has seen widespread adoption in healthy planning research (Kurko & Holden, 2012). The flexibility of the MSA lens, noted applicability to both fields (including origins in comparable fields of health and transport policy) (Kingdon, 1984; Rawat & Morris, 2016), and relevance to issues where there is ambiguity as to responsibility (a setting Hoeijmakers et al. (2007) term a fuzzy domain) make MSA an appropriate choice in addressing this gap. Studies employing MSA also commonly use qualitative methods, particularly interviews, that are common to healthy planning research and which are used in this study, as discussed below.

3.2 Research Methods

This section examines the specific methods adopted in this study. Table 1 illustrated the structure of the research undertaken including the contribution of each publication in the research question and research objectives, and the methods applied in doing so. A multi-method approach, covering literature review, document analysis, surveys, semi-structured interviews and cases, is adopted with qualitative data collection and qualitative data analysis undertaken. The literature review informed the first research objective, while surveys and interviews undertaken using a MSA approach as well as document analysis helped in meeting research objectives two and three. The findings from this qualitative research undertaken as well as cases then formed the basis for the subsequent papers in addressing research objective four. These methods are described in the following subsections.

3.2.1 Literature Review

The narrative literature review undertaken (for instance, see Green, Johnson, & Adams, 2001) informed the first research objective in defining key concepts of the research and examining who is responsible for the delivery of healthy planning and active living initiatives. While generally limited to academic publications (Green et al., 2001), the narrative literature review undertaken as part of this study also extended to grey sources (for instance, see Pappas & Williams, 2011), necessitated by the need to address the first research objective and the relatively limited academic investigation focused on the implementation of healthy planning and active living initiatives (see Section 2.5). This was also made possible through the adopted iterative research design. The inclusion of grey publications in the narrative literature review is considered appropriate given this had been the case in previous research. For example, scoping reviews (such as Pham et al., 2014) include grey literature in their scope and so do previous literature reviews on healthy built environments (such as Kent et al., 2011). A common criticism of narrative literature reviews is that they reflect the biases of the author, however this can largely be overcome by adopting appropriate literature review techniques (Green et al., 2001).

With this in mind, and as discussed in Chapter 2, the scope of the literature review undertaken as part of this research was limited to physical activity, identified by Jennifer Kent and Susan

Thompson (2014) as one of the three domains through which the built form influences health. Studies from across the globe were included in the scope, however only materials written in English were considered. Where interview or survey respondents identified materials originating from outside Australia, they were also considered against the literature review scope (refer also Section 3.2.2, below). Secondly, materials identified in the literature review were screened, using the title of the article and abstract of the article. Where papers or grey sources were identified that related primarily to one of the other two domains (healthy eating and connected communities) they were excluded from the analysis. Lastly, materials were assessed in detail for their inclusion in the review. Although unsystematic (Green et al., 2001), narrative literature reviews allow for a summation of existing work in the field and for identification of gaps in previous research (Grant & Booth, 2009). The findings of the narrative literature review are primarily presented in Publication 1 and this exegesis (refer to Chapter 2).

3.2.2 Document Analysis

Iterative analyses of documents and relevant guidance and research relating to healthy planning and active living were undertaken and informed Publications 1-3 in identifying both barriers and enablers. Document analysis was conducted in addition to the narrative literature review (refer to Section 3.2.1, above), and included key documents such as policies that were identified by respondents (in either the surveys or interviews undertaken, refer to Sections 3.2.3 and 3.2.4, below). These documents were analysed iteratively, immediately upon receipt if returned with the surveys or simultaneous to the analysis of the interview transcripts. The scope of the document analysis was limited to Australian sources only. However, it is noted that no internationally sourced material was provided by respondents in surveys or referred to in interviews that had not already been identified through the literature review process (refer to Section 3.2.1, above). The Australian sources were analysed using the coding software NVivo 11, which provides an analytic aid and data management tool in the process of analysis (Zamawe, 2015). Document analysis is an effective way to triangulate data collected via other methods (including those below) (Bowen, 2009), and has been previously been applied in examining both local health policy and the policy setting of LG (Hoeijmakers et al., 2007).

3.2.3 Surveys

Qualitative, open-ended surveys (see Fink, 2003) comprising seventeen questions were distributed to LG practitioners in Australia and informed Publications 1-2 in identifying both barriers and enablers. Surveys present a suitable data collection tool (Neuman, 2014) that addresses the difficulties identified in reaching LG practitioners targeted in this research, including time constraints and no formal way for them to complete the surveys on behalf of their LG. Surveys have successfully been used in reaching Australian LG practitioners previously (Lawless et al., 2017).

Purposive sampling (see Neuman, 2014) was employed whereby Heart Foundation cases (National Heart Foundation of Australia, 2014a, 2015a) and the Healthy Spaces and Places case studies (Healthy Spaces and Places, 2012) were used to identify recent (within the last ten years) examples of successful healthy planning and active living initiatives across Australia. Cases noted in these resources were excluded where they were not recent (i.e. where they were not initiated within the last ten years), where they did not relate primarily to healthy planning and/or active living promotion (as defined for this research in Chapter 2) (e.g. healthy food initiatives) or where a stakeholder other than LG undertook the project. Refer to Appendix A1.1 for a summary of survey participant characteristics and Appendix A1.4 for a sample survey questionnaire.

Data in the form of survey responses were analysed in Nvivo 11 coding software, with sensitising concepts applied in initial analysis (Thornberg, 2012). This helped to avoid imposing the MSA lens on the data. This was important given MSA has not been widely used in the healthy planning and active living field to-date, particularly in Australia (see Section 3.1). Hence, the suitability of the lens was informed iteratively by the data collected. Using sensitising concepts, where data produce valuable ideas they can be further pursued by the researcher (Faulkner, 2009), especially valuable if an iterative approach is adopted.

Survey data were collected until data saturation occurred (for instance, see Hennink, Kaiser, & Marconi, 2017), at which point additional information (subsequent rounds of survey distribution) was not considered necessary to provide added results or improve their accuracy

(Carter & Little, 2007). Data saturation was understood to have occurred as (1) the second round of survey results did not add significantly to the number of codes generated after the first round of survey distribution (indicating that 'code saturation' had occurred), and (2) the second round of survey results did not add significantly to the understanding of ideas that were coded after the first round of survey distribution (indicating that 'meaning saturation' has occurred) (Hennink et al., 2017).

3.2.4 Semi-structured Interviews

In-depth, semi-structured interviews were undertaken with healthy planning and active living advocates and informed Publications 1 and 3 in identifying both barriers and enablers. Purposive key informant sampling was employed initially whereby cases and participants are selected according to, and to meet, the aims or objectives of the research undertaken and to show different aspects of the same issue through the multiple case study approach (Carter & Little, 2007; Creswell, Hanson, Clark Plano, & Morales, 2007). Participants then contributed to subsequent snowball sampling through suggestions of potential additional interviewees (Palinkas et al., 2015). Interviewees were selected based on their professional employment in Australia, and a demonstrable, recent contribution to both practice and the public discourse on healthy planning. Semi-structured interviews were combined with MSA to examine local health policy development (Craig et al., 2010), as well as in Australian studies analysing healthy planning at the LG level (Allender, Gleeson, et al., 2009; Allender et al., 2011) and research into barriers and enablers to policy settings to reduce obesity (Dodson et al., 2009).

Semi-structured interviews allow for relevant points to be examined in greater detail as they arise during the conversation and the iterative approach to data collection allowed for early answers to inform subsequent questioning (Edwards, 2013). In all, twenty-eight interviews were undertaken. Refer to Appendix A1.2 for a summary of interview participant characteristics and Appendix A1.3 for a summary of interview questions. Following the initial transcription, transcripts were returned to the interviewee for examination of the data, to ensure accuracy, make any necessary amendments and importantly to allow any further information or knowledge to be added (Baxter & Jack, 2008). Similar to the analysis of the surveys outlined above, NVivo 11 was used to code the transcripts and MSA was applied as a sensitising concept

(Blumer, 1954; Bowen, 2006) and part of an abductive approach to analysis. An abductive approach lies between induction and deduction, and involves moving 'back and forward between data and pre-existing knowledge or theories', searching for the best explanations and interpretations (Thornberg, 2012, p. 247). Using an abductive approach to data analysis, theories do not test hypotheses, but instead act as a starting point for patterns and themes to emerge (Kennedy & Thornberg, 2017; Thornberg, 2012). Such an approach allows for and encourages data collection and analysis to occur simultaneously (Carter & Little, 2007) which aligns with the 'linear but iterative process' of information gathering and analysis adopted for this study (refer to Table 1) (Yin, 2014, p. xxii).

Similar to survey data as discussed above (see Section 3.2.3), interviews were undertaken until data saturation occurred, at which point additional data (subsequent interviews) were not considered necessary to provide added results or improve their accuracy (Carter & Little, 2007). The American global health researchers Hennink et al. (2017, p. 605) note that data saturation can be broken down into 'code saturation and meaning saturation', whereby 'code saturation may be reached with few interviews as it provides an outline of the main domains of inquiry, but further data are needed to provide depth, richness, and complexities in data that hold important meaning for understanding phenomena of interest', or meaning saturation. Results from analysis were therefore considered against these two types of data saturation. Data saturation was understood to have occurred as (1) interviews ceased to add significantly to the number of codes generated (indicating that 'code saturation' had occurred), and (2) interviews ceased to add significantly to the understanding of ideas that were coded (indicating that 'meaning saturation' has occurred) (Hennink et al., 2017).

3.2.5 Cases

The use of cases allows for current phenomena to be examined (Yin, 1981, 2014) and is commonly applied in healthy planning and active living research (Allender, Gleeson, et al., 2009; Kent et al., 2011) and when a MSA framework is employed (Kingdon, 1984). The cases used in Publication 4 were purposively selected (Carter & Little, 2007) based in one instance on the definition of coastal community and in the other given noted success in implementing walkable and bikeable settings, and also on the author's familiarity with each example (Palinkas

et al., 2015). Surveys (refer to Section 3.2.3) were based on pre-defined cases identified in the guidance used as sources for their distribution (Healthy Spaces and Places, 2012; National Heart Foundation of Australia, 2014a, 2015a). Examining cases using multiple evidence sources allows for the triangulation of data (Rossman & Wilson, 1985) as generalisable findings can emerge from examining a series of examples (Stake, 1978).

This chapter outlined the research design and theoretical underpinnings of the thesis, including MSA, and the methodologies employed. An overview of the research contribution of each paper with regard to the research objectives of the thesis, as well as the used methodologies was also provided. The next chapter presents a summary of each of the five publications and examines in greater detail their contribution to knowledge generated through this research.

4. SUMMARY OF RESULTS

The research undertaken as part of this thesis set out to establish reasons for the slow uptake and implementation of healthy planning and active living 'on the ground', and ways this could be overcome. As discussed in Section 1.1, the research objectives of this research are as follows:

1. Conduct literature review to define healthy planning, healthy urban design and active living initiatives, and to identify who is responsible for their delivery.

2. Undertake surveys and interviews with healthy planning practitioners and advocates to determine the barriers to uptake and implementation of healthy planning and active living initiatives.

3. Undertake surveys and interviews with healthy planning practitioners and advocates to determine factors that enable the uptake and implementation of healthy planning and active living initiatives.

4. Identify ways in which enablers could be better utilised to encourage the planning and production of health-promoting environments, particularly with regard to relevant barriers.

Publications 1 – 5, and their respective contributions to addressing the above research objectives, are summarised below.

4.1 Publication 1 - Planning for health: Barriers and enablers for healthy planning and design at the local government scale

McCosker, A. (2017). *Planning for health: Barriers and enablers for healthy planning and design at the local government scale*. Paper presented at the 10th Making Cities Liveable Conference, Brisbane, Qld: Association for Sustainability in Business Inc.

Abstract

The rise in prevalence of various 'lifestyle diseases' or noncommunicable diseases has been associated with an overall decline in the walkability of Australian cities since the second half of last century. This has implications for Australians' health and lifestyles, and there are increasingly louder calls for upstream or preventative community health measures rather than a predominantly treatment-based approach. One such way this might be (and is currently being) addressed is through urban planning and design initiatives.

This paper firstly adopts a socio-ecological perspective to examine the role of the various scales of governance and government in the Australian urban planning context. In taking such an approach the importance of local governments as significant shapers of and stakeholders in the built environment becomes apparent, and so, by extension, does their role in providing environments that enable and promote community health. Additionally, a multiple streams analysis (MSA) is adopted to examine the agenda-setting process regarding healthy planning and design at a local scale. MSA enables conceptual analysis of policies and politics associated with a particular problem (such as prevalence of lifestyle diseases) and presents a novel conceptual framework for use in Australia and at the local government scale.

Data from surveys undertaken with built environment professionals and from interviews with advocates of healthy planning is then explored, allowing for an outline of barriers and enablers for healthy urban planning initiatives at the local government scale to emerge. This knowledge, particularly how the framing of the lifestyle disease 'problem' and prevailing policies and politics can act as either barriers or enablers to healthy planning and design is hoped to be transferrable and of relevance to health or urban planning practitioners and healthy planning advocates across Australia, and particularly those operating at a local governance scale.

Findings

The role of LG in Australia is examined using the socio-ecological perspective, with the primary roles that LG performs found to be based on or affect considerations that in turn impact on community health. These include 'general public services, education, health, welfare, recreation and culture, housing and community amenities, transport and communications, economic

development, natural resource management, planning and development, and control or regulation of building and subdivision' (Williams & Maginn, 2012, p. 39). Each of these roles then places LG in an important position to promote active living (as demonstrated in Table 1 in Publication 1). This establishes a clearly defined role for LG currently and into the future in addressing community health in Australia by increasing opportunities for physical activity. The role of LG in addressing these matters is also noted to be broadening (Pettman et al., 2013), presenting both a challenge and opportunity for LG (Jolley & Barton, 2015).

In terms of policy barriers and enablers, the presence of suitable and well-developed existing options is found to be negated by systems that do not allow for these to be regularly implemented, with governance frameworks failing to provide an imperative for implementation and leading to one-off efforts rather than a more sustainable approach. Project implementation can occur where champions are present, however the policy framework is currently insufficient to facilitate the consistent and sustainable delivery of healthy planning and active living initiatives. More integrated governance is a way this ad hoc implementation might be overcome. The very nature of healthy planning and active living initiatives, given such a complexity of compounding and interrelated factors and the need for contextually responsive implementation, means that despite adequate guidance and policy options, there is no one-size-fits-all guide (like there might be for, say, crime prevention through environmental design (CPTED) (see, for example, Kent & Wheeler, 2015)). Tensions therefore exist between the potential benefits of an overarching, one-size-fits-all policy solution that might see wider uptake (and enforce wider uptake) and the realities of healthy planning as a multifaceted and amorphous concept (refer also to Section 2.3) that must be implemented in accordance with local settings and community contexts, needs and desires.

In terms of political barriers and enablers, responsibility transfer (generally between levels of government) acts as a barrier regardless of whether it is really happening, or simply perceived to be happening (as the perception of it happening also disenfranchises stakeholders and practitioners, discouraging action). However, champions can in most cases overcome these concerns, and play a key role in placing healthy planning at the centre of LG's role, creating a mandate for action. Champions are regularly engaged through partnership building, and so partnerships are identified as a key enabler. Partnerships also provide funding opportunities that facilitate implementation.

Promotion of improved community health through physical activity is a politically viable concept, yet details as to how this might be achieved 'on the ground' through healthy planning and active living initiatives is considered to be less so, and so such details are commonly avoided, even by advocates and supportive practitioners. This leads to an avoidance of details including in proposed policies and the thinking that such change is not on people's radar or the fear that implementation might be unpopular arguably acts as a barrier in its own right. Politically-driven spending decisions are also a barrier to implementation, with state governments seen to be hesitant to reapportion even a small percentage of health budgets towards preventative health, and wariness by LG in undertaking healthy planning and active living initiatives given budgetary concerns.

The way a project is framed can also determine its likelihood of uptake. If a project is framed as being part of the urban planning process or as contributing to multiple positive benefits this acts as an enabler, yet when it is framed as an extra (optional) add-on this acts as a barrier and can cause initiatives to be seen to be prohibitively costly. Co-benefits – either where community health is improved through increased activity levels as a result of projects with a different focus, or where projects with an active living focus have other (such as economic) benefits – also act as enablers. Where projects are framed as being central to LG functioning and responsibilities, they can be implemented at the LG scale, even where the legislative setting is not fully supportive of such initiatives.

Discussion

A negative inertia is noted to affect urban planning practice generally, given relatively slow implementation of initiatives. Yet champions, partnerships and the careful framing of the problem can all create positive inertia for projects. These matters also assist in overcoming the barrier of responsibility transfer (whether real or perceived) to a certain extent. A contradictory scenario is evident whereby LGs are apportioned significant (and increasing) responsibility in the delivery of health promoting environments yet are not allocated funding, training or resources commensurate to this increased responsibility.

The role of individual champions, the need for LG to form partnerships with external stakeholders, and the importance of problem framing are all drivers of project implementation, however these present short-term enablers only. They convey an overreliance on individual actors in the place of more systemic measures that could encourage or enforce the consideration of and delivery of healthy planning and active living initiatives. Political attention and problem framing are key determinants in project success, at the expense of preferable methods such as evidence-informed policy, particularly now that a sound research base is available. Issues then arise regarding a lack of equitable and data-led project delivery, which in turn presents a setting not currently conducive to the sustained undertaking and delivery of such initiatives.

4.2 Publication 2 - Barriers and Enablers to Planning Initiatives for Active Living and Health

Abstract

The response of local government (LG) to issues of rising rates of noncommunicable diseases (NCDs) is an important one given their roles as place managers. This article explores the experiences of LG built environment and community health practitioners to identify barriers and enablers to the implementation of healthy planning and associated active living promotion efforts. The role of Australian LG in community health is presented, followed by findings from practitioner surveys and policy analysis undertaken, with subsequent discussion of the barriers and enablers. Six key enablers and barriers to successful project implementation were identified: (1) internal LG functioning, (2) the promotion of co-benefits, (3) partnerships, (4) the value of recognition and good news, (5) placing a mandate for action on LG and (6) funding and resourcing.

Findings

Six key considerations acting as barriers, enablers, or both to project implementation are commonly identified by LG practitioners, namely: internal LG functioning, the promotion of

co-benefits, partnerships, recognition and good news, a mandate for action on LG and funding and resourcing. The first, internal LG functioning, can act as either (or both) a barrier or enabler, however was noted as an enabler in every instance of implementation. Limited practitioner knowledge around community health promotion through healthy planning and active living projects, as well as siloed operations of LGs are key barriers in this regard. However, these are able to be overcome where there is active uptake of healthy planning ideas from staff, and where efforts are made to form partnerships (either between departments of the LG, or with an external stakeholder), which result in better functioning of the LG in project delivery. The structure of the LG and its day-to-day functioning, as well as local governments seeing community health as being a responsibility shared amongst departments and roles also increases the likelihood of project uptake. The existing policy framework is an important consideration in the likelihood of implementation, however more importance is placed by practitioners on general objectives and the strategic direction of a LG, rather than any singular policy that facilitates healthy planning.

The second consideration identified is the promotion of co-benefits, which acts as an enabler. Co-benefits of projects relating to economic or built form benefits are central considerations in their uptake, and were more commonly referred to than community health benefits. Most commonly, examples were driven by economic or built form reasons, with health improvement as a co-benefit. The other scenario, whereby projects initiated primarily for community health benefits are enabled by consideration of other co-benefits, is less common. A range of improved social outcomes also result from projects, but such benefits are most commonly identified as co-benefits to primarily built form or economic-driven projects as discussed above.

The third factor is partnership formation, which acts as an enabler. Partnerships are a common way for LGs to overcome siloed functioning and other barriers. However, partnerships appear to form opportunistically given practitioners and LGs generally do not have a consistent strategy around which to build partnerships. Nevertheless, practitioners recognise the value of partnerships in this field, and are keen to position their LG as being open to engaging in partnerships with external stakeholders. Instances of LGs partnering with state or federal levels of government are less common than instances of internal or local partnerships.

The fourth consideration is the value of recognition and good news, which act as enablers. Good news and positivity surrounding projects mean that they are generally seen to be politically

viable, and the benefits of such can be claimed by everyone at the organisation (improving project buy-in). Rather than presenting as a driver at the start of projects, good news and positivity associated with projects are more commonly a subsequent consideration that can create positive momentum around healthy planning in a LG, and is more likely to be considered by those operating in the political sphere.

Fifth is the mandate (or lack of mandate) placed on LG for action, which can act as a barrier or enabler. Uncertainty from professionals or the public over LG's role and responsibility in shaping community health through increased active living opportunities acts as a barrier to implementation, while the positivity created by projects and placing community health at the forefront of its role assists project uptake. The traditional role of the state government in providing more clinical health services leads to a questioning of LGs role in improving community health through healthy planning and active living initiatives. A way to overcome such concerns is to frame LG's role through a socio-ecological perspective, which leads to its current functioning to be seen to be health promoting (or having the opportunity to be such) (refer also to Publication 1).

The final consideration is funding and resourcing, which can act as either a barrier or enabler. This consideration is tied closely to practitioner concerns over responsibility transfer and compounds other barriers such as those mentioned above. On the other hand, funding encouraged project uptake and implementation, however is generally irregular, discouraging more sustainable uptake and implementation.

Discussion

Siloed operations of LG do not expressly prohibit project implementation, as some identified enablers allow silos to break down, improving LG functioning and ability to deliver projects in the process. Similarly, healthy planning guidance and policy provide a strategic direction only, and so can easily be overlooked, yet this too can be overcome, particularly where co-benefits are employed to tie a project to an issue that a LG does have stronger policy on (such as economic development).

While the current evidence base is considered appropriate amongst practitioners, it is difficult for LGs to meaningfully monitor the effects of single projects or small-scale interventions. The complex relationship between changes made to the built environment and their effects on community health plays a role in this, as does the limited funding generally available to LGs in the current setting. Discussion around more general project success, such as participation rates, is an example of this, where other more in-depth research might include longitudinal results and monitoring of disability-adjusted life years (DALYs), body mass index (BMI) and other commonly used indicators of health across populations. Yet attaining such results presents obvious difficulties for LG. This places greater importance on discussions around co-benefits, where the global evidence base is perhaps less scrutinised and there is less of a concern over the need for local evidence (for instance CPTED principles are generally considered applicable across Australia) and around walking and cycling (physical activity) over the more general concept of community health (see Section 2.3). Consideration of co-benefits and physical activity participation rates allow for more immediate impacts of projects to be conveyed, as opposed to the more general concept of community health, which is less easily defined and measured, and where benefits of projects to indicators of this broad concept can take decades to emerge.

Consistent with the existing literature in the healthy planning field, partnerships are a way by which the 'wicked' problems of community health can be addressed through healthy planning and active living initiatives. Partnership formation helps LGs respond to complexity, yet also contributes to the complexity in which LGs must deliver healthy planning and active living initiatives. A further consideration is the framing of problems, particularly relevant to healthy planning given its apparent boundary problems, whereby no single organisation is responsible for providing healthy urban environments and where the mandate for LGs to act in this space can be (and commonly is) questioned by the community, LG practitioners or those operating at the state government level (see also Section 2.4). Framing LG as having importance in influencing community health, particularly with regard to active living, is a significant enabler to project implementation.

Additionally, funding can present a barrier to projects in two ways. A lack of direct funding for preventative health initiatives aimed directly at improving community health through increasing opportunities for active living (such as when considered as a proportion of overall state health

budgets) will clearly limit the possibility of projects being undertaken. However, limited funding to LG generally in Australia also impacts their operation and ability to deliver projects. While innovative ways for LGs to fund projects such as through partnerships or sponsorships are evident, this setting ultimately reflects a more pervasive issue whereby health inequalities might be reinforced as project opportunities become available to some LGs (and often to some specific areas within those LGs themselves) while other LGs and areas do not receive such opportunities. Health funding at the state level in Australia (generally oriented heavily towards clinical health care over preventative measures or community health) is provided through well-established measures and processes, presenting a clear contrast to the arrangements (or lack of) for funding at the LG level for healthy planning and active living projects.

The above presents various structural barriers to project uptake, which then necessitates individual practitioners to engage in matters of politics and problem framing to encourage implementation. This indicates that LGs have not yet fully adopted the processes, policies and actions required to systemically and equitably deliver healthy planning and active living initiatives, however factors outside the control of LG also influence project uptake and distribution.

4.3 Publication 3 - Policies, Politics, and Paradigms: Healthy Planning in Australian Local Government

Abstract

Local government in Australia is critically positioned to provide built environment initiatives that respond to the increasing prevalence of non-communicable diseases (NCD), climate change, and various other human and ecological health considerations. However, action on the ground has not been as widespread as might be expected, particularly in improving community health. This research explores the barriers to and enablers of the implementation of healthy planning and active living initiatives through in-depth interviews with healthy planning and

active living advocates. Advocates are seen to promote healthy planning in relatively weak policy settings, where politicised, largely reactive decisions by individual politicians or practitioners are the main determinants of project success. The most important factor affecting project uptake and implementation is how the 'problem' of healthy planning, or what might be considered a healthy planning paradigm, is presented. Such a paradigm includes a strong reliance on the co-benefits of projects; it is also subject to the way that healthy planning is communicated and framed. Potential problems around such a setting are subsequently examined, identifying the potential reasons for the slow delivery of healthy planning.

Findings

Healthy planning and active living advocates identified that neither the policy setting nor the political considerations are a prohibitive barrier or absolute enabler to projects. Instead a healthy planning paradigm, or a particular way that healthy planning is framed and communicated using particular techniques, plays a disproportionate role in determining whether such initiatives are adopted, as discussed below.

Policies

State-level policy impetus is seen by advocates to have a greater impact than community (bottom-up) or LG-produced policy, as state-led policies have the potential to be more widespread. In Australia, states also have a longstanding and well-defined role in both the health and urban planning fields, and LG's role also relies heavily on state policy given the country's governance setting. This reliance is prohibitive to project implementation where the state policy setting – either with relation to urban planning or health – is unsupportive. State legislative and policy settings have generally become more supportive recently, however this still does not ensure project uptake and success. The value of supportive state policies is seen to lie in their ability to be referenced by champions in encouraging project uptake, and such policies can also inform the LG policy setting.

Despite this, there remains importance in the way LG delivers healthy planning and active living initiatives on the ground, regardless of the state setting. Therefore, when state policy is discretionary, is not mandatory, lacks specificity or fails to produce a clear mandate for action

by LG, this reduces the likelihood of successful implementation. While stronger state legislation might assist project uptake, the difficulty in producing and implementing such policies given the need for contextually-specific solutions makes this a challenging task. State government policies also influence the functioning of LGs more generally including through financing, a mandate for community engagement (which could, depending on constituents, present a demand for healthy planning delivery) and the ability for states to override decisions regarding urban planning and the built form in numerous instances, which can also be prohibitive.

Local government policies also play a role in project uptake, such as public health plans being selectively used to support projects in an ad hoc manner. However, the creation of a supportive policy framework within LG (more likely to generate sustainable project implementation) generally falls to individuals and groups advocating for such in one-off efforts. Politicised decision making and siloed operations between statutory and strategic arms of LG also present barriers.

Research and guidelines are the two most commonly identified sources of knowledge transfer and dissemination relating to healthy planning. The current state of research in the field provides an adequate level of evidence to support decision-making with regard to relationships between the built form and physical activity levels as well as with regard to project efficacy. However, advocates note concern by other stakeholders over the applicability of the international evidence base to an Australian setting. Related to this, advocates themselves are concerned that policy in Australia is not being informed by this international evidence base. Project implementation can help to address these concerns over applicability, in providing data and evidence to support (current and future) projects. There is sufficient existing guidance in the field, but the concern amongst advocates is the lack of implementation on-the-ground. Potential reasons for this lack of implementation include difficulties in interpreting and dispersing the guidance in meaningful ways that reach the necessary professionals and decision-makers.

The existing policy setting acts as both a barrier to and enabler of healthy planning and active living initiatives, however relevant policies alone do not guarantee implementation of projects. Instead, individual efforts and ad hoc interpretation characterises the policy setting, with advocates or special interest groups playing a key role (refer also below).

Politics

The lack of policy-driven mandate to undertake healthy planning and active living initiatives preferences ad hoc implementation of such projects over decisions and implementation backed up by the evidence base. This causes a reliance of projects on politicised decision-making, which can be an enabler, where champions are active in advocacy, or more commonly presents a barrier, where political whim precludes evidence-based decision-making. Projects are therefore heavily reliant on champions (or policy entrepreneurs) and partnerships.

The politicised decision-making setting can create some opportunities for implementation, such as the appeal to community (and so politicians) of general benefits of projects, including 'health' and 'well-being'. Yet advocates consider healthy planning to be viable if specifics regarding implementation are avoided, and the long-term timeframes across which healthy planning comes to be adopted and implemented (and shows benefits) sits at odds against shorter-term political cycles and plan creation. Similar to the policy setting, though the political setting can be both a barrier to and enabler of healthy planning and active living initiatives, this consideration alone does not guarantee implementation. A healthy planning paradigm, discussed below, emerges as a central factor in project uptake.

The Healthy Planning Paradigm

The discussion of co-benefits in encouraging project uptake is an enabling factor, yet is the result of the weak policy setting identified above. Economic and political benefits are the most common drivers of projects, rarely are considerations of community health central drivers. In some cases, health is not even mentioned, in a tactic dubbed 'health by stealth' by advocates. Such an approach employs other, more politically viable considerations to support project uptake, without mentioning health.

In the lack of a strong policy setting or one-size-fits-all guidance as to successful implementation, the healthy planning paradigm relies heavily on communication between stakeholders and framing also plays an important role in this paradigm. A desire by advocates to create a common advocacy message is not being met (and is perhaps unlikely to be) given a lack of consensus regarding the best way to encourage healthy planning. Advocates vary in their

approaches: for some healthy planning is best promoted by framing it as part of good urban planning; for others, it remains an extra add-on to be considered on a case-by-case basis; while there are also people questioning the need to mention health in advocating for changes that will nevertheless improve community well-being. Framing healthy planning as being 'extra' to key considerations presents a barrier to its uptake. However, health can be framed as a central basis around which urban planning operates and an objective towards which urban planning strives. Alternatively, the very need to raise the community health benefits of healthy planning and active living projects is questioned by some, with more appealing or contextually relevant factors considered more viable in supporting projects.

Discussion

The prevalence of NCDs is seen as a 'problem' in Australia. However, the government response has been comparatively slow and weak compared to responses to other community health concerns.

Implementation of projects at the LG level is influenced by the state level such as through previously identified factors like the policy setting and resource and budget allocation. Yet while a supportive legislative setting for LG (most commonly from the state level) is desirable, it is not enough by itself to ensure LG uptake and success in project implementation. Additionally, LGs attempting to undertake healthy planning and active living initiatives face a barrier whereby state governments in many cases provide limited supportive legislation or detailed requirements for project implementation. Yet where LGs attempt to undertake healthy planning, such efforts can be mitigated by the states. In response, these barriers might be overcome through more detailed state legislation, or greater urban planning powers being provided to LG. The efforts of advocates can overcome, and perhaps are even more influential than, non-supportive policy settings, and advocates generally consider that other factors than the policy setting hold more influence over project uptake and implementation.

The ad hoc policy setting causes politicised decision-making and partnership formation; however, the reverse is also true. A lack of evidence-led decision-making and a reliance instead on individual champions whose success depends more on political popularity is a barrier to healthy planning. Further, while concepts of healthy planning are seen to be politically viable,

the avoidance of details regarding implementation is problematic in that it assumes communities are unwilling to accept such changes, whereas evidence increasingly suggests these changes are popular amongst and desired by the community. Concerns over the political appeal of projects is a likely cause of policies that lack more comprehensive details on the implementation of projects. This presents a barrier to implementation, might explain the relatively weak state legislative setting for healthy planning currently in Australia, and reflects previous findings regarding LG (Kent et al., 2018).

The adoption of healthy planning guidance into practice has been slow, increasing the importance of the way such urban planning is framed. Projects can be framed to be a vital component of urban planning or as involving extra work (refer also to Publication 1). Another approach is health by stealth, which is closely linked to the use of projects' co-benefits. The healthy planning paradigm demonstrates issues in the field that are yet to be resolved, including contestation over place management (Kent et al., 2011) as well as differing ways advocates frame and encourage this (Harris et al., 2015). The need for the use of health by stealth and discussion centred around co-benefits shines a light on structural barriers to healthy planning and active living initiatives – the perception of an insufficient evidence base (despite, for instance, the study by Kent et al., 2011), the fear that such changes will be unpopular and an unsupportive policy setting given co-benefits in many cases move the focus of projects to where there is a greater policy mandate. Local evidence has great value for LG in this field, but obtaining it is difficult. Evidence of successful implementation that involves cost-benefits comparisons, cases of effective decision-making, and studies which consider the full range of co-benefits provided by a project can address an identified barrier. This includes the difficulty in getting causal evidence regarding changes to the built environment as well as the impacts on health, in a contextually applicable setting. Communication is a crucial component of the healthy planning paradigm and the importance of advocacy and research translation is an enabler to projects. The role of partnerships is widely acknowledged in this field (Giles-Corti et al., 2015; Giles-Corti & Whitzman, 2012; Thompson & McCue, 2016), and findings align with this knowledge. However, partnerships are also a response to the weak policy setting outlined above, and the need for decisions to be supported politically for them to succeed.

The most commonly identified types of communication typical of the healthy planning paradigm are from LG to the community, from non-governmental organisations (NGOs) to LG,

and from regional actors to LG. Given in this research the NGO and regional actors were generally community health-related organisations and given LG's role as a place manager, this indicates an important flow of advocacy from the health to the built environment profession, supporting the previously noted importance of communication between the professions (Paine & Thompson, 2017; Thompson & Kent, 2016).

A further barrier identified, and one not regularly recognised in the literature given its amorphous nature, is time. Changes in legislative, built form and community health benefits through increased activity levels occur in the medium-to long-term. This sits at odds with a field in which success is based largely around political considerations and short-term results (Harris & Wills, 1997), and in turn discourages projects. It is another reason why the healthy planning paradigm is central to project uptake and implementation.

4.4 Publication 4 - Toward a framework for walkable and bikeable coastal Australian communities

McCosker, A. (2017). Toward a framework for walkable and bikeable coastal Australian communities. Paper presented at the State of Australian Cities Conference, Adelaide, SA.

Abstract

Australia demonstrates a unique spatial pattern whereby approximately half of the population resides within seven kilometres (and eighty-five percent within fifty kilometres) of the coast, and eighty-nine percent live in areas defined as 'urban' but that have a relatively low population density. This differs notably from the geographies evident of (predominantly) European and North American cities that form the basis for most theories, concepts and best-practice cases surrounding the creation of supportive environments for walking and cycling. Indeed, much criticism regarding such concepts being adopted in Australian settings (and uncertainties by advocates on the transferability of these ideas) centres on these contextual differences, particularly if they are viewed as being prohibitive barriers.

With this in mind, this paper draws on census data as well as existing literature on coastal Australian communities and on the 'downscaling' of broader urban planning concepts to smaller

metropolitan areas to identify some key characteristics of 'Australian coastal communities.' This framework is then used to examine concepts of walkability and cycling-friendly environments, comparing the Australian coastal communities of Port Macquarie (NSW) and the Sutherland-Cronulla region (NSW) to Portland, Oregon (USA), Amsterdam (the Netherlands) and Copenhagen (Denmark). This allows for concepts of creating supportive environments for cycling and walkability from Europe and North America that are also applicable to an Australian coastal community setting to be identified. It also allows an initial exploration of where comparable ideas might be adapted to an Australian context, and where the Australian coastal context might represent opportunities to extend existing concepts further.

Findings

Key characteristics of walkable and bikeable urban environments have strong similarities to those characteristics of healthy neighbourhoods and could form the basis to changes made as part of a health by stealth approach. Such characteristics are identified in the literature (Ewing & Cervero, 2010; Ewing & Handy, 2009; Matan, 2011b), and include:

- Use/network: Use relates to the number of people that use a network and the network includes design considerations of the active transport linkages available and the extent of these linkages;

- Barriers: Relates to accessibility levels of the network for all users;

- Intersections: Relates to the safety of intersections and the use of intersections as indicators of connectivity;

- Public transport: Relates to proximity and service quality of public transport options available in the locality;

- Land use: Relates to densities and mix of uses;

- Enjoyment: Relates to accessibility of spaces to the public, the quality of spaces including their character and interest, the number of people using these spaces and how spaces are used;

- Streetscapes: Relates to the experience of the pedestrian/cyclist and includes dimensions of buildings and the relationship between the street and lower level facades of buildings;

- Infrastructure: Relates to pedestrian and cycling infrastructure as well as the availability of public open spaces. Similarities to 'network', as discussed above;

- Comfort: Relates to pedestrian conditions such as traffic and noise levels, maintenance of infrastructure and the weather of a locality;

- Safety: Relates to activity levels and the extent of mixed uses that allow for passive surveillance opportunities as well as protection from motorised vehicles and other crime prevention through environmental design (CPTED) considerations;

- Vehicle traffic: Relates to the extent of traffic calming and traffic speeds in a locality and exposure to traffic;

- Perception of the area: Relates to whether the area is considered safe and pleasant; and

- Social/demographics: Relates to demographics as well as cultural and attitudinal characteristics of a population including perceptions of various transport modes.

This paper also examined the Australian population distribution patterns as well as common attributes of Australian coastal communities. Australian settlement patterns are predominantly located proximate coasts and are also 'urban' in nature when compared to, for instance, north American or European settlement patterns where much thinking on humanistic urban design and heathy planning has come from. At the same time, Australian coastal communities have low densities, are relatively new, are mostly car dependent, have fewer (perceived) diseconomies of scale and are often subject to a single place manager.

Discussion

The characteristics of Australian coastal communities present opportunities for healthy planning (when compared to other north American or European settlement patterns) and might also be a way for health by stealth to be implemented (e.g. associating coastal living as an active lifestyle), specifically as the characteristics identified in the paper with regard to walkable and bikeable communities align closely with the characteristics of healthy communities. Particularly, while the age of the overseas cases in some instances works to their advantages (e.g. in contributing to dense, mixed use, compact streetscapes), it also presents a comparative benefit to those younger Australian communities attempting to provide more health promoting environments. Australian coastal communities demonstrate opportunities for easier retrofit of the urban form than the other north American or European cases, such as through large public road reserves and private lots and generally simple ownership structures (offering greater opportunity for infill development including both higher residential and activity densities) and comparatively simple governance structures. The younger built form and infrastructure will also likely result in reduced project costs if healthy planning projects are undertaken in these settings. Additional, less commonly identified strengths of Australian communities in encouraging healthier lifestyles might be considered a general ease of access to high amenity areas, and climates generally well-suited to (outdoor) active living.

Promotion of active travel (healthy planning by stealth) might centre on the provision of better (active transport) access to the high amenity areas that characterise Australian coastal communities, and their appeal. From a starting point specific to each coastal community this could provide both a way for health by stealth to be implemented, and also provide some advantages for Australian communities over more traditionally walkable, bikeable, or health-promoting places such as in Europe.

Also, while the north American and European cases have inherent advantages (such as European cities with built forms generally conducive to higher active travel rates such as higher densities and mixed-use forms, in combination with a strong culture of active transport), the overseas examples have also demonstrated decisive actions in moving towards provision of more health-promoting built forms. For instance, since the 1960s the exemplar cases have actively taken steps against what was seen in those cities to be a problem of automobile dependence. In

contrast, Australian communities have not taken such strong action and have followed what could be seen as the north American path towards automobile dependence (Newman & Kenworthy, 2015). Another key finding is that an impetus for change can come from positive discussions around which a place's culture can be reflected, and shaped. The European cases particularly exhibit positive built form elements that have been achieved through concerted effort, with the enhancement of the walking and cycling environment further entwining the existing culture of those places with principles of walking and cycling, to the point that the active transport comes to be seen as a characteristic of the city itself. Such a departure from less healthful planning and automobility is yet to be seen in Australian communities.

Australian coastal communities do demonstrate cultures of physical activity, though this generally is recreational based. The overseas cases demonstrate that attitudes can be shifted and a coastal and transport paradigm towards active transport can be developed. The success of the overseas cases has come not just through their inherent built form advantages but also through their focus on accessibility to key places and through long-term and sustained efforts to shift attitudes (for instance, for the case of Copenhagen, see Gehl, Gemzøe, Kirknæs, & Søndergård, 2006). For instance, autocentric planning in the case cities has been addressed generally since the 1960s, and largely overcome, yet in Australia the use of the automobile (and planning for it) has become ubiquitous. The exemplar cases offer other insights for Australian coastal communities that might not always get picked up in the design guidance, which give less weight to contextual transfer of ideas. Similarities are evident most commonly between the overseas cases of the sixties and current Australian cases.

The key contribution of the paper is the outlining of a framework for identifying ways in which healthy planning could be delivered in Australia by identifying contextually specific barriers to a locality, and benefits from comparative advantages to contexts that traditionally have built forms conducive to physical activity such as European cities, or those other contexts that are facing similar challenges, yet where some forms that are being delivered are held as better practice (e.g. north America). The paper also presents a way that health by stealth could be framed to reflect the culture of Australia and allow for contextually appropriate solutions, while also presenting Australian coastal communities (which include the majority of the country's population) as having a form and attributes that present a potential point-of-difference in the promotion of active living through changes to the built form.

4.5 Publication 5 - Implementing Healthy Planning and Active Living Initiatives: A Virtuous Cycle

McCosker, A., Matan, A., & Marinova, D. (2018). Implementing healthy planning and active living initiatives: A virtuous cycle. *Urban Science*, *2*(2), 30. http://dx.doi.org/10.3390/urbansci2020030

Abstract

Factors including internal local government functioning, collaboration and the use of co-benefits have been noted to assist in the uptake of healthy planning policies and projects by local governments. However, less commonly noted is a possible reverse relationship: that implementation of healthy planning projects can contribute positively to organisational functioning and collaboration, and can result in a range of co-benefits that then can be used to support projects. Such a concept is explored in this paper, with a focus at the local government level in Australia. Findings from surveys with local government practitioners and in-depth interviews with healthy planning and community health advocates are presented. The findings indicate four key areas through which the implementation of healthy planning policies and projects and active living initiatives demonstrates a 'virtuous cycle'. These areas include (1) project 'wind-up', or circumstances in which implementation and/or health outcomes exceed initial expectations; (2) improved partnerships that can create opportunities for future initiatives; (3) improved internal organisational functioning; and (4) greater project sustainability. The paper concludes by exploring some possible repercussions of these emerging findings, which indicate that beneficial settings to healthy planning considerations can be a result of as well as a contributor to healthy planning and active living initiative implementation. In turn, this presents another potential co-benefit of project uptake and implementation to those commonly identified.

Findings

Healthy planning and active living initiative implementation demonstrates a 'virtuous cycle' effect through four key processes: project wind-up, partnerships and the improved opportunities for future initiatives these offer, improved internal LG functioning, and the continuation of projects beyond initial timeframes.

Project 'Wind-Up'

The impact of projects can be greater than anticipated within their allotted timeframe. Such benefits include changes to the built environment that provide improved outcomes than planned, or where more funding is released throughout the project. Wind-up can occur through the creation of positive inertia or momentum by a project, which is often achieved through the initial results being noticed by the community (and so driving community demand for the project) or LG councillors or practitioners.

Partnership Development and Opportunities

Another way in which a virtuous cycle can occur is through projects leading to (unintended or additional) partnership formation between external organisations and LG. The two types of partnership development that can occur are linkages between LG and a new partner, or strengthening of existing partnerships through a project. Both types of partnership development create additional, incidental opportunities for improved project delivery or increased likelihood of project uptake in the future. However, the 'unintended' nature of partnerships might be from LG's perspective only: projects are viewed as a key opportunity for LG engagement by advocates and advocacy groups looking to work with and assist LGs in the field. The process benefits advocates given the links they are able to develop and the influence they might then exert, and also LGs which are provided with greater guidance in supporting projects, as well as improved opportunities for future projects.

Improved Internal Organisational Functioning

Implicit or unintended improvements to the functioning of a LG resulting from projects can occur at both the LG and individual practitioner level. For LGs, the existing policy environment commonly becomes the focus through initiatives. Projects can reveal where other LG settings could be improved, such as funding, land use or urban design policies, in addition to highlighting opportunities to improve community health and urban planning policies generally. Projects that begin as one-off initiatives can come to be imbedded in LG policy. Additionally, implementation helps to strengthen the local evidence base around such projects, which can in turn support projects within the LG or at a larger scale (where findings are considered

transferable and applicable). Linked to the above potential policy changes, interdepartmental partnerships can result from projects, and help in overcoming barriers to projects such as siloed operations or the reliance on one champion for success.

Organisational functioning can also improve at the individual practitioner level such as through project uptake and implementation contributing to professionals' skills, understanding of key concepts, and increased support for healthy planning notions. In this regard, projects themselves become tools around which to raise awareness and advocate for future projects.

Sustainable, Ongoing Projects

Benefits of healthy planning and active living initiatives often extend beyond their stated timeframe. The three processes outlined above can lead to projects being extended, or changes that make subsequent project uptake more likely by a LG. This can help to overcome barriers to project uptake and implementation including insufficient funding or ad hoc project implementation.

Discussion

While not explicitly identified (and named) elsewhere in the literature, there are examples available of project wind-up occurring in practice (Swinburn et al., 2012). The identification that initiatives can (and often do) exceed forecast results and the ability for policy entrepreneurs to succinctly and effectively communicate this, might assist in advocating for such initiatives. This scenario gains greater importance when the politicised decision-making processes common in healthy planning are considered, and could serve to increase the political viability of such programs.

While partnerships are regularly identified as an enabler to healthy planning, less commonly acknowledged are incidental partnerships that begin through project implementation. Again, there is record of such in the grey literature (for instance Johnson, 2009), but less often are the follow on or unintended benefits of this made explicit. The healthy planning paradigm makes partnerships relevant as it creates a setting reliant on framing and political considerations over evidence-based decision-making. Partnerships in this field are important given the opportunity

for future projects they provide. If the identification of this unintended benefit can be explicitly made, the political viability of project implantation is likely to improve and will contribute to the consideration of healthy planning initiatives when evaluated against other options.

Where it forms an explicit part of a project, internal LG functioning is generally called capacity building (Hawe, Noort, King, & Jordens, 1997), however less often recognised are the unintended positive impacts. The identification that projects can come to be imbedded in policy when reviews were undertaken at the same time presents a point of difference to the way the policy/project relationship is generally conceived, where policy drives projects. This process is likely to be desirable for LGs as internal structures improve as a result, and as such, capacity building might also be a valuable measure when projects are implemented, particularly given the value of co-benefits in the healthy planning paradigm.

Given these findings, there is added value in undertaking projects to those benefits that come from the measures directly introduced (and those currently commonly identified in the literature), given the additional flow-on effects that can also arise. The internal functioning of LGs can improve, and the opinions of decision makers might also change as a result of project implementation, causing a positive change to the problem setting.

This chapter has summarised the key findings and contributions of each of the five publications included as part of this research. Chapter 5, below, considers these publications and this exegesis cumulatively, discussing the contribution of the study overall to the healthy planning field.

5. CONTRIBUTION OF THIS STUDY

This thesis examines barriers and enablers to healthy planning and active living initiatives, and building on these findings explores two possible ways healthy planning and active living initiatives might come to be embedded into urban planning practice. It outlines some shorter-term considerations (Publications 1-3) that can promote or impede project uptake or success (referred to as barriers and enablers), and also begins to examine two potential overarching approaches identified by advocates and practitioners that might help to better integrate the notions of healthy planning into LG operations (Publications 4-5). The two approaches that emerge are through the explicit identification of health as an urban planning objective and driver of projects, or through the use of health by stealth, where a coastal context might be used to frame conversations around healthy communities and healthy planning in Australia, and where a comparative advantage for future healthy planning and active living initiatives exists.

Factors such as joined-up governance and coordination are important to project uptake, and the policy settings of states and LGs also influence project opportunities to an extent. Yet in the absence of consistent, evidence-informed and detailed policy at both the state and LG level that ensures healthy planning and active living project implementation, political attention and politicised decision-making, as well as a healthy planning paradigm, are key influencers on program uptake and success at the LG scale. As a result, the presence of a champion, or policy entrepreneur, and opportunistically entering into partnerships with external stakeholders currently hold greater importance than the policy setting.

The results from Publications 1-3 present short-term enablers to what are generally longer-term, systemic barriers in the urban planning system, the health (funding) system, societal attitudes or in current governance structures. Particularly, the (over-)reliance on policy entrepreneurs is not likely to produce equitable health benefits consistently across communities. Ad hoc funding provision and responsibility transfer are matters that advocates, champions and policy entrepreneurs at the LG level face as barriers but are likely to have limited impact in changing.

Yet the on-the-ground work and undertaking of projects remain important (particularly given the results of Publication 5) in the nascent stages of the re-emerging relationship between the

health and urban planning professions, and so the identification of potential barriers and possible enablers in response to those is hoped to be of value. For LGs, their own operation is identified as just one of multiple considerations impacting project uptake, confirming the value of integrated urban planning and the need for partnerships in the field. Despite LG's important position with regard to delivery of contextually appropriate projects, their ability to do so can be limited given the governance system of Australia. Yet there is a need for healthy planning to be implemented in a contextually sensitive manner, and blunt, top-down mandates from above (generally state, potentially federal or regional) do not guarantee healthy planning projects will be successfully implemented at the LG level, or even that they will be undertaken. However, far from being a reason not to ameliorate policy in the field, improving the policy setting will likely be crucial to addressing those structural barriers addressed above in the longer term.

The current setting, and ways to overcome the barriers identified, are complex. Perhaps as a result, uptake of these ideas, and particularly implementation, by LG has been slow, and significant changes are likely to be required to integrate healthy planning into LG functioning. Two main avenues are identified by this research, being health by stealth (Publication 4) or the framing of healthy planning as being central to LG operations and having benefits to LG operations that currently are under-recognised in the literature (Publication 5). Both approaches are currently used in the day-to-day work of practitioners and there is no consensus among advocates over a preferred approach (noting that both might be beneficial depending on the context). Paradoxically, these efforts to avoid healthy planning's reliance on individuals and politicised decision-making are likely to continue to rely on individuals and advocacy in the political sphere in moving towards long-lasting change in the field. In the short-term at least, advocacy will continue to be important (Shilton, 2006).

It remains to be seen whether health by stealth or framing of healthy planning as being a central component of LG's role and of urban planning generally will be the breakthrough to encourage more widespread and systematic delivery of healthy planning. This research (Publication 4) examines one potential way in which concerns over the applicability of walkability/healthy planning could be overcome by instead framing this through a contextually sensitive lens (in this instance, coastal communities, which encompasses a significant portion of Australia's population). The approach overcomes some of the barriers identified in Publications 1-3 such as through avoiding the need to rely on relatively weak state preventative health policy, and

addressing practitioners' and community questioning of the applicability, transfer and local evidence base of healthy planning and active living guidance from other contexts. The importance of framing as identified in Publications 1-3 is taken into account in this approach. The approach could be replicated using other central notions (other than a coastal setting) and there is no need to refer to health benefits to create such a structure (whereas such changes would likely result in community health benefits such as through increased activity levels amongst the population).

Alternatively, this research (Publication 5) also identifies that there are additional benefits to implementing healthy planning initiatives where improved community health is an explicit benefit. Project implementation can provide incidental benefits to collaboration and LG operations, and in many cases, projects provide better than the projected outcomes. In doing so projects themselves can contribute to more sustainable implementation, in a virtuous cycle.

6. CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

6.1 Conclusions

The overarching question this research sought to answer is:

Why do we fail to plan for and produce healthy environments in Australia and how can this change?

To appropriately address this question, additional research objectives were developed. The conclusions presented in this thesis in response to those additional research objectives are as follows:

Conduct literature review to define healthy planning, healthy urban design and active living initiatives, and to identify who is responsible for their delivery.

Given the wide scope and complexity of matters such terms encompass (for instance, refer to Section 2.1 on definitions of health and Section 2.2 on definitions of urban planning and urban design), a single and definitive definition does not exist and is unlikely to be forthcoming. Nevertheless, definitions are available in the literature (at least for healthy planning, active living initiatives are less commonly examined or defined). The definitions emerging from the literature review and informing the scope of this research are as follows:

- Healthy planning: for the purposes of this research healthy planning is defined as *the management of natural and built environments to meet the health and well-being needs of current and future communities, including through improvements to economic, social and environmental conditions and striving towards more equitable distribution of these health improvements across populations*. This definition is partly adapted from the definition of Jennifer Kent et al. (2012, p. 385) (see Section 2.3) and was adopted given its applicability across settings and the multitude of ways that changes to the built environment can impact community health. Yet for the purposes of this study, the scope

is limited to physical activity, one of three key domains through which Kent and Thompson (2014) identify that the built environment influences community health.

- Healthy urban design: Given the overlap between definitions of urban planning and urban design outlined in Section 2.2, as the relevant literature often uses the terms interchangeably (for instance, see Clifton, Smith, & Harrell, 2007; Kent et al., 2012) and as the definition of healthy planning adopted above is relatively general, for the purposes of this study the same definition of healthy urban design is adopted as that for healthy planning, as above.

- Active living initiatives: active living initiatives are those *initiatives that encourage a way of life which integrates organised or informal physical activity into people's daily routines and aim to meet the health and well-being needs of current and future communities*. It is noted that the academic literature does not commonly use the term 'active living initiatives' and that difficulty in finding an agreed upon definition of such also arises. However, the term is used in urban planning and health policy (ACT Government, 2016; NSW Government, 2013) and is adopted for the study given the research scope (relating to those urban planning measures aimed at increasing physical activity) and the need to consider behaviour change programs that increasingly accompany urban planning initiatives (see, for instance Buckenara, 2015; Kent & Ampt, 2012).

Within the complexity surrounding the built environment and health and the systems of governance that influence them, there is not one single agency responsible for the delivery of projects attempting to address health through changes to the built form, or even for coordinating the delivery of such projects. The reality is a messy picture with blurred boundaries of responsibility and multiple, interrelated actors often with differing interests.

In Australia, in terms of governance, the federal level plays a limited, ad hoc role. The state level is generally responsible for undertaking both urban planning and health, however states can (and to a large extent do) devolve urban planning responsibilities to regional or LG levels. There are examples of regional urban planning bodies (Crommelin et al., 2017), but consistently and historically urban planning powers in particular have been given to LG. However, these

roles are changing and increasingly LG is considered to have a role to play in addressing global concerns, such as climate change and rising NCD rates, which were previously more commonly the domain of centralised governments. In addition, LG in Australia is the closest level of government to the community and is responsible for the management of the majority of public places used in day-to-day life. As healthy planning ranges in scale from the arrangement of city-wide systems and processes to micro-scale interventions (Australian Local Government Association et al., 2009; National Heart Foundation of Australia (Victorian Division), 2004), LG is likely to have a role (sometimes in partnership with other levels of governance or other stakeholders) in the majority of healthy planning and active living initiatives, particularly as they relate to increasing physical activity levels through active transport. Therefore, while no one stakeholder is solely responsible for the delivery of healthy planning and active living initiatives, and though much focus has centred on the state level in Australian healthy planning, the responsibility commonly falls to LG.

Undertake surveys and interviews with healthy planning practitioners and advocates to determine the barriers to uptake and implementation of healthy planning and active living initiatives.

The surveys were undertaken with Australian practitioners working in LG and involved in healthy planning. The interviews were undertaken with Australian healthy planning advocates, operating at a LG level however with roles external to LG. Findings from these surveys and interviews indicate that an inconsistent policy setting across state and LG levels fails to provide an adequate mandate for the uptake and implementation of healthy planning and active living initiatives. Yet even where an adequate policy setting is evident, politicised decisions still have greater influence over project uptake and delivery. Concerns over the applicability of research, guidance and evidence to an Australian setting (whether real or perceived) also act as barriers to implementation. Projects addressing community health through encouragement of increased physical activity levels are seen to be popular politically, yet details of such are generally avoided, which reduces the likelihood of policies or advocacy work then being implemented on-the-ground.

The weak policy setting and political decision-making (and political concerns) present as barriers, but also provide the opportunity for policy entrepreneurs (such as

advocates/champions) to have notable influence in the field. Yet the barriers to implementation are structural. Even though individuals can overcome these barriers and facilitate project implementation (see below) in one-off instances, structural impediments such as the lack of legislative backing, a continued reliance on advocates and a lack of funding will likely remain elsewhere.

Undertake surveys and interviews with healthy planning practitioners and advocates to determine factors that enable the uptake and implementation of healthy planning and active living initiatives.

The surveys undertaken with Australian LG practitioners and interviews undertaken with Australian healthy planning advocates identified various factors that encourage uptake and implementation of healthy planning and active living initiatives. Key considerations that can act as enablers to project uptake and implementation include the presence of policy entrepreneurs (or champions, advocates), internal operations of the LG, partnership formation, a supportive policy setting (though see above), the use of framing techniques (including the recognition and good news that projects can facilitate), the creation of a mandate for LG, resourcing and funding, the discussion of co-benefits and previous project success.

Policy entrepreneurs commonly adopted two, seemingly conflicting approaches to framing healthy planning and active living initiatives:

- Health by stealth – that is the avoidance of mentioning the health benefits of projects, focusing instead on other benefits; or

- Showing health to be a central consideration to LG functioning.

Identify ways in which enablers could be better utilised to encourage the planning and production of health-promoting environments, particularly with regard to relevant barriers.

The above findings might inform the way advocates and practitioners approach the promotion of healthy planning and active living initiatives. Identifying project-specific enablers might allow for opportunities to be better recognised, and barriers to be better addressed in the short-

term. In the longer term, if health by stealth were adopted as an approach by advocates it is likely that a contextually-specific aspect of Australia would have to inform the approach, given societal (and in some cases practitioner) hesitancy over the applicability of active transport research and guidance developed elsewhere and implanted to an Australian setting. The proximity of the majority of Australians to the coast could be a starting point to this discussion. Although health would not be an explicit consideration (or not appear to be), the health of communities could be improved given such changes that promote active living would be positioned as having contextual applicability, and as Australian communities demonstrate certain characteristics that present a comparative advantage in providing health-promoting (or walkable and bikeable) settings.

Alternatively, in showing community health to be a central consideration of LG functioning, particularly through LG's potential to influence physical activity levels, the importance of actual projects themselves in encouraging future project uptake and implementation is highlighted. Although paradoxical, this finding encourages continued advocacy efforts to deliver healthy planning on-the-ground at the LG level as a way to address the current reliance of the healthy planning field on the efforts of champions and on ad hoc implementation.

6.2 Implications of the Research

It is considered that the research will have applicability across Australia and to countries with similar governance settings or communities with similar built forms and facing comparable challenges as those faced in this country. The following key points emerge from this research:

- The examination of the barriers to healthy planning and active living initiative uptake and implementation presents a complex intersection of considerations across multiple scales, reflective of a wicked problem and without a clear and easy solution;

- Related to the above, the enablers identified in this research (by advocates and practitioners) are more commonly short-term, while both short-term barriers (that could be overcome) and more structural, longer-term barriers are identified;

- The enablers, and project implementation, remain important given the value in healthy planning and active living initiatives for improving community health through improved opportunities for active living in the short-term. However, the enablers are also important (and perhaps even more so, given the long-term impact) in facilitating subsequent project opportunities and allowing the potential for more sustainable uptake of projects in the future;

- Given the above, the actions required for long-term benefits in the healthy planning field will likely be similar to those encouraging short-term change. It is important that structural barriers such as ad hoc implementation, an over-reliance on champions and the importance of a healthy planning paradigm over more evidence-led implementation be addressed. Yet in moving towards this change it is likely that (ad hoc) project implementation will continue to be central in growing the local evidence base and starting a virtuous cycle towards healthy planning across various LGs, that passionate individuals, practitioners and researchers (champions) will continue to lead promotion of the re-emerging field and that the healthy planning paradigm will continue to have relevance in cases of successful implementation (at least in the short-term). It is hoped that this research will contribute to this situation by formalising and disseminating practitioner and advocate knowledge on the barriers and enablers faced in the field, and by outlining two (currently commonly used) strategies by which more consistent and sustainable implementation of healthy planning and active living initiatives might come to be realised.

- The approaches of health by stealth and framing health as being central to LG functioning (and with healthy planning projects creating a virtuous cycle once implemented) are seemingly mutually exclusive in efforts to promote the delivery of healthy planning, yet it remains to be seen which of them is more effective or desirable to achieving the goal of improved community health through providing more opportunities for active living. Potentially, both approaches could be adopted for different situations, according to the particular context.

- Given the findings of this study, there is likely to be value in using a MSA framework in future research on healthy planning and active living initiatives and also potentially in monitoring and evaluating such initiatives. The framework aligns appropriately with the thinking, experiences and empirical knowledge of healthy planning practitioners and advocates, helping to make it useful for this type of research. If the framework saw greater use in the healthy planning field in Australia, such as by practitioners in project monitoring and evaluation and by academics in research, comparison of factors that influence healthy planning uptake between contexts and governance settings in Australia, and also potentially across different scales, might be possible. In a field currently with no commonly adopted theoretical framework, MSA appears well-suited for further and perhaps more widespread use in the healthy planning field.

6.3 Future Research Directions

This research provides an initial step towards understanding barriers and enablers to the uptake and delivery of healthy planning and active living initiatives. There is likely value in future research exploring the following aspects in greater detail:

- Adopting a socio-ecological perspective on the determinants of health but then focusing predominantly on built form changes to encourage one determinant (activity levels) of health (albeit an important one given current health trends across the globe and in Australia) is a limitation of many 'healthy planning' initiatives and studies across the world (including this research). There is room for the healthy planning field as it currently exists (including in Australia) to consider more encompassing concepts such as EcoHealth (for instance, see Kingsley et al., 2015; Saint-Charles et al., 2014; Wilcox et al., 2004) and planetary health (Capon et al., 2018; Editorial, 2017; Horton & Lo, 2017; Lerner & Berg, 2017). While there is emergent Australian work on this in the liveability field (Lowe et al., 2015) and with regard to climate change (Zhang & Beggs, 2018), further widening the scope of 'healthy planning' to focus on the links between built environment changes, human well-being and planetary health is likely to be a rich (and important) area of future work.

- The findings of this research are relatively broad, and it is hoped they will have relevance for Australian LG across administrative boundaries, however these could provide a starting point for more detailed studies. This might involve the examination of the identified barriers and enablers at a micro scale such as through the use of specific cases of implementation, and within a single LG.

- Further to above, while the findings are relatively broad and hoped to have applicability to global contexts in which governance structures reflect those of Australia, or in settlements facing similar challenges (such as NCD prevalence) as Australian communities, there is likely value in undertaking similar assessments in different global contexts, cultures and governance structures. This might provide for comparisons between settings and could also further inform comparative analysis of the Australian state-of-play against other countries, particularly where international case studies and best practice examples globally were explored.

- Employing data saturation limited the sample size collected and also limited a sample that included all states or equal representation amongst professions and fields of employment to be achieved. Purposive sampling employed for survey collection and purposive key informant sampling employed for the semi-structured interviews also reduced the representativeness of the sample across states or professions. The findings of this research could be extended to future research employing random sampling and potentially a larger sample size, which could in turn allow for a more representative sample across states or fields of employment to be achieved.

- The exploratory nature of this research, particularly focused at the reasons for the slow uptake of healthy planning and active living initiatives, led to the employment of qualitative methods. It is noted that quantitative analyses are less commonly employed in research in the healthy planning and active living field, and that such are likely to have value in future research. It is anticipated that the qualitative findings from this research will inform future quantitative research in the field, including but not limited to quantitative comparative analyses and quantitative case study comparisons such as those between specific cities, towns or communities.

- The perception by advocates that it was not viable to discuss the details of what healthy planning and active living initiatives entail presents a barrier on multiple levels and has generally not been tested in the literature. Future research could compare community perceptions regarding general notions of community health (such as 'well-being') and more specific components (such as activity levels) against details of what changes to improve community health might entail.

- The scope of this research limited it to considering project uptake and implementation, yet various structural barriers to healthy planning also emerged, such as the limited legislative powers of LG in the Australian governance setting and cultural factors relating both to urban planning practice and the community, including a planning system that due to current practice and standards preferences (in many cases inadvertently) the creation of obesogenic environments over more sustainable forms that are health promoting. These structural barriers could be examined in further detail, such as examining failed projects.

- The two approaches recommended as potential ways to advance healthy planning in Australia are through health by stealth and the framing of health as an urban planning issue to be addressed by LG. The clear tensions between these approaches (and lack of agreement amongst practitioners and advocates over which is a more effective approach) could be further examined.

- Given findings on the value of health by stealth that emerged during the research (after the scope of the thesis was set), it is likely that this study overlooks projects that were not explicitly framed as benefiting health but that nevertheless provided community health benefits, such as through increased opportunities to participate in physical activity. Future research could examine the barriers and enablers to projects where concepts of health by stealth are employed (such as where projects are framed to be primarily driven by economic considerations). Related to the previous point, a comparison of the effectiveness of these two approaches might be beneficial.

- Limited consideration in the healthy planning field has been given to who actually participates in the decision-making process. Examining public participation generally, as well as with a focus towards indigenous and culturally diverse people with regard to participating in, making decisions about and organising such initiatives might provide useful insights.

- Research into barriers and enablers could also be undertaken to the other key built form contributors to healthy living, being healthy eating and connected communities. A comparison between the factors that impact the three contributors might then be possible.

6.4 Concluding Comments

To return to the main question, the results of this research suggest that there are various barriers that prevent healthy environments from being planned for and produced in Australia. Some short-term enablers are also evident. However, addressing the longer-term barriers is likely to involve reaffirming the processes identified as impediments, at least in the short-term. For instance, the weak policy setting leads to an over-reliance of healthy planning on champions, yet it will likely be the work of champions who will push to better integrate considerations of healthy planning into state and LG policy settings. Similarly, ad hoc project implementation is symptomatic of a system not yet set up to accommodate sustainable and evidence-based healthy planning consistently across LGs and states. Yet this research suggests that project implementation is a central way for processes to improve and to increase the likelihood of future project uptake.

Two primary approaches advocates might (and do) adopt to address the barriers identified are presented, one being health by stealth and the other being centrally framing LG's operations around the health of communities. The role of advocates or policy entrepreneurs will remain central to attempts to change the current healthy planning setting in Australia, which exhibits slow uptake and implementation of programs. Australia's failure to plan for and produce healthy environments is due to numerous complex, interrelated and embedded factors, and though there remain structural barriers the thesis suggests that various approaches are available to improve this setting and move towards more sustained and equitable delivery of healthy planning projects, particularly those that relate to physical activity.

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8. PUBLISHED RESEARCH PAPERS

Publication 1

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Planning for health:

Barriers and enablers for healthy planning and design at the local government scale

ABSTRACT:

The rise in prevalence of various 'lifestyle diseases' or noncommunicable diseases has been associated with an overall decline in the walkability of Australian cities since the second half of last century. This has implications for Australians' health and lifestyles, and there are increasingly louder calls for upstream or preventative community health measures rather than a predominantly treatment-based approach. One such way this might be (and is currently being) addressed is through urban planning and design initiatives.

This paper firstly adopts a socio-ecological perspective to examine the role of the various scales of governance and government in the Australian planning context. In taking such an approach the importance of local governments as significant shapers of and stakeholders in the built environment becomes apparent, and so, by extension, does their role in providing environments that enable and promote community health. Additionally, a multiple streams analysis (MSA) is adopted to examine the agenda-setting process regarding healthy planning and design at a local scale. MSA enables conceptual analysis of policies and politics associated with a particular problem (such as prevalence of lifestyle diseases), and presents a novel conceptual framework for use in Australia and at the local government scale.

Data from surveys and interviews undertaken with built environment practitioners and healthy planning advocates is then explored, allowing for an outline of barriers and enablers for healthy urban planning initiatives at the local government scale to emerge. This knowledge, particularly how the framing of the lifestyle disease 'problem' and prevailing policies and politics can act as either barriers or enablers to healthy planning and design is hoped to be transferrable and of relevance to health or urban planning practitioners and healthy planning advocates across Australia, and particularly those operating at a local governance scale.

Keywords: *healthy planning, healthy urban design, multiple streams analysis, barriers, enablers*

Introduction

The longstanding link between the health and urban planning professions, although weakened towards the end of last century, is re-emerging, and can be seen to have increased importance given the 'lifestyle disease', sustainability and built environment quandaries currently facing developed western nations (Freestone and Wheeler, 2015). This re-emerging relationship seems particularly timely in Australia, with relatively high rates of noncomunicable diseases, such as 22% of Australians experiencing cardiovascular disease as of 2014/15 (Australian Institute of Health and Welfare, 2017). The Australian population also demonstrates associated risk factors to such diseases, with approximately 63.4% of Australian adults being overweight or obese as of 2014/15 (Australian Institute of Health and Welfare, 2016). Compounding this is the continued development of a largely unsustainable urban fabric, based on numerous indicators (see Newman and Kenworthy, 2015, Dodson and Sipe, 2006, Randolph and Tice, 2014).

The renewed relationship has indeed garnered, and been assisted by, much recent attention to the relationship between 'place' and 'health'. Such attention has come from educational settings (Kent et al., 2011), the literature (Thompson and McCue, 2016, Barton et al., 2015, Lowe et al., 2015) and the media (Zhou, 2017, Aubusson, 2017). Much attention[8] has also been afforded the topic by advocacy groups and NGOs, and this exensive advocacy and practice guidance in particular has identified the local government (LG) scale as having particular importance. Relatively less academic attention, however, has been afforded to the knowledge and experiences of those operating at a LG level, including those health and built environment practitioners within LG, and those external to LG in advisory and/or advocacy roles. While health-promoting cities and communities are desirable aims for the planning profession to strive towards, such 'outcomes are unlikely to happen unless we pay attention to the processes by which we move from vision to reality' (Baum, 1993, p. 33). This understanding of how health-promoting planning (henceforth healthy planning) and active living initiatives are implemented forms the focus of this paper.

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[8] See National Heart Foundation of Australia, 2009, Planning Institute of Australia (PIA), 2006, Australian Local Government Association et al., 2009, Healthy Active by Design, 2017, National Heart Foundation of Australia, 2012, World Health Organisation, 2013

Approach and methods

The aim of this paper is to analyse the barriers and enablers to the undertaking and success of healthy planning and active living initiatives, at a LG level. Kent and Thompson (2014, p. 240) identify three primary domains by which health is influenced by the built environment: 'physical activity; community interaction; and healthy eating'. This paper's focus is on the first of these domains, physical activity, although the interconnectedness of each is noted. Appropriating the terms used by Smith (2014), barriers are considered to be those factors limiting healthy planning and active living initiative uptake, while enablers are those factors actively supporting such uptake.

In addressing the above research aim this paper firstly frames LG's planning and community governance functions within a socio-ecological perspective of health. A multiple streams analysis (MSA) (Kingdon, 1984, 2003) framework is then posited as a suitable lens for analysis of the experiences of built environment and community health practitioners and advocates at an LG level.

The paper then presents findings from survey questionnaires and in-depth interviews, undertaken as part of an ongoing study into health-focussed urban design and planning in Australia. Ethics approval (RDHU-239-15) was granted for this research by the Human Research Ethics Office of Curtin University on 29 October 2015. Open-ended, qualitative survey questionnaires were distributed by email to those Australian LGs featured in the annual Heart Foundation (HF) Local Government Awards and Healthy Spaces & Places (HSAP) online case studies (Australian Local Government Association et al., 2009, National Heart Foundation of Australia, 2014, 2015). Emails were sent to practitioners where relevant contact details were provided as part of these resources, where no such details were available the survey questionnaire was distributed to the LG seeking completion by a key informant. Such purposive sampling allowed for convenient access to LGs involved in best practice initiatives noted to be worthy of 'celebrating' (National Heart Foundation of Australia, 2015) or those including 'key principles and processes' (Australian Local Government Association et al., 2009). This also allowed for the initiatives to form the basis of subsequent questioning. Respondents' professions included engineering, project officer and urban, strategic and transport planning (classified as 'LG built environment practitioners') and social development, sport and recreation and health

promotion (classified as 'LG community health practitioners'). Necessitated by ethics considerations, respondent feedback is subsequently identified by these broader fields, rather than their specific role. Nevertheless, the variation in respondent professions is important to note given the wide variety of actors (not just planners) engaging in 'healthy planning', and allows for varied perspectives of the field.

Additionally, in-depth, semi structured interviews were conducted with practitioners and advocates in community health and/or built environment professions across Australia. Key informants were initially selected based on existing networks. Snowball sampling was then utilised to identify relevant interview participants who were recognised as key informants or advocates in the healthy planning and active living space at the LG level (Allender et al., 2009a, 2009b). Respondents identified as relevant practitioners or advocates were those identified as contributing significantly and recently both to public debate and practice in the healthy planning and active living field. Where such respondents operate primarily outside of a LG organisation (for instance, in a regional health promotion role), they are subsequently identified as 'Community health advocates' or 'Healthy planning advocates.'

20 open-ended survey questionnaires were returned by LG practitioners on behalf of their organisation from five states and one territory (New South Wales, Victoria, Queensland, Tasmania, South Australia and the Northern Territory[9]) and 15 in-depth interviews[10] were conducted across four states (Western Australia, New South Wales, Victoria and South Australia) with community health and built environment practitioners and/or advocates. NVivo 11 data analysis software was used to analyse the data, including during collection, and data collection ended at the point of data saturation (Hennink et al., 2017). The limitations of the study, including the broad (national) scale, the multi-discipline participants and multi-state (crossing legislative and planning framework boundaries) context in which the participating LGs and practitioners operate, are acknowledged. Nevertheless, any study examining multiple LGs will inevitably encounter 'economic, political, socio-cultural and legal' differences (Hambleton, 2011, p. 10). Further, participants from multiple disciplines were interviewed to provide an overarching perspective of this emerging field, while the broad range of survey

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[9] Any subsequent reference to Australian 'states' includes the federal Australian territory of the Northern Territory

[10] This represents a partial sample given the wider research project is ongoing

respondents is representative of the various professions involved in project implementation. Attempts have also been made to minimise these limitations through the research methodology including use of multiple methods and through sensitivity to these contextual considerations during data analysis. It is hoped that the themes emergent from this paper will be of use to health or planning practitioners and healthy planning advocates across Australia, particularly those operating at the LG level.

A socio-ecological perspective of planning

A socio-ecological perspective sees human health as being influenced by both environmental settings and individual attributes (Stokols, 1996). Such a perspective gives 'attention to the social, institutional, and cultural contexts of people-environment relations' when examining health characteristics, in addition to personal attributes (Stokols, 1996, p. 285). When planning's raison d'être is examined through a socio-ecological lens the profession's impact on the health of communities at its various scales becomes clear. Such knowledge is not new, humans have long understood the impact their surroundings have on their health. Nevertheless, more recent understandings and the use of the 'socio-ecological approach to the planning for future healthy and sustainable communities' can be attributed largely to the World Health Organisation's Healthy Cities movement beginning in 1986, and relating to the actions outlined in the Ottawa Charter for Health Promotion of the same year (Chapman and Davey, 1997, p. 82, Kent et al., 2012, p. 383).

Though the uptake of Healthy Cities programs has been relatively limited across Australia, the movement has been central in encouraging the consideration of health amongst the built environment professions. This is particularly evident in its promotion of a socio-ecological perspective of health and in placing a focus on LG's role in addressing these social determinants of health (Butterworth et al., 2005, Lawless et al., 2017). Figure 1 depicts such a perspective visually, in the 'health map' (Barton and Grant, 2013). The social determinants of health perspective has been successfully employed as a framework through which to examine local government health policy and is 'a very useful tool for planners working in healthy planning' (Browne et al., 2016, Kent et al., 2012, p. 383). Such a model also has value in praxis — most Australian LG practitioners working in relevant fields have been found to have some level of knowledge regarding these determinants (Lawless et al., 2017).
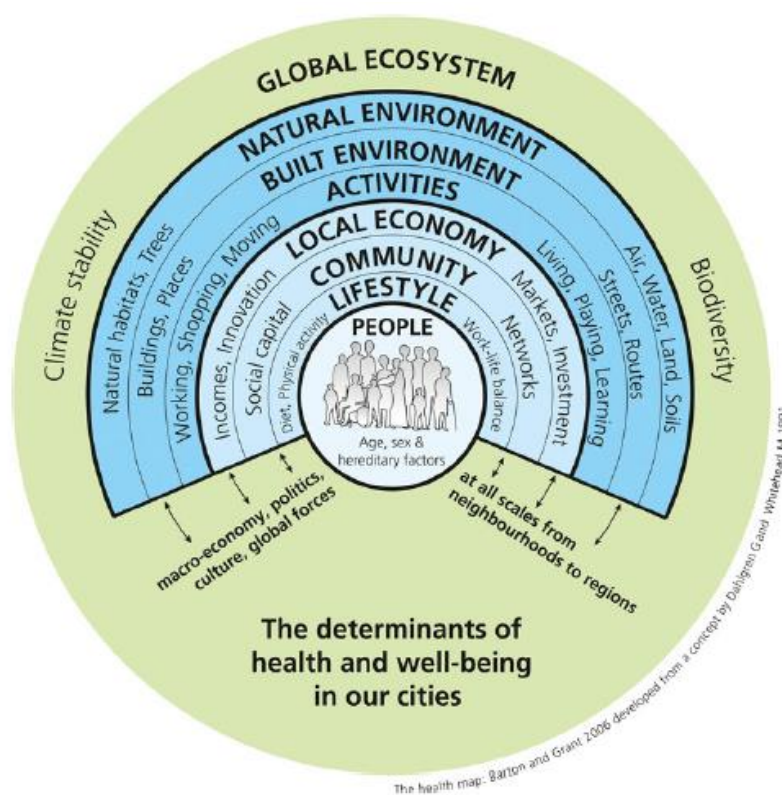
Figure 1: The health map (Barton and Grant, 2013)

Planning for health in Australia from a socio-ecological perspective

Under the 'tripartite hierarchy' of Australia's government system, limited federal powers with regard to 'planning, environment, and regulation of land-use development' mean that such powers largely fall to the state and territory governments (Williams and Maginn, 2012, pp. 38-39). The historically fluctuating role of federal involvement in planning in Australia could be considered currently relatively limited, even from a low starting point (aside from some largely ad hoc initiatives such as the Smart Cities Plan, the City Deals funding mechanism, and the Healthy Communities Initiative) (see Department of the Prime Minister and Cabinet, 2016).

Each state governments' planning system then has differing 'statutory, policy and procedural frameworks', though as Williams and Maginn (2012, p. 39, 46) note, the states 'do delegate a number of day-to-day (that is, 'local') decision-making functions to local government' and that 'most planning decisions are made at the local government level'. Nevertheless, the relatively 'weak' powers of LG in Australia when compared to other developed, democratic nations is well-established (Aulich, 2015, p. 163). Australian LG

ultimately remains 'a creation of the states', with 'tension' existing between LG and the states, especially evident currently (Williams and Maginn, 2012, p. 39, 43). In table 1, general roles of LG are examined briefly against the socio-ecological perspective and its elements relating to active living promotion as evident in Figure 1, and as detailed by Kent et al. (2012, p. 383).

Table 1: The role of Australian LG examined against a socio-ecological perspective

Role of Australian LG (Williams and Maginn, 2012)	Selected impacts on aspects of the socio-ecological perspective (Kent et al., 2012, Barton and Grant, 2013)
general public services	Influence on quality of life and wellbeing including 'lifestyle', ability to participate in the 'community' and on 'daily activities' undertaken
education	Influence on 'lifestyle' and values as well as 'daily activities undertaken'
health	Direct influence on 'lifestyle' such as through behaviour change initiatives, health services and health and safety inspections and certification Indirect influence through those other considerations discussed above and below
welfare	Influence on ability to participate in a healthy 'lifestyle', to contribute to 'community' and to the local 'economy' and to participate in 'daily activities'
recreation and culture	Influence on 'lifestyle' including physical activity levels, 'community' and 'daily activities'
housing and community amenities	Influence on 'built environment' through provisions and planning codes, also ability to engage in 'community' and 'daily activities'
transport and communications	Influence on available/preferred transport methods which impacts on (and is impacted by) 'lifestyle', 'daily activities' (particularly 'getting about') and the 'built environment' (including 'streets' and the quality of 'public places')
economic development	Influence on 'local economy' and quality of place and the 'built environment' and 'public spaces', in turn influences 'lifestyle' opportunities available
natural resource management	Influence on 'natural environment' but also the 'built environment' (such as 'green open space' and 'public places'), which then influences 'lifestyle' and 'daily activities' available
planning and development	Influence on 'built environment' and 'natural environment' through statutory instruments and strategic directions, which then impacts all of 'lifestyle', 'community', the 'local economy' and 'daily activities undertaken'
control or regulation of building and subdivision	Influence on 'built environment' through building regulation and certification, and on overall urban fabric that is created resulting from subdivision patterns

The above comparison of Australian LG roles against a socio-ecological perspective affirms LG's role in planning for community health and active living. Pettman et al. (2013, p. 72) note that this role is expanding, as LGs 'have adopted a broader role in planning for health outcomes and health promotion in communities, further to traditional roles of health protection.' An expanding remit for LG in this field can be viewed as 'an exciting opportunity for cross-sectoral health promotion' while simultaneously 'presenting potential challenges to council staff in planning, implementing and evaluating such initiatives to achieve health outcomes' (Pettman et al., 2013, p. 73, Jolley and Barton, 2015). Browne et al.'s (2016, p. 130) analysis of Victorian LG health policy found LG's remit to have a focus on equity, the possible result of an increasing awareness of 'council's capacity to affect the social determinants of health equity'.

As discussed above, some tensions do exist between the roles of state and local levels of government in Australia. Recent calls have also been made to 'understand the 'policy world' [active living researchers] are attempting to shift' in health promotion planning, and to address a 'research translation gap' in the field (Giles-Corti et al., 2015). Consideration of these factors leads to the use of a MSA lens in this study, as addressed subsequently.

Brief overview of MSA

Frameworks that consider political aspects are noted to have relevance and likely benefit for evaluations of projects that aim to improve community health through socio-ecological considerations (Baum, 1993, p. 39). Also, given the contested nature of the planning project generally, the use of an analysis framework that considers agenda setting appears appropriate and relevant (Harris et al., 2016). As a result, MSA (refer to Figure 2) is used in this study to guide data analysis and to frame findings (Kingdon, 1984, 2003). The framework has been used to examine Dutch LG agenda setting and to identify actors involved in policy making processes at the local level across various countries (Breeman et al., 2015, Secchi, 2010). Harris et al. (2016) have noted the relevance of Kingdon's theory to agenda setting in healthy planning at the state government level in Australia.
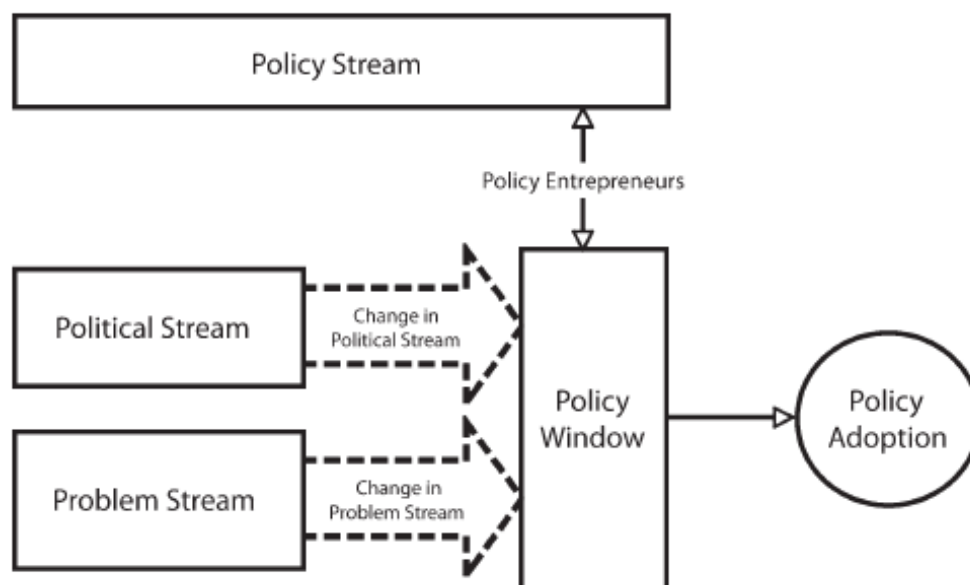

Figure 2: The multiple streams framework (Craig et al., 2010)

Under this theory, three streams, or three processes of agenda setting, present themselves. The first is the *problem stream*, whereby 'conditions' that exist might become seen as 'problems' through circumstances turning these issues into issues that are then framed as a 'public matter that is amenable to policy action' and that policy makers feel compelled to act upon (Embrett and Randall, 2014, p. 148, Kingdon, 2003). The second is the *politics stream*, influenced by 'public opinion', pressure groups, and the role of administrative and elected officials (Henstra, 2010, p. 256). Lastly, the *policy stream* includes a mix of possible policy options, with some considered by policymakers and many not, and wherein 'alternatives that do not conform to prevailing norms or the values of policymakers are less likely to be considered for adoption' (Zahariadis, 2014, p. 33).

These streams, while separate much of the time, can then be brought together to form a 'policy window' at certain opportune moments. A 'policy window' is a chance to put forward a preferred policy by a 'policy entrepreneur' at the agenda setting stage. These policy entrepreneurs (or 'champions') can be either individuals or organisations who aim to join the three streams together, such as through targeted advocacy (Zahariadis, 2014, pp. 35, 36).

Results

Given a MSA lens was utilised for this study, findings are broken into barriers and enablers as they relate to political, policy and problem (framing) considerations. Discussion and conclusions then follow.

Policy barriers and enablers

A common theme identified amongst both LG practitioners and advocates was the presence of suitable existing policy options to address community physical activity levels through built environment initiatives. These included awareness of applicable examples of overseas, interstate and other comparable LG settings whereby successful implementation and high policy efficacy was evident. Respondents, particularly advocates operating externally to LG, identified potential policy options for LGs as being well-developed and accessible. Most advocates also identified a lack of ability for systematic implementation of such by LG, as well as a general lack of requirement to do so by upper levels of government (namely state). The need for new, innovative

ways whereby existing knowledge and policies could be more effectively moved to the policy agenda is consistent with Kingdon's (2003) policy stream, in which policies exist in a 'soup' of multiple policy options, each searching for a problem to be attached to. This thinking was common amongst advocates interviewed, such as below:

> Anything in advocacy, doing advocacy is about identifying an outcome that you think's important, and then working towards achieving that outcome. And you do it however it needs to be done. So the role of the advocates is to actually work out what needs to happen, and then work out how to get there. (Community health advocate 1)

A common barrier identified was that the imperative to implement such initiatives, even where impetus from the state level existed (such as Victoria, South Australia and Western Australia[11]), generally lacks sufficient 'teeth' or weight whereby implementation is enforced through the governance framework. This then presented a challenge at the political scale, in LGs' ability to bring about change. The lack of a clear impetus for projects and programs leads to a reliance on the below two sections (politics and problem framing) to see initiatives implemented, which in turn leads to ad hoc implementation between LGs and amongst communities within LG boundaries. The common theme of reliance on one-off efforts as opposed to such initiatives being embedded into LGs' functioning is typified by the following:

> I think the key thing is just having a champion, really. I mean sometimes it just comes down to people, and their passion, their drive […] Like if you've got a mayor or someone who's just not interested, you know, no matter how much evidence you give them, how many resources you give them, it's just kind of like not going to happen, just not going to happen. (Community health advocate 2)

While this led to project implementation where champions existed, it suggests a policy framework not set up to provide for healthy planning and active living initiatives at the LG scale. While healthy planning and active living guidance often uses the language of radical change, the reality of operating within the bureaucratic and politicised context of LG instead appears to stress more gradual and incremental policy change (Baum, 1993, p. 32). A preference to address

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[11] Under the Victorian Public Health and Wellbeing Act (2008), the South Australian Public Health Act (2011) and the Western Australian Public Health Act (2016) respectively

this through less ad hoc implementation was a common theme, especially amongst advocates, with more joined-up governance viewed as a common enabler to promote initiatives uptake, such as the following:

> I think if there's more collaboration between state, federal and local government we could also do these things more viably. So I think if there's partnerships between three levels of government, and you target different centres and corridors and you do each one properly, then I think it becomes much easier to sell […] if people can see that there's also things coming as part of a viable transitional strategy rather than just statements of intent of where you want to be. (LG built environment practitioner 1)

Another common theme among advocates and LG practitioners was that while there is extensive policy guidance, no single guide to healthy planning or active living exists. This is not surprising given the area's interdisciplinary nature, and as a strength of LG in this field is its ability to provide contextually appropriate initiatives as the 'closest [level of government] to the local community' (Chapman and Davey, 1997). This creates tensions between a need for specified guidance and a clear mandate for action, as above, and the inability to create a one-size-fits-all policy approach to healthy planning at any level of government, exemplified by the following statement:

> My problem is, though, that healthy planning really needs that sort of messiness and complexity for it to work. We need to just be giving people options and that kind of thing, rather than having really specific controls that we can implement, and the planning system's not very good at that messiness. (Healthy planning advocate 1)

The existing potential policy options developed by various stakeholders were identified as being relevant and accessible. Advocates identified the National Heart Foundation, as well as planning and LG representative organisations as key sources of such options. LG practitioners more commonly identified those advocates, researchers and non-governmental organisations with whom their organisation had a formal partnership, or with whom they had a professional relationship with, as sources of potential policy option development. Concern at a lack of a supportive LG framework leading to ad hoc implementation was more commonly identified amongst advocates. Such concerns were less common among practitioners, who mostly viewed

their LG's policy framework as being supportive, at least at a strategic level. Nevertheless, such principles are 'rarely a consideration for our engineers and planners and because they are just principles, it is easy to ignore them' (LG community health practitioner 1). While the need for a certain contextual, place-based 'messiness' and the complex, interdisciplinary nature of such policy that encourages these initiatives is noted, the fragmented policy framework as it exists brings the other two considerations (political and problem framing streams) into even greater importance, as discussed below.

Political barriers and enablers

A commonly identified political barrier amongst both advocates and LG practitioners was responsibility transfer, most often between different levels of government. Community health and built environment practitioners both demonstrated a concern that state governments were conferring extra responsibility to LG without ensuring appropriate funding and resourcing mechanisms are in place to accommodate such. Concerns of responsibility transfer from health to planning were also identified, though less commonly. Regarding state to LG responsibility transfer, some respondents identified that responsibility transfer itself was a barrier to LG being able to act, while others saw falsely perceived responsibility transfer as a reason for hesitancy in implementation amongst LGs. It is noted that whether real or perceived, notions of responsibility transfer act as a prohibitive factor to initiative implementation. This leads to the possibility that 'health promotion falls between the gaps because local governments lack expertise and resources to take on this expanded role' as a result of 'state health services withdrawing from health promotion' (Jolley and Barton, 2015, p. 160). Responsibility transfer could present consistency with the setting in which LGs operate as outlined above, whereby state governments hold legal powers and political strength over them (Aulich, 2015, p. 166). This also reflects the findings of Nichols et al. (2013) regarding Australian obesity prevention projects, where respondents generally felt under-resourced to complete such roles.

Nevertheless, despite the common recognition of and concerns over responsibility transfer, such concerns were generally able to be overcome by the presence of 'champions'. Such champions were noted to frame healthy planning and active living initiatives as part of the LG mandate, acting as strong enablers to project implementation. This idea is typified in the following:

Yeah, and I think that's health promotion's job as well, to get the community onside, that local government isn't all about roads and rates and rubbish, and that it can have a great influence on the way they live their lives. I think we need to be a better spokesperson for that. (Community health advocate 3)

I think probably local councils had champions, and I think you had to find the champions and actually work with them, and work out if they were a town planner, or if they were a transport planner, or whoever they were, work out the right person. [… One champion] was all for building infrastructure to make sure things happened. So he was really important because there was strong leadership […] And maybe they're not all perfect […] If you've got a good champion, they'll make things happen even when everything isn't perfect. There might be some things up, some things down and some things medium, but there's enough of a gap there, "OK let's dive," but you need leadership. (Community health advocate 1)

Champions were identified both within LG and also operating externally to LG. Notably, one respondent saw the local level of government as having a significant role in advocacy at the state level, and the respondent themselves could be considered a champion for healthy planning and active living initiatives at a larger (state) governance scale. With regards to a recent change implemented by a state government, the respondent stated:

In no small way do I believe that's come about because of the pressure that the [LG]'s put on, and the arguments that we've put forward […] If you're within local government and if you can manage the local government environment which is different, better, you can actually influence the state government more effectively. I believe that local governments have the ability to influence where the state government goes much more effectively. […] If you think of the state government as an oyster, then the role of local government, to create a pearl out of the state government's oyster, is to be the most irritating grain of sand that you can be. […] And if I can irritate enough, that irritation passes up the layers, and actually ends up changing things. I make it difficult for business-as-usual. (LG built environment practitioner 2)

Partnerships in particular were recognised and valued by both LG practitioners and advocates as a way to engage champions. Partnerships also led to external funding opportunities, identified particularly amongst LG practitioners (from both community health and built environment) as one of the essential elements of such projects being implemented. The process by which partnerships with external stakeholders can develop is encapsulated in the following excerpt:

> Opportunistic things happen – by virtue of the fact that we're just always involved. And so a little bit of influence leads to more influence, and then more sustainable influence […] So when you've been doing something for a long time and you've made those partnerships and you're used to – and you know, it's very convoluted, so a lot of it's just being involved, and then relationships and process sort of occur out of that sort of tangled web of partnerships and discussions and working groups and submissions […] (Community health advocate 4)

In settings where effective partnerships with LGs were evident and champions were pushing for such initiatives to be adopted, it is noted that even amongst advocates (particularly from the health field) concepts of community health were seen as politically viable and attractive. LG respondents commonly identified the good news aspects of such projects as an enabler, however the detailed processes of moving towards a 'healthy community' were often viewed as being less attractive politically. Common examples from responses included fears over lost car parking spots (considered a barrier amongst society) and more aspirational planning leading to higher development costs acting as a barrier to private sector involvement. Also noted was hesitancy amongst state government health agencies to allocate a portion of already tight state health spending to preventative health measures, and even hesitancy by LG to engage in or encourage healthy planning and active living initiatives given concerns over immediate and long-term costs, such as infrastructure maintenance. Such concerns are also related to how the implementation of healthy planning and active living initiatives is framed, as follows.

Framing (problem) barriers and enablers

The framing of ideas is a longstanding notion in political sciences and is especially relevant when examining ideas through a MSA lens (Harris et al., 2016, Kingdon, 2003). The framing of ideas has been noted to have importance at the state scale in shaping health as a land use planning issue (Harris et al., 2016). Similarly, the framing of health as a planning and active living issue reflects this finding at the LG level. A common theme identified was the notion that advocates were unable to address details and that only 'concepts' of planning for community health would be supported. This is typified by the following statements regarding reducing car dependence:

> And so it's incremental steps, and I like to talk about the positives of people living in walkable neighbourhoods and being able to walk to your shops and have a park nearby and talk to your neighbours and things like that without mentioning that […] you won't be able to do that so conveniently by car. (Community health advocate 4)

> I think it's really important to have councillors onside. It could be politically contentious […] Yeah, I think it has to be handled very carefully. You know, it can be sold well, or it can be sold badly. And I think bringing the community along with you, with the plans, is really important. Planning, you know, what the consequences of this stuff is. I think when people think about car parks they don't think about the health issues necessarily down the track. (Community health advocate 3)

However the effectiveness of adopting a broader scale advocacy approach is unknown, and could be a reason for the lack of legislative impetus for such initiatives, as identified above. Further, the framing of healthy planning and active living initiatives as being expensive, or costing extra, as opposed to simply forming a part of the planning process, can be considered a barrier. Nevertheless, this also reflects the reality of LG operations, with funding and resourcing one of the most commonly identified barriers to such initiatives by LG practitioners. The framing of such initiatives as being potentially prohibitively costly is demonstrated in the response:

> I don't really know why health would be a threat to the [politicians], unless it means spending money, well, it would mean spending money. I think it's, in some respects a good news story. […] But, you know, dollars could be the problem, 'cause, you know, the

pollies in some respects are responsible for carving up the cake, and public works aren't cheap […] (Healthy planning advocate 2)

Another common theme was an identified need for community health advocates to carefully frame their approach when working with LGs, as typified by the following:

I think it's more a procedural thing. Every organisation has their processes of working through whatever their business is. And that's [LG's] business, it's their process, it's more a question of where we can input into that. You know, I think if we go in there with an agenda of modifying their processes it's met with resistance sometimes […and] what we connect with one council around isn't going to be what every council is going to want to connect around. (Community health advocate 5)

LG practitioners in particular noted the benefits of advocacy works in creating a positive message around such initiatives. Nevertheless, a second potential way to frame the 'problem', as addressing community health being a part of existing LG responsibility and operations (and so built into what practitioners already do), was less commonly adopted. Nevertheless, the 'good news' value of the initiatives, and their impetus, was also benefited by notions of co-benefits (Lowe, 2014). These were identified to include both health co-benefits resulting from other projects (as demonstrated in the first response below) and community health focussed projects also noted to have associated benefits (second response):

I think that what is being implemented is only being implemented as a result of it fitting in with the marketability of developments. So, where developers can see that an active development, like an active living-focused development is a marketable thing, then they'll do it. If, from a transport perspective, if the Department of Transport can see that it will save money, or whatever, then they'll implement active transport. (Healthy planning advocate 1)

Well I think all the work now around – you know, I'm sure they have policies around sustainability, climate change, you know, water sensitive design and all that sort of thing. I think that really ties in well with ours as well. Particularly around you know, lowering congestion and emissions and urban heat islands and you know, saving water, yes we want

green parks […] I think those things tie in really well together […] they've got all their walking and cycling strategies and their active ageing strategies […] (Community health advocate 2)

Such initiatives can be seen to be framed positively (including the use of co-benefits) to act as an enabler to their consideration at the LG level. Alternatively, where they are framed (explicitly or implicitly) as requiring extra work or extra funding, they come to be seen as 'optional extras' that can easily drop from the attention of those decision makers and practitioners at a LG level. Framing such initiatives as being central to LG operation and particularly to their built environment management roles, such as through the socio-ecological perspective of health, allows advocates and champions to place a mandate on LGs to implement these initiatives, even where a supportive legislative framework might be lacking.

Discussion and conclusions

This paper presents an examination of healthy planning and active living initiative implementation with a focus at the LG level. Political attention and problem framing are seen as dominant factors in the success of projects at a LG scale, at the expense of other potential considerations such as evidence-informed policy (Armstrong et al., 2014). Nevertheless, as this is the context that Australian LGs currently operate in, it also offers knowledge of advocates and practitioners working in this setting regarding their experiences of project implementation that might be transferrable to others operating in this setting.

The need for joined-up governance and coordination is noted as an important theme for project implementation. Nevertheless, the need for a champion, often at a 'high level' (either within LG or at state level) to push a healthy planning agenda was commonly acknowledged by both advocates and LG practitioners. Inertia was also a common theme emerging from advocate and LG practitioner responses, both in terms of a negative inertia around current planning practice precluding healthy planning and active living considerations, but also regarding the power of champions, partnership development and problem framing as ways to create a positive inertia around such initiative implementation.

Those above considerations were also common themes emerging in overcoming perceived responsibility transfer. Nevertheless, the increasing of LGs' mandate in this field without commensurate funding, staff development and resourcing led to LG practitioner attitudes of powerlessness that reflect the findings of Allender et al. (2009b, n.p.n.) whereby LG representatives felt 'a perceived or real lack of power to make change', and experienced difficulties operating in such a complex 'legislative framework'. Limited LG capacity and built environment practitioner confidence in operating in this community health space as a result of responsibility transfer are also consistent with previous findings regarding LG operations in health promotion (Pettman et al., 2013)

The power of champions, partnership development and problem framing in enabling initiative implementation presents potential issues around equitable implementation, and is unlikely to be conducive in creating sustainable, long-term change in LG ability to undertake such initiatives. While considered enabling themes in immediate project implementation, these indicate an overreliance on individual actors at the expense of implementing new, more systemic measures to encourage or mandate healthy planning and active living initiatives (Smith, 2014, pp. 487-488, Healey, 2006).

The problems *in* our cities and communities are distinguishable from the problems *of* our cities and communities (Bradford, 2004, p. 40). The problems *in* our cities (e.g. inequitable health outcomes, increasing noncommunicable disease rates) can be viewed as a problem *of* our cities, and by extension the way our cities are planned. A lack of a supportive policy framework, a reliance on political considerations as enablers to implementation, and the continued need to frame the problem in a certain way to achieve support for such projects when the evidence is well-established (Matan and Newman, 2014) present themselves as barriers to implementation. Such barriers lead to ad hoc project uptake, which in turn presents a significant barrier to implementation of healthy planning and active living initiatives at a LG level across Australia.

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Barriers and Enablers to Planning Initiatives for Active Living and Health

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Abstract

The response of local government (LG) to issues of rising rates of noncommunicable diseases (NCDs) is an important one given their roles as place managers. This article explores the experiences of LG built environment and community health practitioners to identify barriers and enablers to the implementation of healthy planning and associated active living promotion efforts. The role of Australian LG in community health is presented, followed by findings from practitioner surveys and policy analysis undertaken, with subsequent discussion of the barriers and enablers. Six key enablers and barriers to successful project implementation were identified: (1) internal LG functioning, (2) the promotion of co-benefits, (3) partnerships, (4) the value of recognition and good news, (5) placing a mandate for action on LG and (6) funding and resourcing.

Keywords: planning, health, active living, multiple streams analysis, Australia, local government

1. Introduction

Many developed countries are experiencing a rising prevalence of chronic NCDs. At the same time, in many of these places, there are persistent tensions surrounding urban government/governance systems (Allmendinger & Haughton, 2013; Hambleton, 2011; Healey, 2010). Against this backdrop, LGs are increasingly having to address community health through changes to the built environment that encourage physical activity. In Australia this can be seen in knowledge translation programs for LG health promotion (see for example Pettman et al., 2013, 72-73), partial state devolution of community health responsibility to LG through Public Health Acts (Jolley & Barton, 2015; Lawless, Lane, Lewis, Baum, & Harris, 2017), and a concerted focus of advocacy group efforts towards LGs and LG practitioners (see for instance Butterworth, 2009; Wiggins, 2008; 2013). Academic attention has been given to planning for health (sometimes referred to as 'healthy planning') in Australia at the metropolitan and regional scales (Wheeler & Thompson, 2010) and to state scale policy (Christian et al., 2013) and advocacy (Harris, Kent, Sainsbury, & Thow, 2016). Given the localised way in which the built environment can impact health and health promoting activities

such as physical activity (Ewing & Handy, 2009; Frank, Andresen, & Schmid, 2004), a study of the perspectives of practitioners involved in the delivery of healthy planning and active living initiatives at the LG level is necessary.

This article examines the experiences of LG built environment and community health practitioners in the field of healthy planning and associated active living promotion efforts to identify enablers and barriers to implementation using a multiple streams analysis (MSA) framework (Kingdon, 2003). Understanding of LG's role in Australia in community health is presented, followed by the findings of the practitioner surveys and policy analysis and discussion of the barriers and enablers.

The powers of LG in Australia are generally limited as they remain a 'creature' of the states; that is, Australian LGs find their 'role and purpose' being defined on a state-by-state (Note 1) basis through state legislation (Aulich, 2015, 163-164). As such, Australian LG can be viewed as 'a vehicle through which to deliver a range of services' rather than having 'importance as a political institution' (Grant, Dollery, & Kortt, 2016, 1028). This limited role of LG in Australia with regard to other comparable levels of government globally is well-documented (Grant et al., 2016). Nevertheless, the devolution of certain powers from state governments, particularly planning and increasingly public health, leads LGs to have not just relevance but an increasingly important role if healthy planning and active living initiatives are to be successfully undertaken in Australia. Indeed, LGs globally have been noted to be increasingly concerned with 'international developments' (Hambleton, 2011, 10). Therefore, while the role of planning by LG in Australia has always been driven either implicitly or explicitly by considerations of public health (Freestone & Wheeler, 2015; Giles-Corti et al., 2014), the remit of LG has arguably been extended to now include addressing global concerns including rising rates of NCDs such as obesity and other diseases related to low physical activity levels (Roberto et al., 2015). This idea of Australian LG's relatively broad remit is supported by Stoker (2011, 22), whose 'typology of local government societal functions' positions Australian LG as having an emerging 'lifestyle coordination' function, which 'involves local government systems stepping beyond welfare service provision and narrow support for economic development to a broader co-ordinating role in supporting citizens' changing and developing lifestyle choices.'

It is within this seemingly contradictory context, on one hand an expectation for LG 'not just to deliver certain services well but to steer a community to meet the full range of its needs' (Stoker, 2011, 17), and on the other relatively limited powers assigned to LG by the states (Aulich, 2015), that many healthy planning and active living initiatives are delivered in Australia. Despite the potential tensions caused by this situation, the important role of LG remains clear. The relationship between the built environment and physical activity (Matan, Newman, Trubka, Beattie, & Selvey, 2015) and health (Rissel & McCue, 2014) is firmly established, and in Australia, LG has a central role in various land use and built environment decisions (Williams & Maginn, 2012).

Furthermore, a mandate and 'meaningful framework' exists for the role of LG across the world in this space, in the form of the World Health Organisation's Healthy Cities movement to implement the Ottawa Charter (1986) (Chapman & Davey, 1997, 82). Healthy Cities (1987) encourages a socio- ecological perspective to be adopted in planning with community health as a central consideration (Chapman & Davey, 1997; Lawless et al., 2017). A socio-ecological perspective involves consideration of both the ecological (i.e. environmental, biological and behavioural influences; Swinburn, Egger, & Raza, 1999, 564) and social (i.e. culture, economics and politics; Stokols, 1992, 7) determinants of health. Browne, Davern, and Giles-Corti (2016, 126) identify the value of LG in having 'unique knowledge and capability to address' these determinants, as well as having a central role given that in Australia it is 'the level of government closest to the people'. The role of Australian LG in this field is important.

1.1 Review of Relevant Literature

Given the important role of LG as discussed above, understanding how healthy planning and active living initiatives come to be implemented, and the experiences of both community health and built environment practitioners in this implementation, is valuable knowledge (Allender, Cavill, Parker, & Foster, 2009a). Nevertheless, until recently such an understanding has been relatively uncharted in the literature, especially at a local scale in an Australian setting (Browne et al., 2016; Lawless et al., 2017). In Australia, Lowe, Whitzman and Giles-Corti (2017) examine barriers and enablers to horizontally integrated health-promoting planning at the state

government level in Victoria, with policy context, policy actors, policy processes and policy content given as relevant considerations. Thompson and McCue (2016, 14) note the politicised nature of healthy planning at the state level in New South Wales, whereby 'an integrated, joined up and collaborative approach' enables health considerations to be incorporated into planning, and framing 'health [as] a core component of the planning process' is central to 'transcend[ing…] conceptual, institutional and social barriers' to partnership formation.

At a LG level, Allender et al.'s (2011, 266-267) study to determine the potential for support of policy interventions for healthy eating and physical activity in Victoria found 'general support' for walking and cycling environment changes and land use zoning/mix, as well as open space provision. Primary barriers to policy change in this study are noted as 'competing priorities and limited funding' (Allender et al., 2011, 268). Another study based in Victoria found that 'urban planning for mixed land use' was perceived as one of the least feasible obesity prevention program types by LG and other practitioners, a perception likely to act as a significant barrier to implementation of such programs (Cleland, McNeilly, Crawford & Ball, 2013, E452). Lawless et al. (2017, 206), in their study of LG officers, found that approximately 45 percent of respondents in Australian LG roles where social determinants of health had relevance were unfamiliar or only moderately familiar with such concepts. Regarding project implementation, the study found that 'more practical information' regarding initiatives, 'new cross-sectoral government decision-making structures', greater requirements surrounding health impact assessments and further research would help practitioners (Lawless et al., 2017, 206). In another Victorian study, Allender et al. (2009b, n.p.n.) note enabling factors for a healthy environment (relating to both physical activity and healthy eating) to include changes that were 'supported by external funding, developed from a local evidence base and sensitive to community and market forces.' Barriers identified include 'a perceived or real lack of power to make change,' a complex legislative setting and 'a reluctance to increase regulation' (Allender et al., 2009b, n.p.n.). While the predominant focus of the above literature on a Victorian setting, and the absence of research with an Australia-wide scope is noted, these studies help set the context for this research.

In contrast to the relatively limited literature on implementation of healthy planning and active living initiatives by Australian LG, a burgeoning amount of non-academic guidance and

advocacy has emerged in recent years. Such sources include online resources with specific information for planners at LG level (ALGA, National Heart Foundation of Australia, & PIA, 2009), national online guides with tailored, state-specific guidance to practitioners (Healthy Active by Design, 2017), state-based guides for 'planning and designing environments for active living' (National Heart Foundation of Australia, 2009) and numerous other advocacy and practitioner tools (such as Lette, 2011; National Heart Foundation of Australia, 2012; NSW Department of Health, 2009; Premier's Council for Active Living, 2012). Yet while the attitudes and knowledge of LG professionals has been examined in some (predominantly) state-oriented studies, and the ever-growing guidance and advocacy is often targeted towards LGs and their practitioners, knowledge surrounding the barriers and enablers that allow or discourage implementation of healthy planning and active living initiatives at a LG level remains scarce. This research aims to help bridge these two knowledge streams and address this knowledge gap.

2. Method

Hambleton (2011, 28) states that 'radical change requires political, rather than managerial, thinking because significant shifts in power are necessary.' A framework that enables political considerations, particularly given the changing role for LG in Australia as outlined in Section 1, is necessary to understanding the barriers and enablers to implementation of healthy planning and active living initiatives. A need for research in this field to understand ''policy world' realities' has also been noted (Giles-Corti, Sallis, Sugiyama, Frank, Lowe, & Owen, 2015, 235), however no established methodology currently exists for such (Kurko & Holden, 2012).

This research uses an exploratory approach combining surveys undertaken by LG practitioners around Australia with policy research. Findings from the surveys and policy analysis are then analysed through a MSA framework using three themes (problems/conditions, politics and policy). A MSA approach has been used in both the health (Tenbensel, Eagle, & Ashton, 2012, p. 31) and built environment (Dudley, 2013) fields, while Lawless et al. (2017) note the relevance of policy agenda setting theories such as MSA to an Australian LG context and to community health. MSA frameworks enable understanding of why certain problems are

addressed over others, why when multiple organisations (including LGs) are faced with comparable issues, different solutions are often chosen (Henstra, 2010) and how the three streams can be brought together through a concerted effort (creating a policy window). In the absence of a dominant policy theory or evaluative framework through which to examine initiative uptake in this emerging field, a MSA framework allows for a 'policy world' understanding (Giles-Corti et al., 2015), particularly necessary given the contested nature of healthy planning at the LG level.

2.1 Sample

Purposeful sampling was employed to identify LGs involved in implementation of healthy planning and active living efforts, in the form of the annual Heart Foundation (HF) Local Government Awards (2014, 2015) and Healthy Spaces and Places (HSAP) online case studies. Both feature cases of 'good practice' LG implementation of healthy planning and active living initiatives across Australia. Selection criteria for participation included that: each initiative must (1) be identified on either the HSAP website (as of 2 December 2015) and/or be featured within the HF Awards 2014 and/or 2015, (2) be a healthy planning and/or active living promotion initiative, and (3) have identified LG as the central actor. The sample therefore reflects the various biases of the sources (i.e. the HF Awards are awarded on a state-by-state and LG population size basis and involve self-nomination, and HSAP cases have been selected as an online resource of 'good practice' examples of these ideas being implemented). Nevertheless, purposive sampling is considered appropriate for exploratory research as undertaken, with the HF Awards and HSAP resource providing a suitable sample of LGs publicly identified as undertaking projects in this field, and providing pre-identified and completed or ongoing, LG-based initiatives for respondents to reflect on.

A total of 20 LGs participated (five identified from HSAP initiatives, five identified from HF 2014 Awards and 10 identified from HF 2015 awards). Of the 20 LG surveys returned, 11 were completed by community health practitioners and nine were completed by built environment practitioners, with 11 female and nine male respondents. Surveys were completed on behalf of respondents' LGs. Responses were returned from LGs from across South Australia (six), New South Wales (four), Victoria (three), Queensland (three), Tasmania (three) and the Northern

Territory (one). Due to academic interest in the coming together of two previously (at least recently) disparate professions (Thompson, Kent, & Lyons, 2013), responses are subsequently identified as being from community health [CH] or built environment [BE] practitioners.

2.2 Procedure

Surveys were distributed via email across two rounds. Given the aims and iterative methods of this exploratory research, data saturation (Allender et al., 2009a) was used to gauge a point of suitable data collection, with additional data gathered beyond that point considered to produce only more data rather than increasing accuracy (Carter & Little, 2007, 1321). Upon return, the respondents' LG's planning and strategic policy context, any additional attached information (non-requested but in some instances provided and referenced in survey responses) and the survey itself were analysed using data analysis software NVivo 11. Sensitising concepts from MSA informed the coding undertaken immediately following the return of each survey, with emergent themes identified. Use of sensitising concepts allows for an analysis lens to be proposed and tested, but avoids 'forcing data into pre-existing concepts and theories' (Thornberg, 2012, 249). Emergent themes were referred back to existing data to iteratively validate preliminary findings. Upon data saturation the identified themes were then further coded as being supportive (enablers), limiting (barriers) or having both supportive and limiting impacts (barriers and enablers) on project implementation in the experience of the practitioner (Note 2).

2.3 Instruments

The surveys were electronically distributed as Microsoft Word documents and comprised 17 open-ended, qualitative questions, with no word limit for responses. As discussed in Section 2.2, documents relating to each LG's planning and strategic policy context, and any ancillary files returned by respondents were also analysed. NVivo 11 software was used to analyse all data.

3. Research Findings

The national scope of this research enabled the identification of broad themes. As respondents' selection was based on successful cases of implementation, identification of enablers was more prevalent than barriers. Nevertheless, enablers to successful project uptake and barriers that were encountered in implementation were able to be discerned, with the study revealing six key themes: (1) internal LG functioning, (2) the promotion of co-benefits, (3) partnerships, (4) the value of recognition and good news, (5) placing a mandate for action on LG and (6) funding and resourcing. These are outlined below.

3.1 Internal LG Functioning as both Barrier and Enabler

The most commonly identified theme in influencing project uptake was the internal functioning of the LG. This theme was commonly noted as a potential barrier, but importantly was recognised as an enabler in every case of delivering healthy planning and active lifestyle initiatives.

A commonly identified aspect of internal LG functioning that acted as a barrier was limited LG practitioner knowledge regarding concepts of community health promotion, with practitioners unaware of such concepts holding potential health-affecting roles in LGs (refer to Table 1). Further, siloed operation within LG, both inter-departmental and intra-departmental was identified as being detrimental to LG operation and ability to implement such initiatives.

Table 1. Internal LG Functioning Qualitative Finding Extracts

Finding	Quote Extract	Respondent
Limited practitioner knowledge	'many planners […] still don't see the connection between their work and peoples' health'	BE1
Siloed LG operation	'the challenge is to get the organisation to understand that health is everyone's business'	CH1
	'A lack of integration and cooperation' makes it 'very easy for people to focus on their own areas and continue the business as usual approach'	BE1
Active uptake and	Assisted by and evident through 'increased knowledge and understanding of the issue and the role that planning must play' amongst LG staff	BE1

partnership formation		
Framing of health as a shared responsibility	'ensuring that my team and I are not viewed as the primary 'owner' of Council's health and wellbeing response – it needs to be viewed as a shared responsibility'	CH2
	Functioning that allows for 'a supportive and informed group of councillors and a strong culture of working across the organisation' including 'people that can work [to] transcend high level strategic thinking [and] planning and detailed design [and] implementation'	BE1
	An environment where '[s]taff are generally all on the same page'	BE2
Supportive policy framework	'The current policy framework is integral in implementing such projects and our work is often highlighting many principles and achieving countless objectives documented in the policies'	CH3

Nevertheless, these barriers could generally be overcome where there was active take up internally from staff and where partnerships (refer also to Section 3.3) were pursued. Such partnerships were identified as forming either between various departments within a LG, or with LG and external stakeholders. Both partnership types led to improved operation and cooperation within the LG, while also breaking down existing siloed operations.

Another contributor to initiative implementation was the framing of community health as a 'shared responsibility' [CH2] among LG departments such as transport and land use. This included LG functioning that placed a mandate for action on both non-elected practitioners and elected officials (councillors), and the need for an organisational structure that fostered continued communication and cross-disciplinary discussion. In many instances this was formally facilitated, however cross-disciplinary communication was also determined by individual practitioner attributes in particular roles, and relationships between individuals within these roles.

A supportive policy framework was also identified as being present in all instances of successful implementation. Typically, roles in delivering healthy planning and active living initiatives were found to be supported through reference back to principles and objectives outlined in LG policy. This included where a LG's strategic direction specifically identified a project to be undertaken or where improvement of community health was an objective or aim generally. It also included situations where co-benefits, 'additional benefit[s] arising from an action that is undertaken for a different principal purpose' (Capon & Rissel, 2010, 110), were identified as having strategic importance for the LG (refer also to Section 3.2). Vertically

(between state and LG) and horizontally (inter-departmental) integrated planning was also noted to be assisted by LGs having municipal public health plans and by various other LG plans, policies and strategies. In numerous instances the creation of a municipal public health plan was identified as a key influence on the direction of overarching strategic plans, which in turn prompted relevant initiatives to be considered and undertaken [CH1, CH2].

Internal LG operation can restrict project uptake through limited practitioner scope or siloed operation. In contrast, enablers to project uptake include how conducive LG operations are to partnership formation, the perception across a LG that community health is a shared responsibility, and through a supportive policy framework. Nevertheless, various other considerations also emerge as both barriers and enablers to project implementation in this field, as discussed below.

3.2 Promotion of Co-benefits as an Enabler

The promotion of co-benefits was the second most commonly identified theme regarding project uptake. Perhaps unsurprisingly, no instances of promoting co-benefits of an initiative acting as a barrier were identified. Two scenarios whereby co-benefits were employed to promote healthy planning and active living initiatives were identified: one whereby a community health program is supported by other co-benefits such as to the economy or built environment, or conversely where community health is presented as a co-benefit of a project focusing on and undertaken primarily for reasons other than community health.

The range of co-benefits identified was broad and included delivery of various 'positive physical, social and economic benefits' [CH5]. Most initiatives were framed as being built environment projects undertaken for built form or economic reasons, with health impacts then presented as a co-benefit (refer to Table 2). Some LG's initiatives purposely omitted phrases such as 'health' and 'fitness', with these concepts being implicit program outcomes, with notions of 'feeling good', 'fun' and 'friends' instead forming the impetus for projects when discussed with the community [CH4].

Table 2. Promotion of co-benefits qualitative finding extracts

Finding	Quote Extract	Respondent
Health as co-benefit	'We were looking at ways in which we could make our city centre perform better and […] the research was also indicating that making the physical environment more people friendly can also lead to better economic performance, reduced environmental costs, improved social connectedness and health and wellbeing. It was not conceived as a public health project – however it was understood that this could be a positive outcome'	BE1
	Community health 'is integrated into everything that we do, however it is not always explicit (and may not need to be) […] If [built environment projects are] done well, the incidental activity will have health benefits'	BE1
Economic drivers or co-benefits	Initiatives framed as reducing 'duplication of services, [providing] financial benefit with efficient use of resources (human and material) and ultimately [providing a] service [that] is more effective'	CH6
	'the initial interest came from concerns by councillors that this was a low-performing council asset that required substantial financial subsidies from council'	BE3
	Active transport a 'low cost, or no cost' form of travel	BE8
Built environment drivers or co-benefits	'creating a genuine community meeting place' and 'activation of the public realm'	CH5, BE2
	'slower traffic, increased pedestrian permeability, safer intersections' and spaces 'designed for people and not cars'	BE1, BE2
Social co-benefits	'opportunities for local employment and training' through to improving 'housing diversity' and 'tackling […] significant socio-economic disadvantage'	CH1
	'provid[e] the best opportunities for residents to enjoy healthy and connected lives and flourish in their local community'	CH2

The fact that other considerations than health were generally responsible for project uptake was particularly apparent when economic co-benefits of projects were referenced, and where LGs were framed as an asset owner seeking to maximise the productivity of these resources such as through reducing duplication or improving efficiency. Such concepts were commonly identified as the source of LGs' initial interest in these initiatives.

Improved built environment outcomes were also oft-cited co-benefits of such projects. More commonly though, these outcomes formed the central impetus for program creation, with community health then acting as a co-benefit. Projects were noted as having positive built form outcomes including through facilitation of community interaction, improved settings for active transport and reduced traffic congestion. While these aspects can by extension promote more healthful behaviour such as active travel, practitioners (whether in community health or

built environment roles) more commonly detailed built form changes such as these rather than population health changes resulting from projects.

Improved social outcomes were generally identified as a co-benefit of primarily economic and/or built form initiatives as discussed above. Such co-benefits ranged from employment opportunities through to improved liveability and social connectedness. It is noted that the associated benefits of such projects also extended to LGs themselves, such as improved internal functioning and the ability for the LG to gain recognition and positive attention (refer also to Section 3.4).

Each of the above co-benefits are ultimately contributors to community health when considered from a socio-ecological determinants perspective. This was generally acknowledged by respondents, who recognised 'the importance of considering all aspects of community health – infrastructure, social interaction, accessibility and affordability and the need […] to get these right' [BE4]. Economic or built form benefits can therefore be considered significant enablers of projects, with both more commonly discussed than actual health outcomes.

3.3 Partnerships as Enablers

As identified in Section 3.1, partnerships were commonly identified as a 'useful strategy' to overcome siloed LG functioning [CH4]. Partnerships involving LGs were only identified as an enabler. The possibility that ineffectual partnerships, partnership breakdown or a lack of partnership formation might act as a barrier is noted, however is outside the scope of this study given only respondents involved in successful cases of implementation were sought.

Types of partnerships identified as being beneficial varied greatly and included projects undertaken across LG departments, projects guided by interdisciplinary internal advisory groups, partnerships with community sector service providers, partnerships with local commercial operators [CH7] and private developers [BE4], partnerships between multiple LGs [CH8], state government-led guidance (with LG as implementer) [CH5] and federal government-initiated partnerships (primarily funding partnerships, again with LG as

implementer) [CH7]. Such partnerships were multifaceted and complex, and no particular strategy or consistently identified enablers for partnership development emerged from the data. Instead, partnerships appeared to develop on an ad hoc and largely opportunistic basis. Nevertheless, the importance of partnership formation and cooperation in this re-emerging field was commonly recognised by respondents (refer to Table 3).

Table 3. Partnerships qualitative finding extracts

Finding	Quote Extract	Respondent
Importance of partnerships, collaboration	'Disease prevention can involve collaboration amongst professions, providers and institutions which have traditionally been separate. Engagement, coordination and collaboration are key'	CH6
LGs 'open' to partnerships	'[LG] supports working with all industry sectors (government, private developers) to achieve the best possible outcomes for its residents. Any pieces of work that assist Council in achieving its objectives are welcomed'	BE2

Multiple benefits of forming partnerships both for the LG and for overall community health were identified, and respondents commonly positioned their LG as being open to new and innovative partnerships. The necessity of local partnerships in the successful implementation of initiatives is particularly noted. While partnerships with 'higher' (state and federal) levels of government in some instances provided funding to LGs, local partnerships, either internally within the LG or with external stakeholders, were identified as an enabling factor in almost every instance of implementation.

3.4 Recognition and 'Good News' as an Enabler

The majority of respondents identified positivity that such initiatives created and the recognition that comes along with an LG implementing these. Such recognition was identified as coming through awards, identification of the LG as engaging in best practice, or through community or media feedback and perceptions of the LG generally.

The political viability of healthy planning and active living initiatives at the LG level (refer to Table 4) was closely linked to the 'good news' aspects of such initiatives [BE5]. Where initiatives were successfully implemented they were also seen as achievements that the whole organisation could claim. Also associated with this notion of achievement was a sense of

'healthy' competitiveness, with LGs striving to be seen as innovative and as taking a proactive role in leading their community [CH8].

Table 4. Recognition and 'Good News' qualitative finding extracts

Finding	Quote Extract	Respondent
Initiatives politically viable, supported	'Current local members and executive management very supportive'	CH6
Positivity around LG's role in initiatives	'We were very proud of our project'	BE6
	'The project allowed us to summarise and celebrate some of our successes and subsequently be acknowledged at the State and National level'	CH4
	'It was […] a great way to remind the community of progress, and celebrate the ongoing participation in projects'	BE7
	'A ground breaking initiative that is a first for a regional Council in [the state]'	CH5
Positivity supporting, rather than driving, projects	'the kudos that went with [the project is] a bonus'	BE4
Most commonly considered by elected members of LG, politicians	Initiatives are 'very visible, [with] lots of opportunities for our Mayor and councillors to be photographed with the community' and '[l]ots of good news stories for the media'	CH1

Various positive phrases were used in discussing LG's roles in the initiatives. Such positivity revolved around pride, celebration, and a showcasing and acknowledgement of LG's efforts. This positive message was presented as a subsequent consideration and generally was not identified as driving initial interest in any project, although the good news aspect of such projects was identified as providing momentum after initial project implementation. Such positive recognition was generally considered most desirable to elected members and politicians.

3.5 LG's Mandate as both Barrier and Enabler

As discussed in Section 1, LG in Australia can be viewed as having always had community health as a core function, whether this is explicitly acknowledged or not. Nevertheless, perceptions surrounding whether 'community health' is influenced by, of concern to, or the

responsibility of LG impact project initiation. Such perceptions can either support or limit project uptake.

A commonly identified barrier was the questioning of LGs' role in the provision of healthy planning and active living initiatives, with such questioning occurring both within LG, by practitioners or elected members, and throughout the community (refer to Table 5). Where the community was identified as questioning LG's mandate, this was considered to be due to a limited conceptual definition of 'health' (Note 3), and difficulty in reconciling with a socio-ecological perspective. Such a barrier also extended to attitudes of practitioners within LGs (refer to Section 3.1).

Table 5. LG's mandate qualitative finding extracts

Finding	Quote Extract	Respondent
Questioning LG's role – community	'Many in the community were not aware of the connections between the design of the physical environment and how it can influence your likelihood to walk or cycle more or less. Some community members are sceptical of local governments' role in seeking to influence peoples' behaviour.'	BE1
	Lack of '[p]olitical acceptance that local government has a role to play in terms of contributing to the health of the community'	BE4
Questioning LG's role – within LG	Need for 'increas[ed] awareness amongst Councillors and staff that Local Government has a role to play in promoting community health rather than just being a provider of facilities'	BE4
Responsibility transfer	'Local government is always concerned about [cost and responsibility transfer]. Local government needs support to implement programs that are broader than [the] funding scope was designed to accommodate'	CH9
	'State government discharging responsibility for health to local government without appropriate funding in place'	CH5
Use of socio-ecological determinants perspective to provide mandate	'Almost all Council services' framed as being 'aimed at improving or protecting public health, from bike paths that support physical wellbeing to men's sheds that enhance emotional and psychological wellbeing'	CH5
	'Health in local government is based on the social determinants of health model and on creating environments for health. It intersects across most work in local government so the role of health planning is to support the joining of the dots'	CH1

There was also the perception amongst numerous practitioners in LG (both respondents and colleagues identified by respondents) that any impetus placed on LG in community health promotion amounted to responsibility transfer from 'higher' tiers of government. Responsibility transfer was most commonly identified as coming from state governments, which are generally responsible for providing and funding clinical healthcare in Australia.

However, despite perceptions of responsibility transfer, an associated enabler to project support was the use of a socio-ecological determinants model to clearly mandate a role for LG in this field. Such a perspective was evident in the majority of responses, and was seen to encompass most roles performed by LG.

The level of impetus placed on LG for action in this field determined whether this consideration was a barrier or enabler to project implementation. Where practitioners or the community were unsure of LG's role in community health promotion, project implementation was made more difficult. Alternatively, where LG's role was considered central in addressing community health, or where the good news value of previous projects created a positive inertia going forward, project implementation was assisted.

3.6 Funding and Resourcing as both Barrier and Enabler

Compounding the impacts of those barriers identified in Sections 3.1 and 3.5 was the overarching consideration of LG funding and resourcing. Particularly relating to responsibility transfer, concerns were raised regarding an increased LG mandate in the field, often with no rearrangement to existing funding or resource allocation. Respondents identified program efficacy, community consultation, education programs, research and staffing to be constrained by resourcing. The largest barrier to incorporating health into practitioners' roles was '[a]ccessing funding' [BE6], as too was the primary barrier to implementation of such initiatives (refer to Table 6). Limits to funding and capacity were identified as a barrier to future projects even where other enablers such as those outlined in Sections 3.1 to 3.5 were present. For instance, in a case where a previous project allowed for 'greater awareness of health considerations in the organisation, the limits on capacity remain[ed]' a barrier [BE7].

Table 6. Funding and resourcing qualitative finding extracts

Finding	Quote Extract	Respondent
Limited funding	Primary barrier to implementation of initiatives 'is, and always will be, funding and resourcing'	BE6
Funding provision	Initiative 'would not have been possible without the [one-off] funding', opportunities for such are 'extremely rare'	BE6, BE7

It follows that where limited funding acts a barrier, provision of funding will be identified as an enabler, with many cases identified as achieving success only following provision of funding, generally through one-off or ad hoc arrangements. Limited resourcing and funding was however noted to encourage LGs and individual practitioners to pursue unique funding opportunities or approaches. Multiple projects identified were supported through private funding including private developers (reaffirming the value of local partnerships as per Section 3.3) and businesses.

4. Discussion

The emergence of six central themes regarding healthy planning and active living initiative implementation at the LG level is identified, with three themes having potential to act as barriers (internal LG functioning, LG's mandate for action in this field and limits to funding and resourcing), and all six having potential as enablers. Examining these barriers and enablers in isolation is, however, to simplify a complex set of interactions within and external to the bureaucratic agency of LG (Stoker, 2011). This section then attempts to further contextualise and examine some of the key findings identified in Section 3.

Firstly, it is noted that where siloed LG operations were existing they were not a prohibitive barrier to project implementation. Where other enablers (often the promotion of co-benefits) led to project uptake, this was generally noted to result in a positive cycle of silo breakdown, improved LG functioning and improved subsequent or continued project delivery. Further, while the strategic direction of each LG was considered an important enabler in allowing for healthy planning and active living initiatives' implementation, such strategic directions and guidance relating to these were regularly noted to be principles only, and so easily ignored. This was able to be addressed, however, through consideration of co-benefits, where health-promoting initiatives could be tied into alternative issues around which LGs did have specific policies or objectives.

The relative complexity of the relationship between community health and the built environment (see, for instance, Kent, Thompson, & Jalaludin, 2011), particularly when the contextual and site-specific, geographic and population differences among LGs represented

are considered, is noted. Combined with limits to funding and resourcing, this situation can create difficulties in monitoring and measuring precise health benefits of a single program. As a response, many LGs were found to present and discuss initiative participation rates and some key successes regarding general notions of improved community wellbeing or quality of life, rather than presenting more rigorous health findings from projects (such as, for example, the longitudinal study by Giles-Corti et al., 2013). This then led to LGs and respondents having a greater focus on the co-benefits of initiatives for their community (Giles-Corti, Foster, Shilton, & Falconer, 2010). Also of consideration is time: planning timeframes are long, as are the beneficial health impacts of such projects, while Australian political cycles, including at LG level, are comparatively short (Hambleton, 2011). Co -benefits in this instance present a way for LGs to show more immediate benefits and 'good news' surrounding a project to their constituency.

It is acknowledged that the importance of partnerships in this field is not a novel finding (Kent & Thompson, 2012; Thompson, Kent, & Lyons, 2014), and reflects a re- emergence of the previous close partnership between the planning and health professions (Freestone & Wheeler, 2015). Indeed, the formation of partnerships has been noted as a way for 'wicked […s]patially concentrated problems' to be overcome through 'place sensitive, holistic approaches […] delivered through networked relations crossing program silos, even jurisdictional turfs' (Bradford, 2004, 40). The findings outlined above reflect this notion, as the development of partnerships allowed for a breakdown of siloed operation in LGs, and partnerships have previously been noted as both a response and contributor to complexity (Sinclair, 2011, 78). LG is also identified as a level of government capable of addressing a 'multiplicity of factors' (Chandler, 2010, 13). Partnership formation can be seen as an effective way to address this multiplicity.

Further to the above ideas of complexity and multiplicity, the findings also reflect Stoker's (2011, 23) 'boundary problems' in public policy, whereby 'the boundaries between sectors of life and different institutions have become increasingly blurred'. Stoker's (2011, 23) example of this is illustrative, and has relevance to the healthy planning and active living field: does the mandate for health rest with the 'citizen who should eat and drink appropriately, the state that should provide good advice or companies that should sell healthier food'? Similarly, such

questions of framing were found to be relevant considerations in determining whether there was a mandate for LGs to act in this space, either from the community, LG practitioners or from higher levels of government. Where LG was framed as playing a central role in influencing the health of their constituents, project implementation was assisted.

With regards to funding, both limited funding for initiatives and to LGs generally were found to have detrimental impacts to project implementation. Further, while the 'adaptive capacity' of LGs in demonstrating 'innovation and creativity' (Platts-Fowler & Robinson, 2016, 763) to secure funding is noted as an enabler in Section 3.6, this scenario can be seen to further entrench health inequalities, as ad hoc funding opportunities present themselves to some LGs and not others, and to some areas within an LG and not others. Such ad hoc adoption occurs at the expense of sustainable, evidence based implementation of projects. This reflects the findings of Pettman et al. (2013, 73), who found in the 'health policy and practice' sector of Australian LG that 'the extent to which LGs are being supported externally […] to implement evidence-informed initiatives, and guidance as to how to integrate these initiatives with existing health plans, has also been inconsistent.' Ad hoc, inconsistent and short-term funding opportunities and the need to form partnerships to secure such funding sits in sharp contrast with state government functioning in Australia, whereby health funding is supported through established mechanisms (see for instance, Section 5 'Health Cluster', New South Wales Government, 2017).

For LGs these findings have relevance given internal LG functioning was just one of six major themes emergent as impacting on project uptake. This indicates a significant role being played by external factors as well as reliance on individual staff members in key roles within a LG for successful implementation. Further, findings show that at an individual level, practitioners in this space require engagement not just in development of policy, but in the political and problem (framing) aspects as well.

Though undertaken in Australia, this research is hoped to have relevance to practitioners and policy makers in similar governmental or institutional settings, and in countries facing similar issues (i.e., automobile dependence; increasing prevalence of NCDs). The broad scope of the six themes increases their likelihood of transferability, though opportunities for similar studies

in other parts of the world, or more localised studies in Australia might be avenues for future research.

5. Conclusion

This research, through surveys with 20 Australian LGs has determined six key barriers and enablers to project uptake in the healthy planning and active living space at a LG scale in Australia: (1) internal LG functioning, (2) the promotion of co-benefits, (3) partnerships, (4) the value of recognition and good news, (5) placing a mandate for action on LG and (6) funding and resourcing. While practical concepts and themes were emergent from LG practitioners in relation to particular projects, the findings reveal that implementation of projects also face underlying and structural barriers such as ad hoc funding provision, responsibility transfer and the need to rely on political and problem (framing) considerations in addition to policy development and implementation. This dependence of projects' success on the engagement of individual LG practitioners in politics and problem framing *in addition to* policy development and implementation indicates that the re-emerging field of healthy planning and active living promotion has not yet been integrated into the day-to-day functioning of Australian LG, despite states increasingly placing an emphasis on action at this level, and calls for such in relevant guidance, advocacy and literature.

Acknowledgments

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Notes

Note 1. For brevity Australia's two primary mainland territories (Australian Capital Territory and Northern Territory) are included in the term 'states' as used throughout this article.

Note 2. Understanding of the terms 'barriers' and 'enablers' for the purposes of this study is consistent with the use of those terms by Smith (2014).

Note 3. WHO and Secretariat of the Convention on Biological Diversity (2015, xii) define human 'health' as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'.

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Article

Policies, Politics, and Paradigms: Healthy Planning in Australian Local Government

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Abstract: Local government in Australia is critically positioned to provide built environment initiatives that respond to the increasing prevalence of non-communicable diseases (NCD), climate change, and various other human and ecological health considerations. However, action on the ground has not been as widespread as might be expected, particularly in improving community health. This research explores the barriers to and enablers of the implementation of healthy planning and active living initiatives through in-depth interviews with healthy planning and active living advocates. Advocates are seen to promote healthy planning in relatively weak policy settings, where politicised, largely reactive decisions by individual politicians or practitioners are the main determinants of project success. The most important factor affecting project uptake and implementation is how the 'problem' of healthy planning, or what might be considered a healthy planning paradigm, is presented. Such a paradigm includes a strong reliance on the co-benefits of projects; it is also subject to the way that healthy planning is communicated and framed. Potential problems around such a setting are subsequently examined, identifying the potential reasons for the slow delivery of healthy planning.

1. Introduction

1.1. Human Health, Planetary Health and the Built Environment

The close link between the health of the human population and that of the planet [1] is recognised through the concept of planetary health [2–5]. Such a concept is not new; indigenous societies have long understood this relationship [6,7] through the perspective that "human health cannot be seen separately from ecosystems" [8] (p. 301). Today, however, given the increasing rates of urbanisation [9], this link is most obviously manifested in the built environment [10–13]. For instance, particularly in higher income societies, the influence of the built environment on planetary health has become evident through the effects of the development of low density, car-dependent suburbs with limited land use integration [14]. Such land-use patterns are associated with impacts that are placing an increasing burden on the natural environment [15,16] as well as posing significant social [17–19] and economic [20] challenges. These land-use patterns also offer limited opportunities to socialise locally or participate in active forms of transport [14], while also leading to higher greenhouse gas emissions [11]; they are also due largely to increased reliance on motorised transport [21–23]. The impacts on human health and well-being are expected to be further exacerbated by climate change [24,25], particularly for indigenous people [26] and those in lower income countries [27]. So, while managing the built environment might currently have an implicit goal of improving community and individual health [28], as the prevalence of non-communicable diseases (NCDs) continues to rise and the impacts of climate change worsen, the role of place managers, such as local government (LG) and LG practitioners, will gain even greater importance [25]. There is a significant opportunity to address these problems in a coordinated manner, through changes to the built environment [20,24].

Given this opportunity, and the associated benefits that such actions can have [12], urban planning attention has recently shifted focus [13], moving towards the encouragement of active and public transport [29], such as through land-use planning [30,31] and behaviour change programmes [32–36]. However, while there has been "exponential growth in research, teaching, and policy related to health and the built environment" ([37] p. 1542; [12]), and the imperative for action is growing [38], efforts to make more healthy, sustainable built

environments are far from ubiquitous. This might be a result of the complexities of "translating that evidence into policy and practice at multiple levels" [39] (p. 1), with such initiatives proving "hard to activate on the ground" ([31] p. 2; [18]) and subsequently resulting in the relatively slow uptake of healthy planning principles. In a comprehensive Australian review [40,41], these principles were found to include "getting people active . . . connecting and strengthening communities . . . and providing healthy food options" [42] (p. 19). The focus of this study is planning that addresses the first principle, though the three are noted as interconnected. With these three principles in mind, healthy planning can be defined as "planning for people and how they use different environments"; in doing so, it "places the needs of people and communities at the heart of the urban planning process and encourages decision-making based on considerations of human health and well-being" ([43] p. 385; [44]). Additionally, active living initiatives are those that encourage "a way of life where people integrate organised or informal physical activity into their daily routines" ([45] p. 6; [46]). The slow uptake of healthy urban forms is particularly evident in Australia [47], where built environments that are detrimental to health are retained or continue to be created [48]. Indeed, in many contexts, land use and transport planning work against the provision of health-supportive environments [23].

Given that there is a strong evidence base for change, yet relatively little difference is evident on the ground, the need to explore factors influencing the implementation of healthy planning and active living initiatives is clear. To date, greater academic focus has necessarily been afforded to establishing the causal linkages between urban form, transport choices, and human health [13,49–51]. Although town planning had its origins in efforts to improve public health [52,53], the two professions developed independently for a long time, and their relationship has only recently re-emerged. With these linkages now established [12,41], the opportunity (and imperative) for academic attention to turn towards the implementation of initiatives that improve public and planetary health transpires [54].

1.2. Significance of the Study

Having such an imperative in mind, this study aims to identify the barriers to and enablers of the uptake and implementation of healthy planning and active living initiatives. This research focusses at a LG level, as although issues such as NCDs present a global challenge, addressing these challenges ultimately requires local action [18]. The key role of LG in addressing such issues has been noted [55,56], but limited academic attention has been focussed on this level of governance to date. Attention has more commonly been afforded to healthy planning at the state government level, perhaps due to states' legislative power over LGs [57], or given Australian states' traditional role in providing for acute health care treatment such as through hospitals. Yet the 'day-to-day' roles of planning and policy implementation are generally delegated to LG in Australia [58], which are important considerations given the role that the local setting can play in community and individual health [59]. Therefore, while states might set a general direction, and are important actors through their legislative power over LG, LGs can ultimately be seen in many instances as being responsible for the delivery of healthy communities [56]. By focussing on LG, this research provides an examination of this important level of governance, and addresses the practical issue of initiative implementation (or lack of implementation), which is a consideration that is often overlooked in public health policy [14,54].

In Australia, practitioner knowledge and perspectives have been sought regarding climate change impacts on human health [25], agenda setting in healthy planning at the state level [47], the feasibility and effectiveness of obesity prevention programmes [60], and healthy planning by LG. Yet relatively less attention has been afforded to the perspectives of advocates in this space, particularly with a focus at the local level. However, advocacy has played an active role in advancing healthy planning efforts in Australia [56,61], and such perspectives are important.

1.3. Current State of Research

Few studies have explicitly explored the concept of barriers and enablers with regard to healthy planning and active living policy or implementation, particularly within an Australian

LG setting [14,61–63]. However, healthy planning literature does offer insights into settings that might encourage or discourage healthy planning and active living initiative uptake and implementation. The existing research context is explored briefly below.

Barriers to integrated planning for health in the Australian Victorian state context have been noted as including tokenistic consultation between departments, a politicised (state) planning system, insufficient resources, and difficulty in implementing even established policies [14]. A commonly identified barrier at the state scale is the siloed operation between departments [14,64]. A lack of incentives for practitioners with regard to collaboration [18] or the consideration of social determinants of health (Note 1 in Appendix A) [62] can also inhibit project implementation. At a LG level, practitioner perceptions of powerlessness to instigate change can present a barrier to action [63]. Further, skepticism by practitioners regarding the viability of land use planning's ability to address obesity concerns [60], as well as limited practitioner knowledge regarding the social determinants of health [62] and the health impacts of climate change [25], could all potentially prohibit project adoption or implementation. The organisational structure of LGs can also limit healthy planning uptake and implementation [61].

Limited consideration of health in state policies and poor integration between these policies can lead to ad hoc, developer-led planning [14]. This policy setting can at the same time be prohibitively complex [64,65], which can make LG practitioners reluctant to add healthy planning policies to an already complex setting [63]. Competing priorities of LGs and limited funding can also be prohibitive to healthy planning and active living initiatives [61,66].

In terms of enabling factors for healthy planning, the benefits of integrated planning and thinking have been noted internationally [18] as well as in an Australian setting [67]. Australian guidance for practitioners operating in the healthy planning field also notes the importance of integration including "working across sectors, roles and responsibilities, regulations, policies and programme delivery" [56] (p. 12). The importance of sharing "ownership of the processes and the end goals, and having a clear understanding of who does what during implementation" is also noted [56] (p. 12). A supportive policy structure from

higher levels of government than LG can encourage such initiatives, with an integrated approach again noted to have importance [18].

The health impact assessment (HIA) of plans and projects [68,69] is identified as a possible avenue to integrated planning at the state level [14], and for greater consideration to be given to social determinants of health by LG practitioners [62]. Healthy planning efforts are also supported through "formal intersectoral governance structures", whose arrangements include LG as well as those at a regional level, and informal, (state level) interdepartmental relationships [14] (p. 7). The importance of intersectoral collaboration has also been identified at a New South Wales state level [64] and at the Victorian LG level [62], and the value of partnership formation in the healthy planning field is well recognised [56,61,64]. The need for a suitably skilled public sector workforce [14] in turn makes education, training, and professional development important considerations in furthering healthy planning [56,70]. Practitioners have indicated that "more practical information about effective interventions" could promote action in this field [62], particularly where interventions (and evidence stemming from these interventions) are developed locally [63]. Localised research into causal links between communities' built and social settings and their health can assist project implementation [62], particularly where external funding is provided to LG, although current funding mechanisms in Australia raise concerns over their continuity [63]. A strong mandate for LG action—whether from bottom–up, community lobbying [63] with a focus on the good news value of projects, or from top–down, government-led policies [61]—can also assist project uptake and implementation.

Within this summary of barriers to and enablers of considerations of healthy planning, a strong focus is evident at the state scale. Few studies focus solely on identifying supportive or prohibitive factors to project implementation, particularly at the LG level. Further, limited studies reflect the multidisciplinary nature of the healthy planning field, which is influenced by a diverse array of actors in various roles operating at various levels. This research aims to address these research gaps, as discussed below.

2. Materials and Methods

Approaches that allow for an understanding of the "policy world" can help to bridge the "research translation gap" between researchers and practitioners [71]. Without a grasp of this policy world, technical solutions alone are unlikely to benefit or influence practice [54]. It is important, then, for healthy planning research to engage in political science [39]. Yet the policy world is complex and influenced by various actors across multiple disciplines, as well as by numerous "political, social, cultural and historical factors" [14] (p. 3). One framework that enables these factors to be examined is multiple streams analysis (MSA), in which policy, problem, and political considerations are each seen to have influence over decision-making and policy uptake [72]. Adopting an MSA framework can allow for a more nuanced understanding of decision-making processes to emerge, avoiding the linear model of the stages heuristic theory [54]. Its relevance and applicability [61] justify the adoption of the MSA framework in this study, as discussed below.

2.1. Multiple Streams Analysis (MSA)

An MSA framework describes the conditions that must come together in order for policy action to occur [72]. Under this model, the conditions (or streams) include problems, politics, and policies [72]. The problem stream relates to how decision-makers view a problem, or whether an issue is even viewed as a problem that is necessary to address [23]. The policy stream relates to policy options, and influences the range of policy responses that are available to decision-makers [72]. Lastly, the politics stream relates to public opinion about an issue [73]. The streams exist (or at least act) independently [74], until they are brought together to form a "policy window" [75]. The policy window is an opportunity for the policy setting to change: at this stage, "a problem has been recognized, there is an acceptable solution available and the political climate is right" [76] (p. 114). Such a window presents an opportunity for a policy entrepreneur (an individual or organisation) to intervene and influence the policy process ([76] p. 114; [72]).

The use of this framework helps avoid some of the criticisms of rational models of policy processes [54,77], and is well suited to complexity [78]. The framework is applicable to

municipal settings [73], and has been posited as a framework to guide health research on urban planning [23]. MSA has been used in examining drivers and barriers to local health policy development in the Netherlands [76], and agenda setting frameworks such as MSA have been noted to have relevance to community health in an Australian LG context [62]. Importantly, while it is most commonly applied to agenda-setting, an MSA approach can also be used to examine policy application and implementation [79]. The chance of policy implementation has been found to depend on the three streams, as well as the governance structures around them [80], which is a relevant consideration given the contested nature of governance in this field between state and LG levels [57]. The MSA model has also been built around examining implementation, such as through an expansion of the number of metaphorical streams used [81], although the original three streams are "well suited to analyse how policies are applied and implemented across space and over time" [79] (p. 507). This has seen the recent use of MSA in examining implementation [57,61,80,81], with the problem and political streams noted as having particular relevance [79].

2.2. Sample

A snowball sampling method [66,82] was employed to identify and recruit potential interviewees. Initial participants were recruited from the researchers' professional networks, and potential new interviewees were identified during interviews with these key informants.

Selection criteria limited participants to healthy planning and active living advocates in Australia. Advocates were defined as those who had made a significant and recent (within the last three years) contribution to: (1) practice, and (2) public debate around healthy planning and active living initiatives at the LG level. The participation of advocates was specifically sought, as the healthy planning and active living field has noted political commitment for changes that address health inequalities to be of particular importance [14]. Data collection proceeded until data saturation was deemed to have occurred [66,82], resulting in 28 participants.

Of these 28 participants, 11 were female and 17 were male, with 46.4% working in New South Wales (n = 13), 28.6% working in Western Australia (n = 8), 14.3% working in South

Australia (n = 4), and 10.7% working in Victoria (n = 3). There were no interviewees from Queensland, Tasmania, the Northern Territory, nor the Australian Capital Territory. This sample (see also Figure 1) reflects the biases of the key informant, snowball sampling method, whereby key informants tended to identify additional potential interviewees operating within their own state. Nevertheless, in addressing this bias towards certain states, data were corroborated with data from respondents across states.
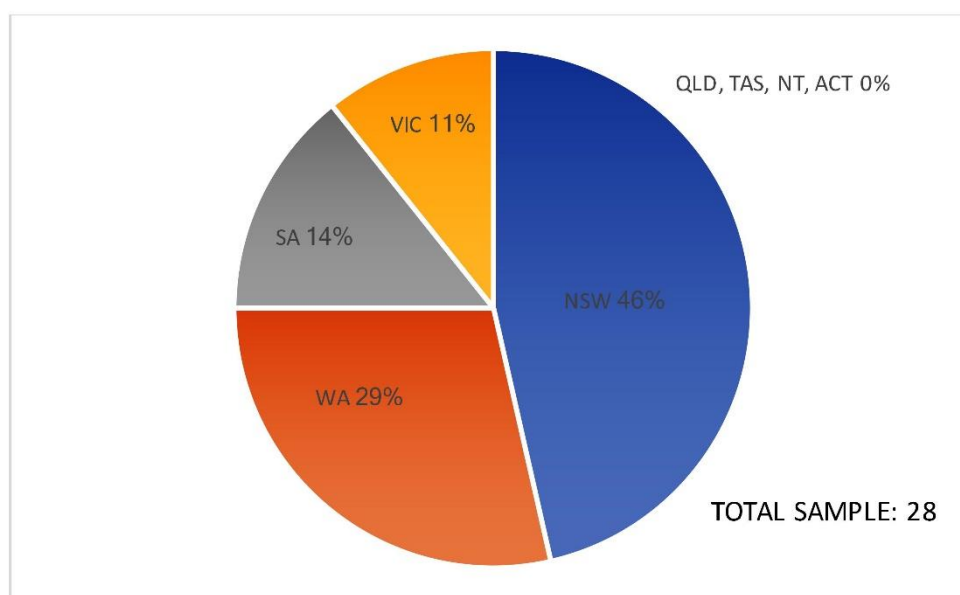

Figure 1. Australian interview sample.

Given the collaboration required by such initiatives, including the significant role of non-governmental actors [14] and the need for intersectoral partnerships [83], advocates were sought from a broad range of roles from both the community/public health (n = 13 or 46.4%) and built environment (n = 15 or 53.6%) professions. Advocates are identified throughout this paper based on their role in the built environment (BE) or community health (CH) field. Participants' employment included government roles with a regional focus (n = 6 or 21.4%), within LG (n = 5 or 17.9%), and at a state level (n = 4 or 14.3%). Participants also had roles in academia (n = 4 or 14.3%), in non-governmental organisations (n = 3 or 10.7%) and in the private sector (n = 3 or 10.7%). Additionally, one participant had roles in academia as well as at regional and LG levels (3.6%), another participant had roles at both the regional and LG levels, and one had regional and academic positions.

2.3. Data Collection

Twenty-eight semi-structured, in-depth interviews were undertaken with healthy planning and active living advocates. The semi-structured interviews offered flexibility, allowing concepts that were not included in the original interview questionnaire "but which may provide further insight to the research question" to be explored [63] (n.p.). Interviews were audio recorded and transcribed, with transcripts checked by the respondents to ensure accuracy and allow for clarification or additional information to be provided.

2.4. Data Analysis

Upon approval from respondents, transcripts were analysed using data analysis software NVivo 11. Coding was initially informed by sensitising concepts from MSA. Although MSA has been noted as a relevant lens through which to view planning efforts to address NCDs [23], and its advantages include adaptiveness [84] and an applicability to examining implementation (refer to Section 2.1), the framework was employed as a sensitising concept [85]. The use of sensitising concepts helped to ensure flexibility in coding, allowing for emergent themes to be identified and minimising the likelihood that theories of the MSA framework would be forced onto the data [85].

Thematic analysis of transcripts was undertaken iteratively [86]. Data were analysed immediately following approval by the respondents, with emergent themes validated against existing data and MSA (as a sensitising concept), with this phase then informing subsequent interviews [63,86,87]. Once data saturation was reached, the identified themes were reviewed, defined [86], and coded as enablers or barriers [14,88,89], with some themes noted to have the potential to act as both.

3. Results

This section provides an overview of the themes that were commonly identified by healthy planning and active living advocates as either barriers or enablers (or both) to initiative uptake and implementation, namely policies and politics. The policy setting in which these

initiatives occurred at the LG scale is examined, as are relevant political considerations. As neither of these considerations were identified as being a prohibitive barrier or consistent enabler to initiative uptake, the central role of the way that the healthy planning 'problem' is conveyed is then examined.

3.1. Policies

The policy and legislative setting has been identified as being central to supporting healthy planning in Australia, including at the state [47] and LG levels [90]. This section examines themes regarding the policy setting, including barriers and enablers stemming from state-level health and planning policy, policies (not necessarily related to health or planning) that impact LG functioning, and health and planning policies at the LG level.

3.1.1. State Policies—Planning and Health

Both health and built environment advocates identified a view that "the ultimatum for healthy built environment policy needs to come from above local government" [BE1]. Having state-level impetus was generally considered more effective than bottom–up or LG-led policy, given its potential for more widespread population health benefits [CH1], yet the dominant legislative role of the state level over LG made the latter reliant on both health and planning policy from above [BE2]. Such a situation could act as a barrier where a state legislative framework was not supportive of healthy planning, resulting in a lack of "sufficient autonomy" for LG in policy implementation due to "interference at a state level" [BE3].

However, respondents generally identified the emergence of a more supportive state legislative setting that enabled healthy planning implementation, which has been particularly evident over the last ten years [CH1, CH2]. Commonly identified enablers were state public health legislation mandating for LGs to produce health plans [CH3, BE3] and opportunities for state planning legislation to include concepts of health [BE4, BE5, BE6, CH2]. For instance, the introduction of a new Public Health Act in one state was seen as providing the impetus "for councils to say, 'we want to implement healthy design principles into our neighbourhoods'" [CH2]. Although the supportiveness of each state's legislative framework

varied and did not guarantee successful project implementation in any state, such policies were noted to formalise the consideration of community health by LG [CH1, BE3], and were selectively referred to by advocates to instigate projects and secure internal LG funding [BE7]. A supportive state legislative setting was also noted to have the potential to encourage positive changes to LG policy around healthy planning [BE8, BE9]. Such policies were particularly noted to be enabling where they encouraged state government partnerships with LGs, such as through funding or resource provision [CH4], and where LGs otherwise would not have had the internal capacity or resourcing to undertake such projects [BE10].

Despite the identification of a supportive state framework as an enabler, LG's role in implementing state policies was important, whereby "as much as everyone goes 'oh, but it's policy', we all know that that doesn't necessarily happen at all. It has to be driven, and guided by those local areas" [CH5]. For instance, even in a setting where both planning and health legislation at the state level had recently changed to better support healthy planning, the ultimate effect of these changes would depend on "how those policies are implemented, how that filters down into action" [CH2]. Related to this consideration, a commonly identified barrier was that state policies were often discretionary [BE11] and lacked specificity [BE1, BE6], especially with regards to implementation. State policy was also noted to provide a strategic direction only, without a legislative mandate for action by LG [BE4]. Such a theme was typified by the perspective that "if [the state government says] 'we want to go this way', and then leave it all up to LG, it is really hard. It's good to have a bit of a stick, it's good to have some legislation" [CH6]. This mandate was generally missing though; even where best practice in healthy planning was present in the state policy setting, such policies had "no power or anything . . . , it's a 'nice thing to do, if you can. And if you can't, we won't worry about it!'" [CH5].

A commonly identified enabler in response was the need "to find some legislative teeth at the state level, to get it going, to make sure that there's outcomes and outputs" [BE2]; [BE6, BE4, CH7]. Such policy at the state level could "require [healthy planning guidance] to get sourced, all those pools of information would then be tapped, formally, and in a systematic process" [BE8]. The complexity and "messiness" of addressing community health through changes to the built environment was nevertheless noted [BE1]. This leads to difficulties in

creating effective top–down policy, and could be a reason that such "planning policies are written to have a bit of wriggle room" [BE11] with regard to implementation.

3.1.2. State/LG Policies—General Role of LG

State-level policies also influenced the role and function of LG more generally, which was identified as impacting on the ability for LG to consider and engage in healthy planning. An example of this was project financing, including the ability for LG to receive "recurring funding" through levies and rates [BE8]. Additionally, state policies ensured that LGs engaged in community consultation, which advocates identified as a "mechanism . . . to start to bring in the health stuff, so that it can filter down through all of the various different and diverse components of what council does" [CH8]. However, as noted in Section 3.1.1, the states' legislative standing allowed them to "interfere" [BE3] in LG efforts in healthy planning. Advocates noted that LG decisions based on healthy planning considerations could be overturned at the state level:

> *LG provisions that are in planning policies quite often get challenged successfully by applicants at the state level, so for us, things that are probably legislation and code we find can be implemented more effectively* [BE8].

3.1.3. LG Policies—Planning and Health

While a top–down mandate for healthy planning was identified as a potential enabler, the internal LG policy setting also impacted project uptake or failure. For instance, prior to it adopting a public health plan, one LG was noted as having "no talk between, you know, planning and design teams and community teams or the health teams" [CH4]. Meanwhile, the adoption of a public health plan facilitated such communication, increasing the likelihood of healthy planning initiative uptake [CH4]. It is particularly noted that the LG was not mandated to have a public health plan by the state government at the time of its implementation.

Further, the LG policy setting could be used to gain support for initiative implementation from those in senior roles, whereby "the Public Health Plan is a tool that you can kind of say,

'we have this that states that you must undertake these actions'. And if elected council members don't like it, you can say 'you approved this plan, don't forget'" [CH4]. However, where a LG policy setting was particularly supportive, this was generally due to the advocacy of an individual or group, as typified by the following response: "I was able to win over a lot of issues when I got the basic policy statement for footpaths in the strategy, I now had a clear policy statement" ([BE7] emphasis added). Also contributing to the ad hoc LG policy setting as a barrier was politicised policy decision-making, where "councillors . . . make the final decisions on the policy . . . They are two tasks in a way, that you might be able to get the staff on board, but you can't necessarily get the councillors on board" [BE12] (refer also to Section 3.2.1). A disparity between the regulatory or statutory setting of a LG and its strategic direction was also noted as a potential barrier, such as where:

> *some of the engineers still have, you know, things like road design guidelines, they can impede walkability . . . and I suspect a lot of those manuals are still in place. But in terms of strategic planning, I would hope that there's nothing that we have current, as in adopted policy, that would impede healthy living and active travel* [BE8].

The above presents a complex picture of the role of the policy setting as both a barrier to and enabler of healthy planning and active living initiatives. Even where relevant policies at the state and LG levels were evident, they were insufficient alone to ensure project implementation. Healthy planning policy at the LG level was largely open to ad hoc interpretation regarding initiative implementation, and often relied on individual efforts for its uptake. However, advocates generally considered that the lack of a supportive policy setting could be overcome through individual efforts or special interest groups. Conversely, a supportive state and LG policy environment alone was insufficient to ensuring initiative uptake and success. When questioned on the role of policies as barriers and/or enablers, respondents generally paid greater attention to political or other considerations, such as identifying that "the policy frameworks are . . . there, it usually boils down to money, insurance, and other competing issues" [BE13]. Respondents considered barriers and enablers to initiative implementation to stem from "organisational structure as much as policy. And having a champion within the council who can just be there constantly" [BE11].

3.1.4. Data, Evidence, and Guidelines

Central to the re-emergence of a healthy planning paradigm has been a concerted effort to build and share the evidence base regarding the complex relationships between the built environment and health, as well as intervention efficacy. Respondents identified two primary types of information as enablers: research (i.e., studies undertaken as part of initiatives and/or academic studies) and guidelines. Existing research was noted to provide suitable evidence supporting the relationship between built environments and community health (relating also to the problem stream, such as whether NCD rates are even considered to be of concern to built environment professions), as well as the effectiveness of healthy planning and active living initiatives. An "explosion" of evidence was noted [BE3], particularly over the last 10 years and supporting the uptake of projects [CH1]. Advocates in this space were seen to play the role of a knowledge broker [71], sharing information and translating academic findings for practical use by practitioners [BE6]. However, while knowledge brokers can also "ensure that researchers are aware of issues confronting policymakers and practitioners" [71] (p. 236), this reverse flow of influence over research agendas was less commonly identified by respondents. LG requirements for localised evidence, and the difficulty of obtaining such requirements, were also identified as barriers, as typified by the following response whereby LGs:

want data, and that of course is always a tricky one to get, 'cause we don't have often the data they need down at local government area level . . . where it's not that easy to have that research [CH5].

Concerns also existed around applying the international evidence base locally, and particularly that while such findings had applicability in Australia, such evidence was not informing policy [BE3]. Project implementation was noted as an enabler in this regard, offering an opportunity for the local evidence base to be strengthened. Initiatives were considered particularly valuable in providing quantitative data that justified implementation and could support subsequent projects [CH3], with the value of pilot or example projects in informing more qualitative aspects of project successes also noted [BE13].

The second type of information that acted as an enabler to initiatives was guidelines. Such guidelines generally related to evidence translation and project implementation, and were commonly produced by advocacy groups [56,91,92]. Similar to academic data and evidence, a suitable amount of guidance to support practitioners in implementing healthy planning and active living initiatives was considered to be available to Australian practitioners [BE3, BE5, CH6, CH7]. Instead, a barrier was how this research and guidance were implemented "on the ground" [BE12], with the challenge being to interpret and disperse the "truckload of guidelines and evidence" that was available [BE5]. More important than new evidence regarding the causal linkages between the built environment and community health was research into the development of "protocols and processes for . . . integrating health into council planning" [CH8].

A setting of an incomplete and at times incongruent "legislative scaffolding" [BE5], including conflicts between policies at various levels of government and also internal to LG (such as between strategic and statutory), acted as a barrier to potential initiatives, as did concerns regarding a lack of evidence of project effectiveness, especially locally. The need to engage in political discourse to improve this policy setting was commonly recognised. As a result, the success or failure of projects was considered to more likely hinge on prevailing politics and a healthy planning paradigm, as explored below.

3.2. Politics

Given the relative policy void mandating project implementation at the LG level, motivators behind healthy planning decisions gain added importance. Various politically viable aspects of healthy planning were identified; however, the incomplete legislative setting led to policy changes and initiative implementation undertaken in a largely ad hoc manner rather than via an evidence-based decision-making process. This section identifies the various political considerations that acted as barriers to or enablers of healthy planning and active living project implementation. Such considerations include politicised decision-making processes, the notion that healthy planning is politically attractive yet that its implementation

might be less so, the need to engage in partnerships as a response to this politicised setting, and the difficulties caused by short-term political cycles and thinking.

3.2.1. Politicised Decision-Making

As discussed above, the lack of a strong policy framework to support healthy planning led to a reliance on ad hoc, politicised decision-making. Such decisions were noted to play a significant role in policy uptake as well as project implementation. Respondents were aware of the opportunities this afforded, with one built environment advocate noting that health advocates were becoming "more educated about planning, and so . . . they've got a better grasp on where those opportunities are to make interventions", such as a redirected focus "upstream" from opposing individual developments to influencing policy and offering guidance [BE11]. If the above policy setting were to be improved, the need to gain political support was commonly recognised, as typified by the following:

> *I think that establishing health-promoting policy probably starts with some political will at the top . . . , otherwise it's just not going to fall on the radar of people who really do influence the health of people through the built environment . . . Maybe if you got the political commitment from the top . . . you would get policies in place that give the local government planners the teeth to be able to do stuff* [BE6].

Politically-driven decisions regarding healthy planning were commonly identified at the LG level (refer also to Section 3.1.3), where a reliance on politically elected councillors to make key healthy planning decisions was a recurring theme. This reliance could act as an enabler, such as where "having the trust of the councillors was a big thing, because they control everything that we do, pretty much" [BE10]. Alternatively, politicised decision-making at the state level could provide a barrier to the integrated delivery of health-promoting environments, whereby:

> *the political impediment to LG is that we can prepare plans, but then their chance of being supported and implemented is hit-and-miss . . . So, it's a very hard environment to work in when currently . . . a lot of the state public and private*

transport infrastructure decisions are not based on any adopted strategies, so they're entirely politically made, whereas the land-use plans are made predominantly by the local government and state government. But then they don't always speak to the transport decisions that are made [BE8].

This theme of politicised decision-making was reasserted by a common identification of policy entrepreneurs [72], or a reliance on individual champions to bring about change. For instance, one advocate expressed the perception that "you can say what you want at a LG level, but if you've got a person in the right place . . . , then it's going to happen, regardless of how much evidence and grassroots support you've got" [CH9]. In another instance, a head of a state government planning department who could be seen to be a policy entrepreneur "was absolutely instrumental in saying, 'walking and cycling matter' . . . So, he was really important because there was strong leadership at a state level, that was high profile" [CH1]. Nevertheless, overall, politicised decision-making was generally viewed as being unfavourable to healthy planning outcomes. Such processes meant that "decision makers are still able to find loopholes" to avoid creating provisions for health-promoting environments [BE3].

3.2.2. Politically Viable—General Notions

Although the politicised decision-making process was criticised by the majority of respondents, enabling considerations were identified that assisted project uptake and implementation. A common enabler was community (and market) demand, whereby "communities are demanding that they want to live in safe, healthy places that . . . they're able to walk around in, feel safe in, enjoy nature" [BE5]. This demand for such initiatives meant that they were also likely to appeal to politicians, whereby "the politicians could see votes in it . . . talking about community well-being and stuff like that" [BE4]. It was considered that healthy planning and active living initiatives "push all the buttons from a political perspective because they are a good news story . . . and are very attractive for politicians or mayors or CEOs" [BE14].

3.2.3. Politically Contentious—Detailed Implementation

Despite healthy planning concepts being attractive to communities and politically possible for politicians, it was generally considered that they would only be viable if details of implementation were avoided. While it was generally considered that "everybody's happy enough to have health and well-being in policy . . . because there's no real negative to putting it in", concerns were likely to arise "if we were to get deeper into the process, and developers were to say, 'oh hang on' . . . then they might oppose that" [CH9]. This might be a contributing factor to the relative policy void and lack of legislative impetus for project implementation identified in Section 3.1. As a further example, the same advocate stated that healthy planning and active living initiatives were viable given that "health, I suppose, it doesn't threaten anyone . . . is someone going to say they want to make a sick community? Of course not", while contrastingly outlining the existence of:

> *huge political barriers. I mean it's one thing to say you know, 'oh yeah, we'll have an objective about health.' Who's going to fund it? How are you then going to implement that? . . . If it's in the case of a local council through the planning system, are they going to get more resourcing? Is a council that's really proactive in providing this sort of infrastructure for its community, are they going to get rewarded in some way?* [BE5].

3.2.4. The Need for Partnerships

Partnership formation was considered to be an important enabler of projects in this politicised setting. Respondents noted various partnerships that assisted project uptake, with the most commonly identified being those between LG and an external partner (such as with a non-government organisation (NGO) or regional health service), vertically between government levels, interdepartmentally within a LG, and partnerships that existed externally to LG (including between state and regional actors, or with developers). Partnerships provided LG with guidance and support (including resourcing and funding) [CH3, BE2]. While policy that encouraged partnerships was noted as an enabler (refer to Section 3.1.1), in

many instances, partnerships influenced the policy framework in which an LG was operating. This was typified in an example where the policy framework was:

ad hoc, because . . . it relates to a large degree to how involved the local health district has been in relation to that particular local government area, as to how good a relationship we've had, in terms of input . . . So it's good where we have had that input [CH10].

Partnerships were found to assist project implementation, and also to result from such projects once they were implemented. This positive cycle was illustrated with regard to siloed LG functioning, whereby project implementation forced departmental collaboration, which improved integration across the LG [CH2]. Interdepartmental partnerships within LG were noted to have particular importance in project success, such as where:

you need people who can provide a technical response, and you need people who can be that community interface. So, we had a great partnership with engineering that ensured we were able to bring those different types of skills together for that community benefit [CH11].

All of the advocates acknowledged the value of partnerships within and external to LG, and many (whether they had roles within or external to LG) discussed a common strategy of engaging in partnerships with people in higher-level political and bureaucratic positions of LG in order to maximise success. The formation of partnerships was generally seen as a way for advocates to influence decision-makers within LG and encourage the increased implementation of healthy planning [CH8, CH12]. However, advocates external to LG saw their role in partnerships as being "helpful", whereby "it's always about that relationship, isn't it, in connecting LG in partnerships when they need things connected, or . . . getting the right people to come" [CH5].

3.2.5. Timeframes

Different aspects of healthy planning were noted to be subject to different timeframes, which acted as a barrier to project uptake. The adoption of healthy planning processes and initiatives, and changes to the built environment were all noted as changes that occur in the medium to long-term [CH12]. Similarly, the benefits of healthy planning and active living initiatives generally presented themselves over a long timeframe [CH12, BE2]. However, such timeframes sit in contrast to short-term political cycles and plan creation [BE3], as discussed in Sections 3.2.1–3.2.3. The contrasting timeframes evident in this field are typified by the following statements:

there'll always be that political question of when an election is coming up in three, four years' time, of what can a party deliver now, that's going to make a difference, when we're taking about [a] 20, 30, 40-year horizon for a new community, where people move in and they start to get those health benefits . . . that is part of the research translation I guess, given that planning is so political [BE6].

it's politically difficult for governments . . . because in three or four-year government cycles, they're trying to get re-elected, and so it's not politically feasible for them to plan strategically long-term, 'cause we're talking 10, 20, 30-year timeframes for getting the benefits of delivery. So that's . . . the overarching problem in terms of healthcare delivery and health promotion and designing healthy urban streetscapes [CH7].

This notion of contrasting timeframes impacting on project consideration and implementation is related to the relatively weak policy setting (refer to Section 3.1) and the various relevant political considerations that then gain added significance. Such short-termism was a barrier to the widespread and effective implementation of health-supportive settings, presenting a need to move "beyond an election timeframe and shift beyond sort of personal interests of council workers and health workers and be more of a systemic thing" [CH8]. For instance, political "churn" at the state level [BE3] led one LG practitioner to note that:

every time you get a state government reshuffle it's like we brace ourselves, like, what's going to be the in-thing, what's going to be the new thing? Whereas the strategic plans get done over a 10, 20-year timeframe, so I think that's definitely a barrier to it [BE8].

The above section has examined politicised decision-making in healthy planning, with general concepts of such being considered politically attractive amongst advocates, politicians, and the community. However, concern was common amongst advocates and politicians that the actual implementation of initiatives would be less politically accepted. Partnership formation was identified as being a key enabler to project implementation and success, potentially as a result of the assistance that such partnerships might provide to LGs through resource provision or advocacy work in a politicised setting. Such a politicised setting led to a disparity between long-term built environment projects, changes to population health, and short-term political cycles. However, similar to the policy setting outlined above, while considerations that assisted or discouraged project uptake were identified, no distinct lists of prohibitive barriers and/or definitive enabling factors that ensured successful project uptake presented themselves. Instead, the above political considerations were influenced heavily by various factors relating to a prevailing healthy planning paradigm, as discussed below.

3.3. Conveying the 'Problem' (or the Healthy Planning Paradigm)

With this context in place, where a relative policy void plays a limited role in healthy planning implementation, and whereby politicised decisions can influence project uptake, important elements relating to the way the 'problem' of planning for health is conveyed (or elements that are indicative of a healthy planning paradigm) emerge as key barriers or enablers. Such a healthy planning paradigm can be seen as being promoted via discussions around co-benefits, through particular avenues of communication, and through 'problem' framing. These ideas are explored below.

3.3.1. Co-Benefits and "Health by Stealth"

The healthy planning paradigm draws heavily on the promotion of projects through discussions and uses of benefits other than health to justify projects, which are often called co-benefits. Co-benefits can support healthy planning and active living initiatives, or alternatively, community health can be a co-benefit of an initiative with a separate focus [61]. While co-benefits were identified as enabling, the need to use co-benefits in supporting initiatives can be seen to stem from the limited policy impetus for healthy planning, as discussed in Section 3.1, whereby:

where things have actually had a health focus, LGs have had to use other means, like, you know, character of the neighbourhood or other things like environmental health factors, whereas the kind of public health factors have never been taken into account [CH2].

Specific healthy planning and active living initiatives identified by respondents were most commonly implemented due to their economic benefits and an associated marketability or political benefit (refer also to Section 3.2.2), with community health then considered to be a co-benefit of such projects. With regard to concepts that might encourage LG to consider healthy planning more often, one respondent stated that:

I'd like to say . . . health should be actually really important from a planning perspective . . . but in reality, I don't think that's going to make any difference. It's when it becomes either marketable or politically viable, that's how it's going to gain traction [BE1].

Health advocates in particular saw improved economic considerations as a "means to an end" through which to promote healthy planning to LG and encourage project uptake [BE11]. In a limited number of circumstances, improving community health was considered capable of being the primary driver of implementation, such as where:

climate change has somehow become a contentious political issue . . . But what we
find is the politicians and the community find it much harder to dismiss the evidence
of health impacts . . . if we can push a graph in front of a politician, and show that
cities with a lot of walking and cycling have better cardiovascular health, those
things are much harder to refute [BE8].

However, even where community health benefits were explicitly discussed by advocates, such benefits were generally expressed through the economic or lifestyle improvements resulting from them [BE7, BE9, BE14]. Advocates most commonly talked about the economic and (natural and built) environment benefits of what could otherwise be seen as healthy planning, in an approach that has been termed "health by stealth" [93–95]. Health by stealth employs co-benefits that have been identified as being politically viable (refer to Section 3.2.2) in order to promote projects, or uses terms that are considered more marketable and attractive than 'health', such as 'well-being' [BE4, BE11, CH9] or 'liveability' [CH11, BE11]. The concept of health by stealth is illustrated by the perspective that:

advocates shouldn't talk about healthy planning and disease prevention, we should
just talk about good planning. Let's make good planning and planning standards
improve; that incorporates this whole idea of health, or healthy urban environments
[BE2].

Using notions of health by stealth was noted as an enabler to policy change and initiative uptake, where "even if policies don't explicitly mention the word health, but are tweaked towards, you know, designing new development, incorporating healthy design principles, I think that's important" [BE11]. Health by stealth relied heavily on the discussion of co-benefits, and was seen as a way for a common message amongst advocates to be developed. For instance, one respondent stated that in successfully advocating for such changes:

I don't think you'd talk about health. I think in the current climate you'd talk about
the economic value of creating connected environments . . . you'd just be speaking
about the economic benefits of making those changes, and knowing that they will

deliver big health benefits as well. So really, you're asking for exactly the same

thing, but you're just speaking their language [BE6].

Healthy planning and active living initiatives are more commonly initiated due to reasons other than the improvement of community health. While the use of co-benefits was considered to be an enabler to project implementation, this reliance on health by stealth might be the result of either the limited policy impetus for healthy planning, or of potential difficulties in the measurement and communication of healthy planning benefits, particularly locally.

3.3.2. Communication

In addition to the co-benefits considered above, the importance of communication was also noted in the implementation of healthy planning initiatives, and was considered central to advocates' efforts, which necessitated a "distillation of the evidence into a message, sound bite, or policy ask" [CH13]. Three common flows of communication were identified as being central to the healthy planning paradigm and as enablers of project uptake. The most frequently identified flow of communication was from LG to the community (i.e., engaging in community consultation, or more commonly communicating the benefits of an initiative), with advocates commonly acknowledging the important role of LG "in engaging with their community, educating citizens, involving people in deliberative discussion . . . to actually foster informed, meaningful and assertive civic involvement and decision-making" [BE3]. Communication between NGOs and LG was the second most commonly identified form, and generally included NGOs advocating for changes in the policy framework or built setting [CH1, CH2, CH13], or engaging in skill development or the dissemination of research to LG practitioners [BE6, BE2]. Communication from regional actors to LG was also central to the promotion of a healthy planning paradigm [CH5, CH9, CH10], with a similar role identified between regional actors and NGOs. Such communication was important to inform the community of the central role that LG can play in this healthy planning space [BE3, BE4, BE12]. However, health advocates also identified a need to (re-)establish health's role in planning in the perspective of LG practitioners, with a key message being that healthy planning is:

not building hospitals, necessarily. It's [the] whole environment, and planning . . .
and that's often been quite eye-opening for councils who haven't really seen the
health profession's role in that sphere before [CH10].

Communication from NGOs particularly was identified as an enabler, with such organisations having the ability to communicate "information that governments probably don't want to hear", particularly as "state governments or federal governments would not necessarily produce reports that have such open and frank statements in them" [BE10]. Less commonly identified avenues of communication that benefited healthy planning and active living initiatives included from one LG to another, and from academia to built environment professionals.

3.3.3. Framing

Similar to the theme of communication was the need to frame healthy planning in a certain way in order for projects to be considered and implemented. Key themes that emerged with regard to framing were the need to align a common message amongst advocates, tensions over whether healthy planning was framed as good planning or an extra add-on to be considered (and whether it was even necessary to mention health and health outcomes in advocating for such changes), and the need to alter advocacy messages to align with different LGs.

Aligning a single message or idea amongst advocacy groups or when implementing an initiative was considered to assist project uptake, such as the need for advocates to "sing from the same songbook" [CH13], "come together and support LG with a consistent message" [CH2], and to "go with one voice to local government . . . it's not a good look, us all going separately" [CH5]. Such a concern was generally limited to advocates in the community health professions aiming to influence built environment practice, though some built environment advocates did note such an approach as an enabling factor [BE5, BE6]. An aligned message would relate to "consistency . . . about what health's role is and really sort of cementing it as a critical function" in the built environment profession [CH8].

Related to the above consideration, a barrier to healthy planning and active living initiatives was that they were commonly framed as being additional considerations to those issues that were central to planning, and involving extra, "expensive infrastructure like shared pathways and stuff like that, so there's sort of those attitudes and the funding is always a problem" [BE5]. When framed in this way, projects became less politically viable. However, an alternative approach was for community health "to be more clearly defined as a planning issue . . . as it once was when the profession started" [BE6]. It was a commonly held perspective amongst advocates that "healthy urban design principles are . . . good planning principles, you know, they're not outside the realms of what planners do or think" [BE2]. If a healthy planning initiative could be framed as such, as "part-and-parcel of all the other work that councils do, then it doesn't necessarily have to be an onerous add-on, it can be a co-benefit" [BE5], with a health advocate noting that built environment practitioners often respond with "we already do that" when presented with healthy planning guidance [CH8]. In contrast, some advocates considered that it was not necessary for concepts of 'community health' to be made explicit in order for projects to succeed, and that instead, the discussion of co-benefits and the use of health by stealth (refer to Section 3.3.1) were sufficient to support healthy planning and active living initiatives.

Yet whether it was through health by stealth or framing health as a central consideration to planning, the need to align advocacy to the built environment professions and each individual LG was noted, particularly by advocates in community health roles. Such an approach could help to avoid what one advocate termed "health imperialism", whereby the "health profession asks 'how are you going to help me in this way?' rather than 'how can we help each other?'" [CH13]. Avoiding such a barrier could be achieved by advocates better responding to the needs and aspirations of a LG. As an example, where a LG did not see the promotion of community health as their responsibility, initiatives were instead framed around "community well-being or having a livable environment and community happiness" which "they do see . . . as being a bit more of their realm" [BE11], indicating that health by stealth could also be applied to LG.

Providing a common message amongst advocates to LG and tailoring this message to each LG's context and needs were identified as enabling factors to project implementation. Yet,

there was less agreement amongst advocates as to whether community health should sit centrally to and drive planning practice, or exist in the background, such as being a co-benefit of economically-driven projects.

4. Discussion

The above section presents a complex and interrelated set of factors that play varying roles in supporting or discouraging the uptake and success of healthy planning and active living initiatives. This section compares these findings against the existing literature, and briefly touches on the structural barriers to healthy planning that these findings present.

The healthy planning policy setting identified by advocates sits in stark contrast to the "strong regulatory environment" introduced in Australia in response to community health issues such as smoking, road injuries, communicative disease epidemics [63], and crime [96]. Such a legislative setting has the potential to instigate "long-term cultural and attitudinal changes towards health promoting behaviours", and achieving a sustainable built environment is "impossible when simply relying on ad hoc citizen initiatives without a clear structural future vision" [97] (p. 10). The state level in Australia gains particular importance in this regard, given that state legislation and funding influence LG agendas and policies [63]. However, although positive changes to the health and planning policy settings were identified, particularly recently, the existing setting in Australia was not considered to provide a sufficient mandate for LG to engage in healthy planning.

Findings relating to the policy setting at the LG level are consistent with, and are also influenced by, previously identified barriers to healthy planning at the state level. These barriers include inconsistencies in the legislative setting, a disconnect between state budgets and plans, and a lack of impetus for healthy planning locally, with a focus on strategic direction and aspirations at the expense of detailed implementation [14,47]. Advocates generally considered LG to be hamstrung by the role of state government providing little supporting legislation or detailed impetus for project implementation, and with LG efforts to engage in healthy planning able to be overturned at the state level. A more supportive top–down legislative setting at the state level, or greater devolution of planning powers and

responsibilities from states to LG, were two identified routes by which these structural barriers might be overcome. However, the perception that efforts of individual or special interest groups could overcome such policy barriers reflects overseas findings regarding local health promotion, whereby "local health policy did not appear to be of pivotal importance to the operations of stakeholders or their organisation" [76] (p. 117). The policy setting, while it can support or hinder projects, neither acts as a prohibitive barrier or definitive enabler to project implementation. For instance, advocates in South Australia, where a relatively supportive legislative setting is evident (Note 2 in Appendix A), identified the same barriers to implementation as advocates in states with less supportive settings.

The reliance on politicised decision-making and partnership formation is both symptomatic of and contributes to this ad hoc policy setting. With regard to politics, the findings reflect the limited evidence-based decision-making resulting in ad hoc decisions that are based instead on community opinion, which is a noted barrier to undertaking healthy planning [63]. This absence of evidence-based decisions instead places importance on individual champions, with reactive decision-making based more on political popularity than community health benefits [76] (p. 117). The interviewed advocates identified general concepts of health as being politically viable and as a "non-threatening good news story", and the avoidance of detailed implementation of healthy planning in policy has been noted as "an explicit strategy" at a state level [47] (pp. 8, 10). However, the avoidance of detailed implementation presents barriers across multiple levels. Firstly, it represents a perceived unwillingness of the community to accept such changes, with broader concepts of health being "innocuous" [47] (p. 9). However, the emerging evidence base presents the community [98] and businesses [99] as receptive to such changes. Secondly, concerns that healthy planning will be contentious among the community might prevent policies from including details of implementation, which is another identified barrier. Such perceptions are closely tied to the way that these initiatives have been framed (refer to Section 3.3.3), and perhaps go some way towards explaining the generally unsupportive state legislative settings (refer to Section 3.1.1). This also supports policy findings at the LG level, whereby a "lack of willingness to define goals and targets" can lead to actions "framed in very general, fragmented and intangible ways" [100] (p. 409).

Partnerships were noted to be essential in bridging horizontal and vertical silos [64,71,101], as well as providing funding and resourcing opportunities. This research also finds partnerships to be a response to the policy void, whereby politicised decisions are supported through advocacy efforts of partners to, or on behalf of, LG.

The examination of the problem setting, or the notion of a healthy planning paradigm, brings forth various tensions within the field, such as the contested nature of built environment governance [41] as well as "definitional tensions" and variations in approaches to framing healthy planning [39] (p. 3). While existing evidence and data were accepted to be sufficient, the difficulty in gaining data that supported specific initiatives, particularly at a local level, was noted as a barrier. In response to this barrier, the healthy planning paradigm gained increased importance. As part of this paradigm, co-benefits were typically mentioned or used by respondents as a way to communicate the value of such initiatives and measures. The use of co-benefits in healthy planning can reduce siloed operation and add benefits to economic calculations of project efficacy [102] (p. 125). Using co-benefits to support projects that benefit community health has a long history [103] (p. 43). However, rather than just adding value when healthy planning and active living initiatives are considered, the use of co-benefits can also be seen as a response to the difficulty of establishing the evidence base to support projects [41]. This is particularly true at the local level, given that the resulting health benefits are subject to such multifaceted and complex factors [104,105]. The use of co-benefits can also be seen as efforts to position projects in areas where there is a stronger policy mandate (such as economics or environmental management), or as a response to dealing with extended timeframes for health benefits to be realised (refer to Section 3.2.5). The paradigm of healthy planning relies heavily on concepts of co-benefits, which although acting as short-term enablers, present more structural barriers to the widespread adoption of healthy planning. For instance, the use of co-benefits is not needed when justifying the consideration of other planning issues, such as crime prevention through environmental design (CPTED) in Australia [96].

Given its interdisciplinary nature, communication in the healthy planning field is important [41] and can promote collaboration [64]. The communication of project benefits to the community is also an important consideration in gaining support for projects [41]. Of the

three most common flows of communication identified by advocates—LG to the community, regional operators to LG, and NGO to LG—two involved communication from predominantly health organisations (at both the regional level and in NGO advocacy roles) to LG. This finding supports the identified importance of communication and cooperation between the health and built environment disciplines [42,106], particularly from the health to the built environment professions. Communication between academia to built environment professionals was also identified as having less importance than the above-mentioned flows of communication, reaffirming the need for academic guidance to be successfully interpreted [71] and disseminated [67].

The adoption and acceptance of community health as a planning issue has been slow [28,106], and so, the way that healthy planning has been framed was identified as a particularly important consideration. The use of framing techniques has been noted in agenda setting for healthy planning at the state level in Australia [107]. Findings indicate that initiatives can be framed as being central to planning, or as "requiring extra work or extra funding", in which case they come to be viewed as being "optional" and are less likely to be considered for project uptake [57] (p. 102). Alternatively, some advocates preferred to focus on co-benefits through "health by stealth", whereby "even if 'health' is not an explicit policy goal, integrated policies can have significant health co-benefits by addressing social determinants of health" [14]. The use of health by stealth concepts have been identified in the promotion of healthy food strategies, and also in some built environment [93,94] and behaviour change [95] settings. This has strong links to the use of other (co-)benefits for implementation, whereby health improvement is an implicit benefit rather than an explicit project motivator [94]. While this approach might have occurred in the past [108] and is considered sufficient for planning to implicitly support community health at a state level [14], the use of such a concept reinforces the largely inadequate policy setting and advocate concerns that the implementation of healthy planning is unlikely to be politically supported. Practically, understandings of co-benefits and discussions around such could be deepened through greater consideration of indigenous perspectives on the complex relationship between ecosystems and health, in contrast to contemporary western understandings [109]. Such perspectives are commonly excluded from western scientific thinking and particularly planning [110,111]. However, where these perspectives have been recognised, such as through the field of ecohealth [8,109,112] or in

specific projects, including in health assessment in New Zealand [113] or land-use planning in Canada [114], they have had success. Such an approach might be a way to more holistically and effectively analyse and discuss healthy planning and active living efforts.

With regard to supporting project uptake, the existing academic evidence base was considered to have less value for LG than local evidence, whereby "local government needs practical, relevant data at the local government level" [63] (n.p.), particularly regarding examples of successful interventions [62]. Cost–benefit analyses and cases of decision-making that demonstrated project effectiveness and enabled implementation were deemed beneficial [23,115], as were evaluations that considered social, environmental and economic benefits, reflecting the use of co-benefits and providing an alternative to more difficult "evidence of true causality" between community health and the built environment [41] (p. 59). The importance of communicating this knowledge to practitioners through methods such as advocacy and research translation [71], and the need to undertake more evaluations of locally implemented projects [63], were identified as potential enablers.

The concept of time is an important public health consideration [104], and is especially relevant to "attempts to create healthy local communities based on local government areas" [100] (p. 403). The multifaceted and contested nature of planning means that both policy and built environment changes generally take an extended amount of time [14,116], while the nature of socio-ecological processes means that (health) impacts are not immediately identifiable [105]. This can create tensions in seeking "strategies that provide a balance between achieving long-term goals and the immediate results" [100] (p. 403). The contrast between these long-term considerations and shorter-term political cycles creates difficulty in relation to developing the evidence base and promoting projects using community health benefits; thus, it is another potential reason behind projects' reliance on a healthy planning paradigm. In response to this issue of varied timeframes, practitioners and advocates must "work with time as a component of [the] decision-making process" [117] (p. 37).

An important aspect of healthy urban planning that did not appear through the interviews is the lack of institutional engagement with indigenous and other culturally-specific values. Although the methodology used allowed for the participants to state any indigenous

perspectives or issues linked specifically to indigenous worldviews and values, none of them did so. The failure of the respondents to refer to indigenous issues or other culturally-specific values is representative of the embedded institutional racism invisible to those in positions of power.

Limitations and Future Research Directions

It is hoped that this research will be relevant to advocates and practitioners operating within LG or encouraging healthy planning at the LG level. Although an Australian context is examined, and caution should be taken in applying these findings to different settings, the emergent themes are considered broad enough to have relevance to similar institutional contexts, or to those places attempting to address similar issues. Studies in other global contexts and cultures might be valuable in allowing comparisons between settings, particularly as localised research is important in guiding decision-making [23]. While considerations around participation in and the organisation of such initiatives by indigenous and culturally diverse people were not specifically targeted in this study, they too might also provide beneficial channels of exploration. Given that indigenous thinking has contributed substantially to understandings on planetary and human health, as well as their links, the greater examination of such perspectives in future investigations, or the inclusion of indigenous people in organising or participating in future initiatives, is also likely to hold value [111].

Additionally, future studies might build on this research by further investigating the structural barriers to more evidence-based, consistent, and equitable implementation of healthy planning. Greater academic attention might also be afforded the flow-on impacts of project implementation, while the tensions between the ideas of health by stealth, co-benefits, and the framing of health as a planning issue could also be further examined.

5. Conclusions

The study outlined barriers to and enablers of initiative uptake in healthy planning. This research's findings point to an inconsistent legislative setting, politicised decisions privileged

at the expense of evidence-based decision-making, and healthy planning initiatives that rely on a particular paradigm for success. In turn, this incomplete and at times inconsistent setting provides opportunities for policy entrepreneurs to create policy windows, or opportunities to bring about change [72]. The identification of various barriers and enablers will offer practical guidance to those practitioners or advocates undertaking initiatives at the LG level. However, an (over)reliance on policy entrepreneurs such as individual advocates and champions [63,67] is unlikely to produce the equitable spatial delivery of health-promoting environments across LGs, or across individual LGs. Simultaneously, and perhaps paradoxically, those policy entrepreneurs are most likely the best able to produce more sustainable and long-lasting change.

The findings indicate that the policy setting can be changed to support healthy built environments, but that policy interpretation and project implementation on the ground mean that even supportive state and LG policy settings are not sufficient alone to guarantee project uptake and success. Nevertheless, supportive state and LG policy settings did assist projects, and improvement of the legislative setting, particularly at the state level to provide a clear mandate for policy and action, is an important step to delivering more widespread and equitable healthy environments. Given the contributions that policies, politics, and paradigm shifts can make towards planetary health, the role of LG needs to be strengthened and properly supported. LG in Australia is critically positioned to provide built environment initiatives responding to increasing NCD prevalence, climate change, and various other planetary health considerations.

As it stands at the moment, healthy planning is considered to be an attractive notion politically, but politicised decision-making and an avoidance of details lead to a reliance on individual advocates or champions to progress initiatives. Such ad hoc decision-making increases the importance of the healthy planning paradigm, particularly in regard to the ways that healthy planning and the issue of NCDs are framed and communicated. With the built environment providing a most needed setting for actions towards planetary health, the identified factors indicate potential reasons for the relatively slow delivery of health-promoting and sustainable urban forms in Australia.

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Appendix A

Note 1. The social determinants of health are those 'socio-economic conditions that influence the health of individuals, communities and jurisdictions as a whole. These determinants also establish the extent to which a person possesses the physical, social and personal resources to identify and achieve personal aspirations, satisfy needs and cope with the environment' [118], also [62,119,120].

Note 2. The South Australian state legislative framework includes the South Australian Public Health Act 2011 [121] which places a mandate on LG to proactively plan for community health in a regional public health plan (s. 51), and the Planning, Development and Infrastructure Act 2016 [122], which notes planning, design and development 'to support active and healthy lifestyles and to cater for a diverse range of cultural and social activities' as a planning principal (part 2, division 1, s. 14).

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Toward a framework for walkable and bikeable coastal Australian communities

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Abstract: Australia demonstrates a unique spatial pattern whereby approximately half of the population resides within seven kilometres (and eighty-five percent within fifty kilometres) of the coast, and eighty-nine percent live in areas defined as 'urban' but that have a relatively low population density. This differs notably from the geographies evident of (predominantly) European and North American cities that form the basis for most theories, concepts and best-practice cases surrounding the creation of supportive environments for walking and cycling. Indeed, much criticism regarding such concepts being adopted in Australian settings (and uncertainties by advocates on the transferability of these ideas) centres on these contextual differences, particularly if they are viewed as being prohibitive barriers.

With this in mind, this paper draws on census data as well as existing literature on coastal Australian communities and on the 'downscaling' of broader planning concepts to smaller metropolitan areas to identify some key characteristics of 'Australian coastal communities.' This framework is then used to examine concepts of walkability and cycling-friendly environments, comparing the Australian coastal communities of Port Macquarie (NSW) and the Sutherland-Cronulla region (NSW) to Portland, Oregon (USA), Amsterdam (the Netherlands) and Copenhagen (Denmark). This allows for concepts of creating supportive environments for cycling and walkability from Europe and North America that are also applicable to an Australian coastal community setting to be identified. It also allows an initial exploration of where comparable ideas might be adapted to an Australian context, and where the Australian coastal context might represent opportunities to extend existing concepts further.

Key words: Walkability; cycling; coastal communities; Port Macquarie, Sutherland Shire.

Introduction

There is now widespread acknowledgement in Australia of the need to provide environments that encourage walking and cycling, particularly given the multiple benefits such changes facilitate (Giles-Corti *et al*., 2010, Rissel, 2009). Nevertheless, this has not always been the case. Although such ideas are now prominent across the world, recognition of the need for targeted promotion of walking and cycling through humanistic planning and urban design had its early origins in Europe (e.g. Gehl, 1987) and North America (e.g. Jacobs, 1961). From an Australian perspective, such thinking ultimately originated from 'elsewhere', as 'locally-developed, but […] internationally-derived, ideas' (Butt *et al*., 2015, p. 1). This is especially so when differences in the built form and institutional and cultural contexts of overseas settings are considered against those of Australia.

This paper stems from findings from ongoing research by the author on the promotion of health through built environment initiatives at the local government (LG) level. The importance of carefully 'framing' ideas and discussions around the promotion of active forms of transport is an emergent theme commonly identified by practitioners and advocates involved in the study. The need for a new, perhaps more contextually relevant way of thinking about, discussing and encouraging walking and cycling promotion in Australia emerged from these findings, and is a starting point for this paper.

With this in mind, the paper begins by examining some features common to walkable and bikeable environments as drawn from the literature, with three overseas cases presented. Some characteristics of Australia's population and particularly coastal communities are then examined, with two Australian cases introduced. The paper then examines the transfer and applicability of planning ideas across varying contexts, before a comparison of the overseas and Australian cases is then undertaken. The concluding sections then attempt to tie these ideas together, examining where such concepts of walkability and bikeability might apply across the varying contexts, where comparable ideas might be adapted to an Australian coastal setting, or where the Australian coastal setting might offer contextual advantages in the provision of more walkable and bikeable environments.

Some characteristics of walkable and bikeable built environments

Given the growing interest in place making and encouraging active forms of transport, there is a burgeoning field researching and writing on characteristics that make places conducive to walking and cycling. Nevertheless, relatively little of this research has focused specifically on coastal areas. Llewellyn Cartlidge (2015, pp. 26-27) notes that urban design theory's focus on observation of place has predominantly been undertaken in the United States of America (USA) and Europe, and that 'there is more known about streets, parks and piazzas than beachfronts.' Particularly, relatively little has been written on facilitative environments for walking and cycling with a focus on coastal areas, especially from an Australian perspective. Overseas, Smart Growth principles have been adopted for a coastal and waterfront context, including the creation of 'walkable communities with physical and visual access to and along the waterfront for public use' (National Oceanic and Atmospheric Administration *et al*, 2009, p. 4). In Australia, David Lock Associates (2008) prepared 'Guidelines for Walkable Coastal Environments' for the City of Greater Geelong, with a particular focus on positive ageing and accessibility. The report presents 17 specific issues relating to walkability and coastal areas for consideration, however no overarching sense of the character of place is explored in-depth, instead practical solutions to what are framed as commonly occurring problems in coastal localities are given, with a particular focus to the City of Greater Geelong. In developing an urban design typology for Gold Coast beaches, Llewellyn Cartlidge (2015, pp. 62-63, 410) adopts a definition of a 'beach precinct' stretching 140 metres inland from a beach and four urban design principles of a walkable place are identified as 'governance, accessibility, human scale and need, and diversity'. While the study does offer a valuable in-depth examination of an urban/coastal interface at three specific beach locales, the beach precincts as examined are too spatially limited for adoption in this paper, particularly given the aim of comparing coastal communities to overseas metropolitan areas.

The need therefore arises to turn to the literature generally to examine what makes for walkable and bikeable environments. Ewing and Cervero (2010, pp. 267, 275) outline the oft-cited 'five Ds' as built environment variables that influence travel behavior (see also Ewing and Cervero, 2001), with design considerations and diversity of urban fabrics being found to have the strongest association with walk trips. Density, destination accessibility and distance to transit

are also noted to have relevance (Ewing and Cervero, 2010). They also outline that demand management and demographics (despite not being part of the physical environment) are further influences, however note that each has 'ambiguous and unsettled boundaries' (Ewing and Cervero, 2010, p. 267). Matan (2011) offers a walkability assessment tool that allows for characteristics relating to walkability to be assessed, and which can be adapted for the purposes of this paper along with Ewing and Cervero's (2010) more generalised considerations and other selected literature, as per Table 1. It is noted that any typology is to some extent arbitrary, especially given the importance of context of place in walkability and bikeability. However, the following is considered an appropriate framework in allowing for a subsequent comparison and contrast between the Australian and overseas cases, and from which to draw findings generally.

Table 1: Some characteristics of walkable and bikeable built environments

Consideration (Matan, 2011, pp. 38-40)	Description	Applicability to this paper
Use/network	Use: Volumes and densities of pedestrians or cyclists on a network and the needs of these users.	Noted to be 'difficult to measure across a city' (Lowe *et al.*, 2013, p. 36). General use rates and network characteristics can be identified.
	Network: Design considerations (Ewing and Cervero, 2010) such as the types of facilities, the adequacy of these (National Heart Foundation of Australia, 2011, pp. 7, 9), their connectivity to other networks (Lowe *et al.*, 2013, p. 34) and their ease of use.	
Barriers	Accessibility for all users, potential obstacles, interruptions to pedestrian and cycling networks, other barriers (e.g. major roads, rail lines, rivers, hills, private uses) and accessibility to public transport (PT) (Lowe *et al.*, 2013, p. 34, Matan, 2011). Relevance to destination accessibility (Ewing and Cervero, 2010).	Perceived barriers will differ between individuals. Larger scale (network) and commonly occurring barriers can be identified.
Intersections	Convenience of street crossing opportunities and pedestrian crossings, common intersection types, safety to cross street and driver behavior. Mid-block crossing and intersection frequency (Lowe *et al.*, 2013, p. 34) or intersection density (Frank *et al.*, 2010) as common indicators of connectivity.	Context-specific. Considerations of common intersection types included in assessment of 'use/network' for this paper.
Public transport	Distance to PT (Ewing and Cervero, 2010) such as being within 400m of a bus stop or 800m of train (Lowe *et al.*, 2013, p. 34, Badland *et al.*, 2015, p. 106), location	PT available to an area and general level of service and use can be identified.

Consideration (Matan, 2011, pp. 38-40)	Description	Applicability to this paper
	of PT nodes and quality of waiting areas. PT use facilitates walking and cycling trips (Planning Institute of Australia *et al.*, 2009).	
Land use	Primary land uses and destinations in area (Matan, 2011, p. 39) and the population of residents and workers, and the presence of mixed uses (Frank *et al.*, 2010, p. 925, Ewing and Cervero, 2010). Also includes residential, retail and activity density (Ewing and Cervero, 2010, p. 267) and 'compression' and 'concentration' of uses and activity (Whyte, 1980, p. 92).	General densities, land use policies and mixed/mono land uses can be identified.
Enjoyment	Whether spaces are public or private (i.e. accessible to general public?) and the quality of these spaces.	Generally considered in 'land use' in this paper.
	The number of people using spaces and the ways they are being used (including for 'physical activity, play, interaction and/or entertainment'), whether these spaces include opportunities for use by children, youth and the elderly.	Generally considered in 'use/network' in this paper.
	Identifiable features and character of the locality, interesting footpaths and cycleways including access to views, temporary activities and spaces for public engagement (Matan, 2011, p. 39, Lowe *et al.*, 2013, pp. 39-41).	Sources of enjoyment will differ between individuals. General characteristics can be identified.
Streetscapes	Clear private/public delineation, dimensions of buildings at a human scale and active facades (Ewing and Handy, 2009, Gehl, 2010, Gehl, 1987), provide visual interest contributing to cyclist and 'walker friendliness' (National Heart Foundation of Australia, 2011).	Context specific. Land use mixes and densities can be indicative. Considerations generally included in 'land use' in this paper.
Infrastructure	Provision of adequate pedestrian and cycling infrastructure and public open spaces including seating, attractive edge spaces (Lynch, 1960) and various facilities that contribute to 'complexity' of the urban fabric (Ewing and Handy, 2009) and to user comfort (National Heart Foundation of Australia, 2011, p. 7). Also considers access to such infrastructure (Badland *et al.*, 2015, p. 106).	Generally considered in 'use/network' in this paper.
Comfort	Traffic, low ambient noise level, adequate site lines, well-maintained including pedestrian and cyclist	Difficult to measure given numerous variables (Lowe *et al.*, 2013, p. 37) and perceived

Consideration (Matan, 2011, pp. 38-40)	Description	Applicability to this paper
	infrastructure as well as public and private spaces, cleanliness (Matan, 2011).	comfort will vary between individuals.
		Traffic examined in 'vehicle traffic'. Maintenance generally examined in 'infrastructure'. Characteristics of network relating to comfort examined in 'use/network' and 'safety'.
	Weather (Ewing and Handy, 2009, p. 67) and protection from weather (Matan, 2011).	Climate can be identified.
Safety	Whether the area is lively and active including street life, passive surveillance levels (particularly at night), the mix of land uses, visibility between modes of transport and protection from vehicle traffic (Matan, 2011). Lighting and maintenance of facilities (National Heart Foundation of Australia, 2011, p. 8).	Difficult to measure given numerous variables (e.g. Lowe *et al.*, 2013, p. 37) and perceived safety will vary between individuals. Maintenance considered in 'infrastructure'. Mixed use considered in 'land use'.
		General characteristics including activity hours and community perceptions of safety can be identified.
Vehicle traffic	Traffic calming/control/demand management (Ewing and Cervero, 2010), level of vehicle traffic exposure (Badland *et al.*, 2015, p. 107) and traffic speeds (Matan, 2011).	Traffic exposure considered in 'use/network'.
		General traffic volumes and speeds can be examined.
Perception of the area	Whether the area is perceived as being safe and pleasant.	Cumulative impacts of above factors, largely subjective measure likely to vary between individuals, so not included subsequently.
Social/ demographics (Ewing and Cervero, 2010)	Population characteristics and demographics, overarching culture of place, general attitudes towards walking, cycling and other modes of transport.	Can be broadly examined.

From this analysis a preliminary framework for examining places against characteristics of walking- and cycling-friendly environments emerges. Three cities often noted as cases of

successful implementation of such characteristics are Portland, Oregon (USA), Amsterdam (the Netherlands) and Copenhagen (Denmark). These cities are examined briefly below.

One North American and two European cases

Portland, Oregon is located in the north-west of the USA, approximately one-hundred kilometres inland from the Pacific Ocean. With a population of approximately 639,000 people (city) and 2.4 million people (metropolitan area), Portland is the largest city in Oregon and straddles the Willamette River. Portland is particularly noted as one of the best North American cities for cycling and for having addressed sprawl and car dependence that threatened the city in the 1960s, whilst achieving an overall reduction in vehicle distance travelled (Adler and Dill, 2004, pp. 242, 250-51). This has been realised in part through early implementation of transit initiatives and implementing Smart Growth principles. The consultative planning process (Healey, 2010, pp. 185-186) and design of neighbourhoods for walking and cycling (Butt *et al.*, 2015, p. 4) of Portland are also widely recognised.

Copenhagen, the second case, is located on the eastern coast of Zealand in the east of Denmark, on the strait of Øresund. With a population of approximately 764,000 people (city) and two million people (metropolitan area), the city is the largest in Denmark and is also the country's capital. Copenhagen is recognised particularly for its humanistic approach to planning (largely due to the work of Jan Gehl, and also documented by his work, see Matan and Newman, 2017), as well as its cycling culture and infrastructure investment (to the point that separated 'Copenhagen' bike lanes are considered best practice across the world). To 'Copenhagenise' (Copenhagenize Design Co., 2017) has become a verb synonymous with this type of planning and the principles have been adopted in other world cities such as New York (Thandi Norman, 2015).

The third case, Amsterdam, is located in the north-east of the Netherlands, with the city centre approximately twenty-five kilometres inland from the North Sea to the west, Lake IJmeer directly to the east and with the well-renowned canals forming an integral part of the urban fabric. With a population of approximately 850,000 (city) and 2.5 million (metropolitan area), the city is the largest in the Netherlands and is also the country's capital (though not the seat

of government). Amsterdam is particularly recognised for its high levels of livability and attractive streetscapes (Healey, 2010) and again for its extensive cycling culture and infrastructure (I amsterdam, 2017).

This paper will now examine the Australian settlement pattern, and present two additional, coastal cases.

Australia's population pattern

Australia's population spread differs from other Western societies in various ways, including its concentration in state capitals (Dedekorkut-Howes and Bosman, 2011, p. 7) and to 'coastal areas of the east, southeast and southwest' (Hugo *et al*., 2013, p. 1). Sixty percent of Australia's population lives in one of the country's six coastal capitals (Gurran and Blakely, 2007) and eighteen of the next twenty-six largest cities are coastal too (Budge and Butt, 2009). Eighty-nine percent of Australians live in urban areas (The World Bank, 2017b), making it one of the most highly urbanised countries globally (Budge and Butt, 2007). Further, eighty-five percent of the population live within fifty kilometres of the coast (van Putten *et al*., 2017), and approximately fifty percent live within seven kilometres (Serrao-Neumann and Low Choy, 2015, p. 1). Given this population distribution, it is perhaps no surprise that 'Australia's iconic coast' plays an ever increasing role in an Australian identity (Gurran and Blakely, 2007, p. 125, van Putten *et al*., 2017, p. 122). Salt (2003, p. 2) claims that, after the 'bush' and 'city', the 'culture of the beach' is a third Australian culture. This coastal population distribution can be contrasted to that of Europe, with generally high population densities across most of the continent. The Australian population spread also sits in contrast with a North American form. For instance, Canada's population is largely located along the southern border with the USA, and while the USA's east and west coasts are heavily populated, the country also has a significant inland population, particularly with population spread westward from the east coast reflecting early settlement patterns (Salvatore *et al*., 2005).

Additionally, despite being one of the most 'urbanised' countries globally, population densities in Australia are relatively low compared to European cities, and marginally lower than North American cities (Newman and Kenworthy, 2015, pp. 36-37, 43). European cities are generally

medium density, though are over three times the density of USA and Australian and double the density of Canadian cities (Newman and Kenworthy, 2015, p. 43). Such cities can also be compared and contrasted using the theory of urban fabrics, whereby three fabrics of walking cities (generally inner city and older areas), transit cities (emerging between the 1850s and 1950s) and automobile cities (1950s onwards) present themselves (Newman and Kenworthy, 2015). European urban areas with a dense, historically walkable fabric surrounded predominantly by a transit city fabric are notably different to Australian (and North American) cities and communities that, other than the 'old inner cores', have been developed with an automobile fabric (Newman and Kenworthy, 2015, p. 110). The majority of Australian development is associated with a metropolitan area or regional centre (urban), yet at the same time is coastal and sub-urban (low density), whereby seventy-three percent of Australians live in a standalone dwelling house (ABS, 2017c, Gurran and Blakely, 2007, p. 120).

The 'urban' population of Australia is more coastal than North America or Europe, and experiences a different level of 'urbaneness' (regarding density and urban fabrics) to European cities. The culture, lower densities and predominantly coastal development present points of difference in Australia's population geography. The following further explores some characteristics of Australian coastal communities.

Some characteristics of Australian coastal communities

Australian coastal communities have been previously classified by population size and distance from capital cities (van Putten *et al*., 2017, p. 125) using Gurran and Blakely's (2007, pp. 116-118) typology of coastal growth settings. The typology allows for communities to be identified as 'coastal commuters', 'coastal getaways', 'coastal cities', 'coastal lifestyle destinations' and 'coastal hamlets' (for definitions of each, see Gurran and Blakely, 2007). Although beyond the scope of this paper to compare types of coastal communities within Australia, the potential usefulness of Gurran and Blakely's (2007) classification to examine differences in walkability and bikeability of communities is noted. Salt (2003, p. 58) uses the more general classifications of 'metropolitan beachside municipalities' (LGs having 'some sort of beach frontage' but also part of a wider metropolitan area) and 'non-metropolitan beachside local government areas'. Again, while this classification has potential for future use, a broader definition for 'coastal

community' is adopted for this paper. For this study, a coastal community is considered one whereby a resident has access to a coastline using active transport or PT in thirty minutes (as per the Marchetti constant as discussed by Newman and Kenworthy, 2015) or where the nearest 'centre' to a resident provides access to a coastline within thirty minutes using active transport or PT. The definition adopted excludes the central business district (CBD) of each capital city. Such a definition has been adopted to encompass smaller coastal communities as well as those within commuting distance from (and even suburbs of) capital city CBDs. The coastal location of each of these areas (including those associated with larger metropolitan areas) is posited to be of relevance. With the above population spread and broad notion of coastal communities in mind, some select characteristics of Australian coastal communities can be examined.

Low density

Given the spread of the Australian population outlined above, and as a definition that excludes CBD areas is adopted, coastal communities can be seen to have relatively low population and activity densities. While outer suburban fringes may have increased marginally in residential density recently as a result of 'densification and urban consolidation policies' (Coffee *et al*., 2016, p. 522), smaller cities and towns largely remain 'dominated by a housing stock constructed for traditional nuclear families in suburban settings' (Budge and Butt, 2007, p. 287). Even where higher density cores might be evident (e.g. Gold Coast), the overall urban fabric of coastal areas, when considered at a broad scale, remains at a relatively low density against metropolitan and global standards (The World Bank, 2017a).

Relatively 'new'

Australian coastal communities are also a relatively recent phenomenon when considered internationally against, for instance, European and Asian settlements. While coastal communities might have histories as tourism or port and industrial centres, thus demonstrating an older core that is more conducive to walking and cycling (e.g., Fremantle, Western Australia), many coastal communities have undergone significant development and expansion during postwar times, both enabled by and enabling automobile use (Coffee *et al*., 2016). In many coastal areas greenfield development continues to date.

Car dependent

As alluded to above, many coastal communities were developed or reshaped at the time 'of the automobile's development as everyday transport […] during which the ideal of the suburbanized anti-city was developed architecturally, sociologically, legislatively, and financially' (Jacobs, 1961, p. 356). Hence many coastal communities reflect the automobile urban fabric common to this period (Newman and Kenworthy, 2015). This is especially the case for those coastal locations not within commuting distance of a capital city CBD (Gurran and Blakely, 2007). Many coastal communities can also be seen to have limited access to adequate PT, and where PT is provided other than that associated with a CBD (Gurran and Blakely, 2007), such is often provided (or is perceived by the community) as a 'welfare transport option' only (Butt *et al*., 2015, p. 7). It is noted that recent (e.g. Gold Coast light rail) and proposed (e.g. Cairns light rail) efforts are moving to redress this (Newman and Kenworthy, 2015, p. 21). Nevertheless, such communities generally retain their auto-centric form, with relatively few disincentives to driving also contributing to the car dependence of regional Australia (Budge, 2015).

Fewer (perceived) **dis***economies of scale*

Coastal communities can be perceived as demonstrating fewer *dis*economies of scale than might arise from larger metropolitan areas' size. For instance much has been made of a longstanding Australian 'sea change' (Gurran and Blakely, 2007, Salt, 2003) and these considerations can be seen to have significantly shaped Australia's population spread to that outlined above (van Putten *et al*., 2017, p. 122). The reasons behind such population movement are generally voluntary (amenity migration) and, among others, related to housing affordability, lower densities and larger housing/allotments, employment opportunities, lower living costs, and lifestyle and amenity factors (such as climate, image, scenery, recreation opportunities, less traffic congestion and cultural perceptions of an area) (Gurran and Blakely, 2007, p. 124). Coastal communities are also often perceived to be 'safe' places less prone to crime than urban areas (whether real or perceived) and have a general image of being 'good' places to raise children in the Australian psyche (Salt, 2003). Nevertheless, some of these

characteristics might be overstated, and other economies of scale that a large city offers (e.g. greater access to cultural, education and employment opportunities; more efficient transport) might be overlooked.

As Butt *et al*. (2015, p. 10) note, commonly held (mis)conceptions can work against common planning objectives in smaller communities. Particularly, efforts to increase densities and challenge the predominance of car-based mobility might be seen to challenge the very qualities that make such smaller coastal communities desirable, being 'at odds with existing notions of the small city as a space of freedom and accessibility, unhindered by the diseconomies of congestion and scale' (Butt *et al*., 2015, p. 9). Coastal areas generally provide high levels of amenity and might demonstrate fewer explicit *dis*economies of scale than larger urban areas, such as perceived crime rates, traffic congestion and overcrowding.

A single local place manager

Budge and Butt (2007, p. 286) identify a comparative advantage of Australia's smaller cities, in that '[t]hey are each their own local government – with a couple of exceptions the relevant local government encompasses the whole urban area […] This means that the planning agenda encompasses everything from inner city redevelopment to managing the urban rural interface'. Similarly, the definition adopted for coastal communities in this paper (e.g. 30 minute access to the coast via PT or active transport) means that, in contrast to larger urban areas, such communities will generally be within a single LG (Gurran and Blakely, 2007).

This section has attempted to disseminate some characteristics of Australian coastal communities. The following section outlines two Australian cases that allow further examination of such characteristics. The cases are purposively selected given the author's familiarity with the communities, and as they meet the definition of a 'coastal community' as adopted above.

Two Australian cases

Sutherland Shire is a local government area (LGA) twenty-six kilometres south of the Sydney CBD with a population of 218,464 people (ABS, 2017b) and includes Cronulla town centre as well as various other centres, generally based around train stations and retail precincts. The LGA is bounded by the Pacific Ocean to the east, Georges River to the north, and incorporates Royal National Park to the south and Heathcote National Park to the south-west and west. The Sutherland Shire is within commuting distance to the Sydney CBD and the LGA is serviced by thirteen train stations across two lines connected to the Sydney Trains transport system. As part of the Sydney metropolitan area, Sutherland Shire falls under the planning remit of the Greater Sydney Commission. Recreational walking and cycling is provided for at many of the high amenity areas in the locality including along the coastline, and the Sutherland to Cronulla Active Transport Link (SCATL) is currently proposed to be developed from Sutherland (approximately ten kilometres west of the coastline) to Cronulla (GTA Consultants, 2010).

Port Macquarie, the second case, is a coastal town in the Port Macquarie-Hastings LGA, 390 kilometres north of Sydney. The town is located predominately south of the Hastings River and has a population of 44,830 (ABS, 2017a). The river generally acts as the northern development boundary, with the Pacific Ocean to the east, Lake Innes Nature Reserve to the south and Lake Innes to the south west. The centre services approximately seventy thousand residents from across the Hastings region (Corken and Troemel, 2011). The town has been noted for the use of shared space (i.e. 'where vehicles and pedestrians are able to share a common area') principles in the city centre (Sutcliffe, 2009, p. 3, Tooby, 2011) and for place making efforts undertaken across the LGA (Port Macquarie News, 2016).

Given the evident differences in the Australian and overseas cases selected, the next section will briefly examine the transfer of ideas across contexts and scales.

Transfer, applicability and 'downscaling' of planning ideas

Given that such a significant share of Australia's population resides in comparably low density coastal areas, relatively little academic focus has been afforded specifically to such areas in

making pedestrian and cyclist-friendly places. Seemingly more thought has been given to the transfer of planning ideas to differing contexts, however. For one, Butt *et al*. (2015, p. 1) explore the application of planning concepts (including walkability and increasing urban densities) from 'elsewhere' to the small Australian city of Bendigo (Victoria). They note that 'small cities can be seen not simply as scaled-down metropolitan places' but as 'locations where actors and motivations of communities and planners are shaped by particular representations of place' (Butt *et al*., 2015, p. 1), reflecting Jacobs' (1961, p. 26) view that '[t]owns, suburbs, and even little cities are totally different organisms from great cities.'

Budge and Butt (2009) examine how ideas flow to what Bell and Jayne (2006) (see also Budge and Butt, 2007) refer to as 'third tier' cities, and the ways in which such smaller cities adopt the planning ideas of larger ones, generally with less success. In such a transfer, planning ideas can be seen to be 'co-opted from elsewhere and offered place in local arguments' (Butt *et al*., 2015, p. 11). Planning practitioners in smaller cities are aware of the challenges of such a transfer of ideas (Butt *et al*., 2015). As an example, LG practitioners in Port Macquarie have noted, with regard to parking management, that 'much of the information drawn upon comes from dissimilar towns and cities and therefore it is tempting to discount it. Yet whilst the setting or scale may be different, the problem remains fundamentally the same' (Corken and Troemel, 2011, p. 6). The transferability of ideas is therefore not simply an exercise in academic thought, but an important consideration for practitioners in smaller scale settings.

Such differences in context and scale are therefore important to explore. Healey (2012, p. 188) warns of the dangers of imposing 'external ideas about planning and development' onto 'specific histories and geographies'. As Serrao-Neumann and Low Choy (2015, p. 7) state, '[u]nderstanding how communities value their place and wish to plan for their future is of critical importance considering the planning challenges posed by current and future social and environmental change'. Further, 'clearly scale matters' in planning (Butt *et al*., 2015, p. 1), yet it can be easily overlooked even in a field where learnings tend to come from larger metropolitan areas.

In planning specifically for improved environments for pedestrians and cyclists, 'context' and 'scale' of place arguably become even more important. Understanding societal values

regarding transport and an engrained preference for private vehicle travel (Kent, 2013) is also important if steps are to be undertaken to promote walking and cycling. Indeed, promoting active transport modes generally involves a concerted 'cultural, economic and physical process' (Butt *et al*., 2015, p. 9). In planning, 'place-specificity is often disregarded, or assumed to matter less than received and abstracted notions of what constitutes good planning' (Butt *et al*., 2015, p. 2).

As a potential response to this, Budge and Butt (2007, p. 281) examine Bell and Jayne's idea that small cities need to 'identify a distinct identity with [their] own nuances and characteristics', creating a 'Unique Selling Point' (Bell and Jayne, 2006, p. 2). For instance Butt *et al*. (2015, p. 2) explore actor network theory as a way to examine:

> the ways in which networks of actors form around ideas, react to problems, draw-in the community, utilize non-human actors (ideas, places, physical formations) and contain definitions and meanings, often through the exercise of technologies and devices of expert systems, story-telling and the meanings ascribed to place.

Further, Healey (2012, pp. 190, 196) suggests addressing transference of ideas by complimenting transnational learnings with 'rich narratives' (i.e. 'in-depth cases') and 'origin narratives', such as those that describe 'the rationalities or mentalities wrapped up in such stories and the forces which project them into movement' (Healey, 2013, p. 1520). As exemplar cases of walkable and bikeable design are often from 'elsewhere', this paper posits a coastal context as a potential way to engage in problem framing and story-telling in encouraging supportive environments for active travel.

Comparison of Australian coastal communities and overseas cases

The Australian and overseas cases are now compared against the framework adopted above. Relevant literature (including grey literature) as well as a desktop study of each of the cases are undertaken to provide select comments against each criterion, as presented in Table 2. Examples of other studies that successfully examine built environment characteristics remotely

are noted (Kelly *et al*., 2013), and prior visits to each of the overseas cases and familiarity with the Australian cases has also guided responses.

Table 2: Comparison table of Australian coastal communities and overseas cases

Consideration	Portland	Amsterdam	Copenhagen	Port Macquarie	Sutherland Shire
Use/network	- 5.9% residents commute by foot, 6.4% cycle (U.S. Census Bureau, 2015) - High network connectivity (e.g. over 366 kilometres (km) of bikeways) (Adler and Dill, 2004) - Urban footpath network (i.e. provided at both sides of streets, well-connected in grid-like blocks), particularly inner city	- 63% residents cycle daily, 32% movement in city and 48% in inner city by bike (I amsterdam, 2017) - 500km of bike paths, 267,000 official bike parking spaces near Central Station (I amsterdam, 2017) - Urban footpath network (i.e. generally to both sides of streets, well-connected in fine grain network) across city	- High use (e.g. approx. 40% residents cycle daily) (Thandi Norman, 2015) - People friendly city, use of network by elderly, children (Matan and Newman, 2017) - High network connectivity for bicycles – separated bike lanes, prioritised signaling, direct linkages	- High use recreational network (generally via automobile access) - 3.9% walking trips to work, no recorded cycling (ABS, 2013a) - High provision to recreational network (along coast, river), low provision functional network with little connectivity	- High use recreational (generally via automobile access) - 2.1% walking trips to work, no recorded cycling (ABS, 2013b) - High provision recreational (along coast, natural areas), moderate provision of functional network at centres (i.e. to train stations)
Barriers	- Relatively flat, few network barriers to walking, cycling	- 'Few hills' (van der Zee, 2015), few network barriers. High participation rates amongst elderly and young	- Relatively flat, few network barriers. High participation rates amongst elderly and young (Matan and Newman, 2017)	- Hilly terrain in parts, lack of network (above) as barrier, particularly to elderly. Lack of connected network and	- Hilly terrain in parts, variable network (above) as barrier, particularly to elderly. Limited connected network and

Consideration	Portland	Amsterdam	Copenhagen	Port Macquarie	Sutherland Shire
				use as barrier to young	use as barrier to young
Public transport connection	- Bus transit (including designated bus lanes accounting for 70% PT trips in region); light rail, commuter rail, Portland streetcar, car share, bikeshare - Investment in PT over highways (Healey, 2010, p. 185, Adler and Dill, 2004) - 12.1% trips to work 2015 by PT (U.S. Census Bureau, 2015)	- Metro, trams, bus, car share - 16% movement in city on PT (I amsterdam, 2017)	- Main line railway, urban/ suburban rail, bus - Recently expanded Metro from 22 to 39 stops (Thandi Norman, 2015)	- Most houses within 400m of bus service (Corken and Troemel, 2011) however infrequent service, community attitudes, indirect service creates perception as 'welfare' transport option (Butt *et al.*, 2015) so limited use - 0.8% (130 people) travel to work by PT (ABS, 2013a)	- Two Sydney Trains lines, bus - 9.7% trip to work by train - 14.6% journey to work by PT in total (ABS, 2013b)
Land use	- Parts mixed use (planned), good accessibility, medium density, constrained development (urban growth boundary)	- Mixed use (historically), good accessibility, medium-high density (previously fortified), constrained by 1980s planning for the compact city (Healey, 2010, p. 178) and by land reclamation costs	- Mixed use (historically), good accessibility, medium-high density (previously fortified), constrained by natural boundaries and other communities and land reclamation costs	- Limited mixed use (planned – zoning), poor accessibility, low density, few perceived spatial constraints (e.g. continuing greenfield development)	- Low-Moderate mixed use (planned – zoning), poor-medium accessibility, low-medium density, few perceived constraints (e.g. continuing greenfield development)

Consideration	Portland	Amsterdam	Copenhagen	Port Macquarie	Sutherland Shire
Enjoyment	- Urban 'buzz', high network use, mixed use streetscapes, 'promenading'/ people watching generally at city centre	- Urban 'buzz', high network use and mixed use streetscapes, 'promenading'/ people watching throughout urban area, activity focus at city centre	- Urban 'buzz', high network use and mixed use streetscapes, 'promenading'/ people watching throughout urban area, activity focus at city centre	- Limited to town centre and high amenity (recreation) areas, 'promenading'/ people watching in these areas also	- Limited to centres and high amenity (recreation) areas, 'promenading'/ people watching in these areas also
Comfort (Støver Jensen, 2017) Average max. temperature	26.8ºC (Aug)	21.8ºC (Aug)	21.2ºC (Jul)	26.7º (Jan)	26.4º (Jan Feb)
Average min. temperature	0.9ºC (Jan)	0.2ºC (Feb)	-1.9ºC (Feb)	7.4ºC (Jul)	6.6ºC (Jul)
Average days precipitation/year	117	129	97	93	88
Safety	- 'Eyes on the street', late night uses, mixed use areas. High pedestrian and cyclist safety due to network and high use	- 'Eyes on the street', late night uses, mixed use areas. High pedestrian and cyclist safety due to network and high use	- 'Eyes on the street', late night uses, mixed use areas. High pedestrian and cyclist safety due to network and high use	- Suburban safety (low use, clear public-private delineation), little use of public spaces late night	- Suburban safety (low use, clear public-private delineation), limited use of public spaces late night restricted to centres
Vehicle traffic	- Medium-high –prioritisation/ separation for pedestrians and cyclists - Disincentives to drive (e.g. convenience of active	- Medium-high –prioritisation/ separation for pedestrians and cyclists - Disincentives to drive (e.g. one way streets, parking	- Medium-high –prioritisation/ separation for pedestrians and cyclists - Disincentives to drive (e.g. 'the city is owned by	- Low traffic - 74% trip to work by car (ABS, 2013a) - Few disincentives to drive (e.g. large road reserve capacity	- Low-medium traffic - 65% trip to work by car (ABS, 2013b) - Generally few disincentives to drive

Consideration	Portland	Amsterdam	Copenhagen	Port Macquarie	Sutherland Shire
	transport, PT network)	costs, 900km of 30km/h roadway (I amsterdam, 2017))	cyclists' (van der Zee, 2015), vehicle congestion)	(Corken and Troemel, 2011), limited paid/restricted parking, easy vehicular mobility)	- Some paid/restricted parking
Select social characteristics	- 'sustainable, liveable and inclusive' (Healey, 2010, p. 187) - Activism and involvement in planning (Adler and Dill, 2004, p. 232) - First US city planning for the pedestrian (1994) (Adler and Dill, 2004, p. 244)	- 'cosmopolitan 'urbanity'' (Healey, 2010, p. 178) 800,000 bikes vs 263,000 cars owned (U.S. Census Bureau, 2015) - History protesting car-based development (van der Zee, 2015)	- Strong cycling culture, focus on public life - Strong humanist influence by Jan Gehl and others – e.g. current Danish Architectural Policy – *Putting people first* (Matan and Newman, 2017)	- Coastal, high value placed on lifestyle and amenity	- Coastal, high value placed on lifestyle and amenity

Discussion

The above presents a preliminary comparison between two Australian coastal communities and three overseas cases commonly held as exemplar walkable and bikeable communities. The comparison, although limited, presents some areas whereby the overseas and particularly European cases have inherent advantages over Australian coastal communities, particularly the long-established European cities' dense, mixed use urban fabrics and culture of walking and cycling for transport (as opposed to recreation). Neither of these findings are new, and neither are surprising given the cases are held as international best practice. It is important though to note such differences in the transfer of ideas to different contexts (Healey, 2013), including at different scales (Butt *et al.*, 2015). With this in mind, some similarities between the cases, and

differences that might favour an Australian coastal community in creating more walking and cycling friendly built forms and culture are examined.

Where similarities can be found, these are more likely to be between twentieth century Portland, Amsterdam and Copenhagen and the contemporary Australian cases. Each of the overseas cases faced post-World War II encroachment of the automobile into planning practice and their urban fabrics. A key difference is that in each overseas case this was framed as a problem to be addressed. For instance, from the 1960s, strong action was taken to address modernist auto-centric planning destroying farmland and inner-city communities of Portland, including the state-imposed urban growth boundary (Healey, 2010, p. 183). Continued preference for walkable and bikeable neighbourhoods has also been framed to appeal to Portland's progressive constituency (Healey, 2010, p. 182). Similar efforts were made in Copenhagen, such as the pedestrianisation of Strøget and Jan Gehl's humanistic influence in developing a city culture of cycling, outdoor dining and people-centred design in the face of modernist planning (Matan and Newman, 2017). Amsterdam's is a similar story. Transport plans that threatened to destroy inner city neighbourhoods (Healey, 2010, p. 175) and that increased traffic related deaths (3,300 traffic casualties including over four hundred children in a single year, 1971) were met with 'fierce activism' which helped shape the city's structure and culture as evident today (van der Zee, 2015). Comparatively, in Australia the automobile became a ubiquitous element of the coastal community cases during this time.

As identified above, many Australian coastal communities present lifestyle attributes that are central considerations for many people choosing such places (Gurran and Blakely, 2007). Resident angst at perceived threats to such attributes is therefore understandable. However a key difference and potential lesson from the overseas examples from the 1960s on might be that an impetus for change can come from positive conversations that both reflect and shape the culture of that place. Although some advantages evident in the European cases are endemic and due to historical considerations (i.e. smaller streets, lower vehicle speeds, mixed uses), many positive aspects of the overseas cases have been achieved purposefully, politically and through community activism/planning. The European cases have worked for over half a century to re-pedestrianise streets and squares and provide walking and cycling networks that have simultaneously reflected and enhanced their culture. The pedestrianisation of Strøget, for

instance, led Copenhageners to question the imposition of this notion from 'elsewhere' (with the rebuttal, 'we are Danes, not Italians', see Matan and Newman, 2017, pp. 14-15), yet a strong culture of public and pedestrian life has since emerged. Comparatively, in both Australian cases coastal roads and swathes of parking can act as physical and/or psychological barriers to coastal, high amenity areas (David Lock Associates, 2008). A key difference, then, is that the overseas cases have worked to prevent and remove cars from acting as barriers to their culturally important areas, and have created pedestrian and bicycle networks to improve access to these. This has also led to higher use of these walking and cycling networks, and arguably further intertwined existing culture (e.g. one of public squares in Europe) with a culture of walking and cycling.

A further difference between overseas and Australian cases is the predominant conception of safety. The 'eyes on the street' (Jacobs, 1961) encouraged through mixed uses, higher densities and thriving late night economies contributes to a sense of safety in the overseas cases. High network provision also contributes to pedestrian and cyclist safety in these places and encourages greater use of bicycle and pedestrian routes. In a gratuitous cycle this can then contribute to enjoyment of such spaces and encourages even more eyes on the street. In contrast the Australian cases generally retain (and fight strongly for) their sense of (perceived) suburban safety, reflecting the notion that ideas can be scaled down from large metropolitan areas, but can also be from 'the town agenda scaled up' (Budge and Butt, 2007, p. 288). Coastal community street safety is generally addressed through conflict avoidance (e.g. retaining childhood safety by driving them to school) as a result of the limited network of infrastructure evident in each case, particularly for cyclists.

Although PT usage rates are comparable between Sutherland Shire and Amsterdam and Portland, the overseas cases demonstrate notably higher levels of active transport than the Australian cases. As well as limited network provision in the Australian cases, another potential influence is the comparatively lower residential and activity densities and reduced land use mix in the Australian cases. This can be attributed largely to historical factors for the European cases, for instance historical development of a walkable urban fabric (Newman and Kenworthy, 2015), the fact that both cities were once fortified, constraints of being adjacent to waterways and the high cost of land reclamation. In contrast, Portland has largely constrained sprawl

through planning measures, with its urban growth boundary (Butt *et al*., 2015, p. 5) leading to a denser, more walkable and bikeable urban setting. Both Australian cases demonstrate a relative level of constraint given the coast to their east, waterways to their north and natural areas to their south/west, however there is less recognition of such than in the overseas cases. To create a comparable notion of 'constrained' development in these localities could help to encourage a denser urban fabric, which could in turn benefit the coastal areas' ability to provide suitable pedestrian, cycling and PT networks, increasing network use and perhaps also 'enjoyment' of those using them. Reframing development as constrained (laterally) in these coastal areas could also slow the spread of residential areas out of walking or cycling distance of the centres and high amenity areas of these places. Port Macquarie, for instance, is expanding westward with new greenfield residential areas and some service, retail and education uses, however with limited provision of active transport links between these uses or to the town centre, river or beaches. All Australian coastal communities are constrained to at least one side (the coastline) (National Oceanic and Atmospheric Administration *et al*, 2009) and many are constrained in other directions by predominantly natural, or other, features. Better articulating a narrative of constrained space in Australian coastal areas might ultimately allow for more walkable and bikeable urban fabrics to emerge.

Associated with the above notions of 'space' in Australian coastal communities, driving in Copenhagen, Amsterdam and Portland is largely unpleasant, with active transport or PT generally preferable particularly for trips to the inner city, as reflected by travel rates. For instance in 2000 Portland drivers spent an average of forty-seven hours delayed in traffic, and in some cases travel plans accept a Level of Service (F) that allows for one-hundred percent road capacity prior to actions being taken (Adler and Dill, 2004, pp. 251-252). In contrast, Australian coastal communities, even those relatively close to capital city CBDs like Sutherland Shire, generally do not feature the diseconomies of scale that generate calls to address a 'problem' of car ubiquity. Continually planning for automobility might be one of the primary differences between the Australian and overseas cases, and one of the most difficult to address. For instance the solution to limited inner city car parking is generally seen to be the provision of more parking amongst constituents of Port Macquarie (Corken and Troemel, 2011, p. 3), rather than a potential combination of improved pedestrian and bicycle networks in tandem with demand management measures. Introducing a dialogue of access (to services,

centres, areas of high amenity) as is evident in the overseas cases, rather than mobility (distance able to be travelled and at what speed) might contribute positively in developing a walking and cycling network in coastal areas.

The older (e.g. tighter streets, mixed use, higher density) urban fabric of the overseas (particularly European) examples presents a strength of those cities, as above. However this also presents a potential opportunity for newer Australian coastal communities. For instance, provision of infrastructure to older European cities is often complex and costly – the Amsterdam metro ran three times over cost due largely to stabilisation measures necessary for above buildings (Healey, 2010). Adler and Dill (2004, 254) also suggest that Portland's 'success in increasing bicycling facilities stems largely from "picking the low-hanging fruit"— stripping lanes on arterials with plenty of room and little opposition. The easiest, lowest cost projects are nearly complete.' The typically large (generally un-fragmented) Australian lot sizes, uncomplicated ownership structures of standalone dwellings, and the wide road reserves common to many coastal communities therefore represent numerous advantages. Simple ownership structures provides opportunity for redevelopment and intensification (and perhaps mix) of uses, evident currently in higher density zones throughout the Sutherland Shire. The wider road reserves, many with relatively low traffic levels, common to the coastal cases also present an opportunity for retrofit of more pedestrian- and cyclist-friendly designs. This setting might allow for reduced expenditure and minimise the initial impact to existing traffic lanes compared to more constrained metropolitan streets.

Further, Australian coastal communities do have cultures of walking and cycling, however these are largely limited to recreation and generally follow the provision of the pedestrian and cycling network (a noted exception being a few confident recreational cyclists using the roadway), and so are generally limited to centres and high amenity areas (e.g. Port Macquarie's Coastal Walk through rainforest and along the coastline). Nevertheless, the provision of such areas is central to the identity and appeal of these places. In emphasising and extending these networks to more functional routes, walking and cycling for recreation in these communities might too be extended to walking and cycling for transport. A common barrier to such is perception of distance in such communities (David Lock Associates, 2008), particularly when driving is relatively easy and quick. However through continued effort, attitudes and cultures

can be shifted, as demonstrated in Copenhageners' relatively rapid uptake of public life (Gehl *et al.*, 2006).

A 'government in favour of walking' and giving active transport 'political dominance over the other movement modes' is noted to be central to achieving walkable urban design (Llewellyn Cartlidge, 2015, pp. 140, 141). As noted previously many coastal communities have a single local place manager in the form of LG. In contrast, Healey (2010, pp. 176-181) notes the issues of scale and complexity in planning for Amsterdam, with the area having had various regional governance models as the region extended beyond its metropolitan boundaries (Klusman and Teunissen, 2003, pp. 13-14). Such scalar complexity is evident too in the need for the formation of Metro for Portland, responsible for the urban growth boundary, among other planning responsibilities (Healey, 2010, p. 183). This potentially allows for coastal communities at this scale to 'overcome one of the [planning] limitations that metropolitan areas have in terms of coordinated land use planning with their multiple local government jurisdictions' (Budge and Butt, 2009, p. 18) and presents a possible advantage for coastal communities in improving active transport network and increasing use through coordinated strategies. Sutherland Shire's inclusion in Sydney metropolitan planning considerations is noted, yet the (largely) naturally delineated area is still covered by a single LGA. Nevertheless, a difference between the two Australian cases selected is acknowledged, and further comparison between different coastal community types (Gurran and Blakely, 2007) might be beneficial.

As noted at the start of this paper, eighty-five percent of Australians live within fifty kilometres of the coast (van Putten *et al.*, 2017), and approximately fifty percent live within seven kilometres (Serrao-Neumann and Low Choy, 2015, p. 1). In the Australian cases, characteristics include a valuing of easy access to high amenity areas coupled with a comparably suitable climate for outdoor transport (e.g. average minimum temperature in overseas cases of approximately 0ºC compared to 7ºC for Australian cases). Given this, walking and cycling infrastructure could in theory be improved so that more Australians had walkable access to coastal areas, and so that approximately fifty percent of Australians had access to such areas by bicycle (i.e. a seven kilometre trip equates to an approximately half hour bicycle ride). The overseas cases have become exemplars through provision of accessibility - such as to public spaces, the city centre and local amenities. A new coastal

discussion in Australia might revolve around how to provide more equitable active transport access to such areas as well as to centres. This could build on the learnings above, but from a starting point specific to each coastal community.

Conclusion

The 1960s cases of Portland, Copenhagen and Amsterdam are particularly comparable for Australian coastal areas starting to directly address auto-centric planning and focusing instead on promoting walkable and bikeable environments. Australian coastal communities are constrained spatially, however this is not part of such areas' identity as they are not as evidently restricted as the European cases nor as regulated as Portland. If the constraints of space to these coastal areas are recognised, particularly with regard to conservation of the high amenity areas that provide much of the appeal of these places, the provision of conducive environments to active transport will be assisted through a move towards denser and more walkable/bikeable urban fabric, as is emerging in many communities currently (e.g. higher density zones of Sutherland Shire).

Some specific elements that might be adopted and adapted from the overseas cases to an Australian coastal setting also emerge from this paper, although the need to provide these with regard to the context of each community should be noted. These include a better connected walking and cycling network across the entire community, rather than the focus on centres and high amenity recreational routes as is currently the case. Such could include an 'urban' style network of footpaths to both sides of streets, as is evident in the North American and European cases. Strategic corridors could also be provided with separated bicycle lanes, also provided in each of the exemplar cases, with shared bicycle and vehicular roads to less trafficked and reduced speed streets. Given much of the urban fabric of coastal communities is relatively new, such a retrofit might be more easily undertaken compared to more historically and spatially constrained localities, and extensive guidance to undertaking this is available (e.g. Planning Institute of Australia *et al*., 2009). Ancillary infrastructure for pedestrians and cyclists (such as rubbish bins, public toilets and public art), currently lacking outside centres or high amenity recreational areas in coastal communities, could also be extended across entire coastal localities.

The explicit identification of localised barriers to walking and cycling and direct redress of these would also be of value to coastal communities. This paper has preliminarily identified common barriers to the two coastal cases including a hilly topography, low network usage and a lack of functional connectivity. As an example, the hilly topography of coastal areas such as Port Macquarie and Sutherland Shire could be addressed through provision of infrastructure such as strategically located seating, shelter and water bubblers along hilly routes. Wayfinding guidance that allows users to navigate routes that avoid steep hills could also be provided. The lack of use of active transport routes (and so a perceived lack of usability of these) could be overcome through temporary or permanent place activation and behavior change initiatives, while an improved network as discussed above would also contribute to this. Each community could identify further, more specific barriers to participation in active transport and move to directly remedy these in a concerted and culturally nuanced fashion, as was evident in the responses of the North American and European cities to pending automobile dependence.

Further, place making activities to public (e.g. road reserves) and private (e.g. active street frontages) spaces could simultaneously enhance the enjoyment of moving around these places, and encourage extended network use beyond its current focus at centres to other areas and times, such as in suburban areas and at night. Place making measures allow for distinct locality characteristics to be identified and enhanced – a coastal setting could be a starting point from which these initiatives are contextually adapted. The safety of streets, often assumed to be high in coastal areas, could also be re-assessed and actions redirected towards providing pedestrian and cyclist safety through separation and appropriate infrastructure rather than avoidance of active modes as is currently the case. Challenging nostalgic notions of the coastal lifestyle could assist in a reframing of these ideas. For instance, young families and retirees are common in such coastal locations, yet the friendliness, accessibility and safety of the active transport networks generally do not encourage use by children, the elderly and other vulnerable users. Again, an improved network and separation of modes would contribute to this, as could behavior change initiatives targeting driver attitudes and increased awareness of active travel modes.

Other common characteristics of walkable and bikeable communities emerge from this paper that require actions beyond infrastructure provision and network extension and activation. These are likely to require continued actions in the mid- to long-term. For instance serious efforts to redress automobile dependence of coastal communities would require improved PT provision to enable a viable alternative to private vehicle use. Land use planning policies and legislation that separate uses and encourage and enforce a low density built form along with minimum parking requirements might also have to be re-examined as part of any serious effort to move towards truly walkable and bikeable communities. Increased densities and mixed use development delivered sensitively and responsively throughout a coastal community would allow for more destinations to be provided within walking or cycling distance of residential areas, as is evident in the land use patterns of the three exemplar cases examined. Success of abovementioned place making efforts could assist in overcoming perceptions that mixed use, denser, pedestrian-friendly environs are threats to the coastal character and lifestyle. Further, active transport comfort is identified as a comparative advantage of coastal communities. Encouragement of 'year-round' active commuting could be better articulated to the community alongside network improvements, given the current preference for walkable communities and an active lifestyle. Lastly, in addressing vehicle traffic in coastal areas, traffic calming, demand management and provision of lower speeds to high pedestrian and cyclist networks (or potential networks), even where traffic flows are currently limited, would serve to visibly prioritise active forms over private vehicle use. These measures could be provided initially to high profile and high amenity areas such as along coastlines, so as to improve recreational and functional active transport routes whilst also indicating a clear preference for active transport in these spaces. Such explicit prioritisation of pedestrians and cyclists has been central to the success of the European and North American cases.

A walking and cycling framework adopted by a LG (often the single local place manager of a coastal community) might start with the above considerations and adapt them to their local context. Despite some clear historical and other advantages, Portland, Copenhagen and Amsterdam have incorporated walking and cycling into their built fabric and cultures through determined and coordinated efforts, particularly since the 1960s. In its comparison with these cases, this paper has positioned Australian coastal communities as having a distinct nature and form, noting that downscaling ideas of the walkable city to these areas presents a challenge.

Nevertheless, some of the distinct coastal Australian attributes present a potential point of difference in moving towards more walkable and bikeable coastal communities, as well as having potential to act as an impetus for community change in these localities.

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Article

Implementing Healthy Planning and Active Living Initiatives: A Virtuous Cycle

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Abstract: Factors including internal local government functioning, collaboration and the use of co-benefits have been noted to assist in the uptake of healthy planning policies and projects by local governments. However, less commonly noted is a possible reverse relationship: that implementation of healthy planning projects can contribute positively to organisational functioning and collaboration, and can result in a range of co-benefits that then can be used to support projects. Such a concept is explored in this paper, with a focus at the local government level in Australia. Findings from surveys with local government practitioners and in-depth interviews with healthy planning and community health advocates are presented. The findings indicate four key areas through which the implementation of healthy planning policies and projects and active living initiatives demonstrates a 'virtuous cycle'. These areas include (1) project 'wind-up', or circumstances in which implementation and/or health outcomes exceed initial expectations; (2) improved partnerships that can create opportunities for future initiatives; (3) improved internal organisational functioning; and (4) greater project sustainability. The paper concludes by exploring some possible repercussions of these emerging findings, which indicate that beneficial settings to healthy planning considerations can be a result of as well as a contributor to healthy planning and active living initiative implementation. In turn, this presents another potential co-benefit of project uptake and implementation to those commonly identified.

1. Introduction

1.1. Overview

The continued impacts of climate change, high urbanisation rates and noncommunicable disease (NCD) prevalence present significant, and related, global challenges to urban areas [1–5]. Efforts to address climate change such as through mitigation [6–9] or adaptation [10] strategies, as well as ways to address the inevitable challenges of increased populations living in urban settings [11,12] are now central urban planning considerations, especially in local government (LG) settings in Australia [13–17]. Efforts to address relatively high NCD rates through changes to the built environment to promote physical activity have seen relatively slower uptake in urban planning practice, despite the profession having its roots in public health [1,18]. Nevertheless, the impact that the built environment has on community and individual health is well-recognised [19–21] and the need for horizontally and vertically integrated responses from governments and other actors has been noted [22,23]. Efforts to improve population health through changes to the built environment can also contribute positively in addressing many of the other challenges facing urban areas, such as minimising the impacts of climate change [5,8,24,25] and providing efficient transport systems in growing urban areas [2,15].

Such efforts are often referred to as healthy planning, whereby 'the needs of people and communities [are placed] at the heart of the urban planning process' [26] (p. 385). Associated with this concept, and with particular relevance to addressing physical activity levels (Note 1 in Appendix A), are active living initiatives, or programs that encourage both formal and informal exercise to be incorporated into people's daily routines [27].

Key elements that support the undertaking of healthy planning include integrated planning (Note 2 in Appendix A) [28] and the internal structure of organisations delivering initiatives [29]. Partnership formation is another (related) element that is important in delivering healthy planning and active living initiatives [30–32]. However, while the imperative for integrated planning might be well-recognised, its implementation is proving more difficult in Australia, due to the complexity it entails and the need for context-sensitive

implementation, and given the various actors involved in delivering healthy planning policy and initiatives across multiple levels [33,34]. Similarly, continued siloed operation in Australian LGs [29] indicates that while high importance is placed on partnerships in healthy planning, continued efforts at collaboration, particularly between the health and built environment fields, will likely be necessary.

Another important component of the healthy planning and active living field is the impact of co-benefits, or those additional benefits stemming 'from an action that is undertaken for a different principal purpose' [25] (p. 110) (also [8,35]). The use of co-benefits has been noted as a way for healthy planning and active living initiatives to be implemented [29], even in the absence of a supportive legislative framework [36], such as where projects that may not have health stated as a project objective still benefit community health [34]. Co-benefits of healthy planning and active living initiatives are generally categorised in terms of their social [21], economic [37] and/or environmental [6,35] outcomes. Yet less commonly identified in the healthy planning field are benefits to organisational structures or more long-term influence on initiative uptake that projects might have. These types of benefits have, however, been identified in the broader health promotion field, such as where 'a different set of program 'outcomes' [. . .] occur within the organisational context of the program itself' [38] (p. 31).

Given that uptake of healthy planning and active living initiatives has been slow, considerations of project enablers, project sustainability or organisational impacts of projects remain relatively under-examined [39,40]. With the importance of internal LG functioning and partnership formation and the value of co-benefits for healthy planning as central considerations, this paper posits four unintended benefits that can result from initiative implementation, and which have received limited attention in the healthy planning literature. These areas include (1) project 'wind-up', or circumstances in which implementation and/or health outcomes exceed initial expectations; (2) improved partnerships and opportunities for future initiatives; (3) improved internal organisational functioning; and (4) greater project sustainability. It is also posited that some of these benefits, for instance, improved internal organisational functioning, might be included as additional co-benefits of future healthy planning projects.

1.2. Significance of Work

There is currently relatively limited knowledge of factors that enable the implementation of healthy planning and active living programs in Australia, particularly locally [40]. Limited attention has also been afforded the ongoing benefits of healthy planning and active living project implementation to the organisation (such as a LG) involved. This research aims to address this gap by seeking the perspectives of advocates and practitioners operating within, or who work with, LG. It is hoped that an examination of the potential ongoing organisational benefits of project implementation will have value for practitioners and advocates who are looking to implement healthy planning and active living initiatives, or to those advocates or practitioners looking to 'bring lasting and wider health gains' for communities [38] (p. 31), particularly decision-makers and those responsible for project evaluation.

1.3. Current State of the Research Field

Given the extensive scientific evidence base now linking urban environments, travel behaviour and human health [1,21], 'the claim of 'missing evidence' is no longer a legitimate excuse' for delayed healthy planning and active living initiative implementation [41] (p. 719). Yet in establishing this evidence base, '[m]uch effort has been directed into defining best practice [. . .] in terms of 'what' needs to be done while neglecting the 'how'' [40] (p. 336). This tendency to focus on evaluation of 'what' as opposed to 'how' is particularly evident in Australia, with a burgeoning evidence base now linking the built environment, physical activity and human health [20,21,42–45]. The establishment of these links has been essential in what is a re-emerging field, yet attention is gradually also turning to how health-promoting urban planning policies and active living projects might come to be implemented. This attention to-date has focused predominantly at a state or metropolitan level [34,42,46], and key themes to emerge include the value of collaboration and co-benefits, as outlined in Section 1.1.

Where academic studies on healthy planning have focused at the LG level in Australia, they have examined LG policies against a social determinants of health framework [47], evaluated practitioner understandings of central healthy planning concepts [48] and the

viability of various project options [49], and examined factors that might enable health-promoting policy changes to occur [50]. Provision of sustainable funding and resourcing [29,50] has also been noted as enabling project uptake.

Yet relatively little attention has been given to why healthy planning and active living projects have seen slow uptake in Australia [50]. One potential reason for this slow adoption is that 'bureaucratic inertia' plays a role in the uptake and success of projects [51]. The planning profession [52] and LG [53] have been identified as being subject to 'institutional inertia', and existing governance structures have been noted as a barrier to provision of sustainable transport in Australia [54]. Literature on land use and transport planning, for instance, regularly refers to a notion of 'development paths' [15,55], while decisions that impact the urban form have been shown to be path dependent [54,56] (Note 3 in Appendix A). Illustratively, planning predominantly automobile-focused urban areas (a central element of planning that is detrimental to population health), has 'become institutionally "locked in"', yet 'small changes might well tip the car system in a different direction' [2] (p. 15). The operation of a 'vicious cycle' has been noted also to have relevance to obesity rates, though with a focus on food systems rather than the urban environment [57].

However, given the recognised importance of existing settings in influencing project uptake and implementation [29], limited attention has been given to these settings, or how they might come to be. The notion of a 'virtuous cycle', for instance, has been used with regard to health and medical research [58], clinical health expenditure [59] and other areas of health promotion, such as in tobacco control [60], but is relatively less common in literature considering implementation of healthy planning and active living initiatives. The notion can be borrowed from economics, such as where:

a situation in which a series of sound economic policies sets off a chain of events in which improved economic performance produces sound currencies or other structural improvements. This in turn helps to improve economic performance further. [61] (pp. 180–181)

The health promotion field more generally has acknowledged that additional beneficial outcomes might arise as a result of projects [38], and programs aimed specifically at capacity-building note that '[b]y building sustainable skills, resources and commitments to health promotion in health care settings, community settings and in other sectors, health promotion workers prolong and multiply health gains many times over' [62] (p. 2). Yet even in projects aimed primarily at capacity-building, these efforts and their benefits are often invisible [62].

1.4. Current State of Practical Guidance

Given the lack of explicitly identified virtuous cycle in the academic literature, as discussed above, more general practitioner guidance is examined briefly below, with regard to project implementation. Local guidance on the delivery of healthy planning and active living initiatives commonly notes the importance of research, the need for integrated approaches, greater education and training (including skills development for practitioners) and the need for partnerships, as well as methods to evaluate projects [63]. Yet while such notions of a virtuous cycle might be inferred in such guidance (i.e., evaluation of projects is likely to inform and improve future project implementation) [63], rarely is it explicitly mentioned. Further, while such guidance focuses also on concepts of co-benefits, for instance that 'planning for health contributes to developing more sustainable communities' [63] (p. 15), potential for ongoing improved operation of LGs, or the opportunity for improved implementation of such projects subsequently, are generally not included as co-benefits. Various guidance documents detail what actions to promote health might look like, including case studies, however the focus remains on changes to the built environment rather than (organisational) settings that might allow for their implementation [64,65].

The Healthy by Design guidance produced by the Australian Heart Foundation places importance on strategic development, policy integration and project initiation, alluding to the notion of a virtuous cycle by noting that demonstration projects are important initiators of subsequent projects [64]. The Heart Foundation Local Government Awards [66] offer best practice cases of successful initiative implementation. While instances of projects building momentum at a LG level are evident, the projects are given on a case-by-case basis with no explicit examination of a virtuous cycle [66], and this is similar to other guidance and cases

available [67,68]. Guidance specific to LG in New South Wales [69,70] posits a cyclical framework regarding the way the policy setting can incorporate concepts of health, as well as noting that existing services and activities provided by LG impact on future planning and policy decisions. Guidance also indicates that program sustainability should be considered at the outset of initiatives, and that sustainability can be enhanced though incorporating such into existing settings and organisations [71]. However, even where guidance outlines stages such as initiative implementation followed by evaluation [71], a virtuous cycle is not directly referenced.

The above has explored both the academic literature and practical implementation guidance for healthy planning and active living initiatives. While likely to be part of many practitioners' and advocates' empirical knowledge base, the idea of a virtuous cycle resulting from healthy planning and active living initiative implementation has gained limited attention in the literature. While practical guidance offers examples of the themes identified in this study (refer to Section 4), again the idea is not explicitly addressed. Identifying such a process offers the opportunity for its further exploration, as well as the potential to highlight benefits of project uptake that might not currently be acknowledged.

2. Materials and Methods

The study adopted a multi-method approach that included semi-structured, in-depth interviews, surveys and document analysis. The below sections provide an outline of these methods including the research framework used. Detailed descriptions of the multiple streams analysis (MSA) lens employed, as well as sampling, data collection and data analysis techniques employed as part of this study for the interviews [36] and surveys [29] have been reported elsewhere (see also [51]).

2.1. Multiple Streams Analysis (MSA)

An MSA framework was adopted for this study. An MSA framework presents three streams, or three primary processes of agenda setting. These include the problem stream, where conditions might be seen to be problems that are desirable to be addressed and that

policy makers feel compelled to act upon [72], the politics stream, which considers the 'mood' or 'public opinion' at a LG scale [73,74]; and the policy stream, which considers possible policy options available to policy makers. Relevantly, the problem stream considers feedback from previous programs. When the three streams are brought together, a policy window presents itself, with change to policy more likely during this (brief) period.

An MSA lens allows a closer understanding of "policy world' realities' [75] necessary when examining the 'multiplicity and complexity of governance processes manifest within an urban area' [76] (p. 302). Importantly, MSA offers a lens through which to view changes to policy and other settings, offering an insight into why certain choices are made over others [74]. MSA avoids some of the shortfalls of alternative frameworks, for instance, more lineal theories such as path dependence [77–80]. Nevertheless, the theories of path dependence and MSA are compatible [81], with MSA able to offer an explanatory lens through which to view path dependence and/or deviation [82].

2.2. Sample

Potential healthy planning and active living advocates were recruited to participate in in-depth semi-structured interviews through a key informant, snowball sampling method [83]. Additionally, purposive sampling was used to engage practitioners in LGs that were identified as having recently undertaken one or more healthy planning and active living initiative(s) in case studies included in healthy planning guidance [84–86].

This approach provided insights from both advocates (interviews) and practitioners (surveys) operating in the healthy planning and active living space. Twenty-eight interviews with participants from across both the health [n = 13] and built environment [n = 15] professions were conducted. A total of 20 surveys were returned by LG practitioners, also from both the health [n = 11] and built environment [n = 9] fields. Responses attained from interviews [I] and surveys [S] are differentiated throughout this paper, as are built environment [B] or community health [H] practitioners. As an example, an advocate from the built environment profession that participated in an interview could be identified as [IB1].

The involvement of practitioners associated with successful cases of implementation as well as healthy planning advocates limited participation to those with primarily positive opinions on healthy planning and active living initiatives and processes. While appropriate for this study, there is value in future studies exploring the opinions of those who might be critical of such, or who are excluded from these processes altogether.

2.3. Data Collection and Analysis

As outlined above, the study adopted a multi-method approach to data collection, allowing for triangulation of methods [87]. Twenty-eight in-depth, semi-structured interviews [33] were conducted with healthy planning and active living advocates and twenty open-ended surveys were completed by LG practitioners [29]. Different methods of data collection were deemed necessary to reach the different samples (advocates and LG practitioners), given preliminary contact with key informant practitioners in LG indicated time constraints, no process in LG to request time to participate in such a study, and in some cases ethical concerns over participating during work hours or on behalf of the LG as barriers to participating in interviews. Yet the perspective of these practitioners was an important component of the study, and so a survey was considered an appropriate and more accessible data collection method. Surveys have been employed previously to reach LG practitioners in roles that influence health in an Australian context [48]. No such barriers presented themselves in interviewing advocates, and in-depth, semi structured interviews are an appropriate method to reach those who could be considered advocates in this field [50]. The surveys and interviews asked questions on similar topics however the iterative approach to the interviews meant that data received and coded informed subsequent questions, and the semi-structured style allowed for additional lines of enquiry to be pursued as relevant. Additionally, the purposive sampling technique employed for the survey distribution allowed for some questions to be centred around a specific case of implementation.

Of the fifty-six surveys distributed via email across two rounds, twenty were returned (35.7% response rate) (see [29]). An introductory phone call or email was made to fifty-one advocates to request participation, with twenty-eight participating (54.9%). Of the remainder, twelve (23.5%) advocates indicated willingness to discuss the topic but declined formal

participation in the study, and given ethics approval granted for the study permitted only formal in-depth interviews, these advocates did not participate further. Eight (15.7%) requests received no response, two (3.9%) individuals indicated that they did not meet the criteria outlined or had recently changed jobs to a role outside the field, and one (2%) potential interviewee indicated willingness to participate however an appropriate interview time was unable to be arranged.

In some cases, additional materials were provided by respondents or mentioned during the in-depth interviews or in the surveys. These documents were also included as data to be analysed. Data collection proceeded until data saturation was deemed to have occurred [88], with no further interviews and no further survey distribution rounds deemed necessary following that point.

Interview audio recordings were transcribed and checked by respondents. NVivo 11 data analysis software was used to analyse both the interview transcripts and completed surveys (and any supplementary material). Thematic analysis of both data sources was undertaken, with an MSA lens used as an initial sensitising concept, allowing for flexibility throughout the coding process [89]. Data analysis was undertaken iteratively with regard to the interview transcripts, with initial themes informing subsequent interview themes. Once emergent themes had been coded across perspectives of both practitioners (through survey responses) and advocates (through interview transcripts), findings were further verified through triangulation across these data sources [87].

3. Results

Findings from this research indicate four key areas through which project implementation demonstrates a 'virtuous cycle' effect. These areas include (1) project wind-up (Note 4 in Appendix A), or circumstances in which implementation and/or health outcomes exceed initial expectations; (2) partnerships and the improved opportunities for future initiatives these offer; (3) improved internal LG functioning; and (4) the continuation of projects beyond initial timeframes (refer to Table 1). Each emergent theme is discussed below.

Table 1. Summary of four primary research findings.

Research Finding	When Evident	Primary Impact(s)
Project 'wind-up'	During implementation	Impact of implementation during original project timeframe greater than originally anticipated
Partnerships and opportunities	During implementation; following project completion	Improved partnerships/integration including where not within original scope of project. Increases likelihood of subsequent project uptake or improved integration in the existing project or subsequent projects
Improved organisational functioning	During implementation; following project completion	Improved organisational setting including integration/policy framework (including where not within original scope of project). Increases likelihood of subsequent project uptake or improved integration in the existing project or subsequent projects
Sustainable, ongoing projects	During implementation (generally towards original project end date); following initial project end date	Continuation of existing project beyond original timeframe or change to circumstances that increase likelihood of other healthy planning project uptake by the organisation

3.1. Project 'Wind-Up'

Project wind-up was a commonly identified occurrence whereby the overall impact of a project (within the original planned timeline) was greater than initially anticipated. This idea was commonly identified by both practitioners and advocates. The most common types of project wind-up identified were where greater changes to the built environment occurred than originally anticipated [SH1, SH2], or where greater funding was released for the project than originally planned [SH3]. Notions of project wind-up were typically conveyed in responses by ideas of momentum [IB1, SH4] and inertia, such as where 'if [a LG] can get enough happening, [it] can actually get a different inertia, that's winding up, as opposed to the inertia of trying to stop something' [IB2, also IB3, IB4, IB5]. For example, one advocate held the view that healthy planning initiatives are 'like a rolling stone gathering more and more moss, you know, sort of you do one thing and that leads to something else' [IB1].

Projects gained momentum especially once initial successes became evident; such as through 'wins' or positive news surrounding projects [IH1, IH6, IB6]. Such wins then meant funding, resourcing or other benefits were more likely to be afforded the project [IH2, IB7, SH3, SB1]. A practical example of project wind-up is as follows, where:

[LG] sort of went over and above whatever we signed in our memorandum of understanding. So I think it just built momentum and then they saw that they were

winning, you know, getting runs on the board, their executive were coming on board with it, speeding up decision-making processes because they had a project which had an end date, like the intensive phase that they needed to sort of leverage. [IB4]

Various examples of project wind-up were provided by respondents. In one instance the benefits of a program providing cycleways were noted among the community, LG councillors and LG practitioners, resulting in additional funding and allowing further cycleways to be provided than originally provisioned [SH1]. In another instance, a state-led (and state-funded) initiative included installation of active transport infrastructure and wayfinding signage. When the benefits of these were noted (again by the community and LG councillors and practitioners), the LG itself funded the installation of additional infrastructure and signage as part of the program, despite being outside the original project scope [IH1].

3.2. Partnership Development and Opportunities

Secondly, both advocates and practitioners commonly identified another often unintended or additional result of projects to be partnership development (between LG and an external organisation) and the incidental opportunities that these partnerships could offer. Two main types of partnership development resulted from initiatives: the formation of new partnerships [IH6, SH5], and the ability to strengthen and leverage existing partnerships [IH4, IH5, SH6]. In some instances, partnerships were a component of a project itself, yet of particular interest are cases where unexpected partnerships developed, or where formalised partnerships then had an unintended impact, such as subsequent opportunities to implement projects. An extended process of partnership formation resulting from initiative implementation was provided in the following:

So, [a project was set] up so that the people had the time allocated to do it, their priorities [. . .] And then after that we decided that we'd sort of capitalise on having formed connections with a few people there, to have a workshop there [. . .] And there's a couple of working groups now formed from that, and we've funded a [. . .] review for available tools for integrating health into planning and looking at sort

of tailoring something for [the LG]. [. . .] But it's certainly, we're in the door, it's more than a foot in the door at the moment. [IH3]

In many instances the partnerships that developed and opportunities they provided were an unintended consequence for the LG only; advocates and advocacy groups external to LG regularly saw projects as a way to engage with LG and develop long-term relationships. Such an attitude is typified in the following, whereby a 'program [. . .] has been in place in a few councils and that is been a real enabler as well, as like a way in [. . . and] we've hooked up with them and done things collaboratively' [IH7]. For instance, an initiative implemented by a regional health service enabled partnership development, as follows: 'So the [initiative] was probably one of the biggest tools that has shown me and has given me a tool to use to engage councils' [IH8].

Such partnership development was seen to have multiple benefits. Firstly, it could improve the project itself (as discussed in Section 3.1). More importantly to advocates, however, this incidental partnership development provided greater opportunities for healthy planning and active living initiatives to be considered by a LG in the future [IH3, IH4, IH8]. This then presented benefits both to external advocates (having developed formal/informal links to a LG or LG practitioners) and to the LG itself (with greater guidance from advocates leading to improved project efficacy, and greater likelihood of future project opportunities). The importance of this element of project success and the ongoing opportunities such relationships can provide are summarised in the following response, from an advocate external to LG: 'I think establishing relationships is really important, and you can get so much more done when you've had a few good wins, and then you can kind of keep pushing it' [IH2]. Similar themes arose from an advocate within LG, such as where a project:

really helped for us to get a few little wins in, and plus it's given us long-term networks to do things [. . . and] we now know who in [an advocacy group and state department] to give us a hand is, and those relationships will last for years hopefully. [IH1]

3.3. Improved Internal Organisational Functioning

LG functioning was seen to improve in various ways as a result of projects. In some instances, improved internal functioning was an objective or central focus of a project from the outset [SH6], yet more commonly were implicit or unintended improvements [IB3, IB6, IB7, IH1]. It is these instances of implicit or unintended improvements that are the focus of this section. Such outcomes presented themselves at both the LG scale, and at the individual practitioner level.

At the LG level, initiative implementation could turn attention towards the existing policy setting and internal practices of the LG, and could also strengthen the local evidence base. The policy setting could be incidentally improved as a result of actions undertaken through projects. This could occur when implementation of projects (or reviews of policies targeted at other sections) revealed opportunities for policy improvement elsewhere [IB3]. Examples of this included changes to funding mechanisms [IB5, IH2, IH9] and LG land-use legislation or urban design policies [IB3]. Commonly, where projects were undertaken concurrently (but separately to) the review of an LG policy, central components of those initiatives could be 'embedded' into that policy being reviewed (for instance, LG public health policies) [IB7]. Projects could also highlight opportunities to improve the existing policy setting, such as where an initiative 'highlighted to [a LG] where our policy and procedure work was lacking, so, we've definitely developed since then some really good policies to really support what we're doing' [IB6]. The notion of a project providing momentum for policy change is also evident where:

there was no condition [prior to the initiative], but there now is, for an active travel officer [. . .] So that's a two-year commitment by Council for a senior position, to work on active travel as a result of the physical activity strategy that we put in place with others. So [. . .] the policy environment was receptive, but the policy environment's been enhanced. [IH5]

In addition to an improved policy setting (and often related to this consideration), the internal practices of LGs could also benefit from project implementation. Particularly,

ongoing interdepartmental partnerships within LG (distinct from LG partners with external stakeholders, as discussed in Section 3.2) were noted to result from projects, such as where:

> you need people who can provide a technical response, and you need people who can be that community interface. So we had a great partnership with engineering [following project implementation] that ensured we were able to bring those different types of skills together for that community benefit. [IH5]

Such partnership development assisted LGs to overcome siloed operations [SH6, IB8, IH7] and helped to avoid reliance for project success on a single individual or champion, by institutionalising it and involving multiple practitioners/departments [IB4]. The benefits that healthy planning and active living initiatives could have for internal LG functioning were noted in the following:

> a lot of the time I guess it's internal practices that change, and you kind of think, pre this program, we didn't have a connection between the TravelSmart Officer and the Health Promotion team, now we do. Pre this program, we didn't have the Facility Operations guys considering [the Health Promotion team] on activation plans, now they do. So, it was a massive internal culture shift. [IH1]

Implementation of projects also impacted LGs at the individual practitioner level, in terms of individuals' skills, awareness and support of healthy planning principles. For instance, projects could generate greater support for healthy planning and active living initiatives from elected members of LG, whereby 'the councillors support us now in [undertaking healthy planning] as well. So, they've been brought along for the ride, so hopefully in the future they can enable us to do more work which creates those better environments' [IB6]. Projects were viewed by both practitioners [SH8, SB1, SB2] and advocates [IB9] as 'a great awareness and advocacy tool' [IH1]. The relationship between project implementation, the policy setting (as discussed above) and individual practice was exemplified in the following:

I think probably before [the initiative] there was definitely not much appetite within council for [. . .] looking holistically at everything, it was really just about "here's a project, we need to build it," and that's what the policy supported [. . .] whereas now we need to look at, we've probably started to look at things differently, and to look at the quality rather than the quantity. And that's really having an impact on what's being built and what's being developed. [IB6]

Undertaking healthy planning and active living initiatives also provided opportunities for LGs to measure qualitative and quantitative benefits through project evaluation, which in turn enabled future project uptake [IB6, IH6, IH8]. For instance, one initiative allowed for a private developer, a university, a federal government research funder and a state government health department to collaborate in evaluating a locally-implemented initiative [IB3]. The benefits of this extended to improved practice by the developer, an improved knowledge base for the state government agency and localised results regarding project efficacy for the LG [IB3]. Where such opportunities arise, the virtuous cycle likely applies at a scale wider than just LG. Another project involved collaboration between LG, state government departments and a regional health service. Evaluation of that project provided:

hard evaluation data at the end [. . .] I think if we can sort of succinctly and kind of show easily that this is what we're doing, this is where the money's going and this is what we're going to get, it might help I guess [in the] future, down the line, in terms of getting [the message] across a bit more. So, I think having those evaluation outcomes is pretty important. [IH6]

3.4. Sustainable, Ongoing Projects

The benefits of the three factors above then in some cases led to extension of project implementation times, or to changes that made future projects more likely. For instance, where project wind-up provided greater benefits than originally expected, where partnerships were strengthened or developed and where the organisational setting of the LG changed to become more favourable to healthy planning, these could help to ensure that projects were continued [SH6, SB3], or that other programs were implemented directly [IB2, SH1, SH5].

Such effects could help to overcome barriers such as lack of funding [SH2, SB4] or short-term, ad hoc implementation [IB2, IH10]. This fourth consideration is perhaps the best illustration of a virtuous cycle. In an example where the policy setting improved as a result of a project, for instance, one effect was that the LG was able to 'set in place [. . .] procedures that will, you know, live on for years and years and change millions of dollars of infrastructure in years to come' [IH5]. Central to this theme was that projects regularly had impacts beyond their stated timeframes, such as where: '[o]nce the [. . .] funding ceased, Council created a full-time position for this role to continue as Council saw the benefit to the community and it aligned with Council's Strategic Plan' [SH3]. The overarching impact that project implementation could have for LGs in the long-term was typified in the following:

I think there's a real momentum now [for healthy planning . . .]. So, it's not just going to fade away [. . .] it's in policy now and that's going to keep going in a sustainable manner, so that's probably one of the biggest outcomes I guess of [the initiative], apart from all the change that [residents] have had, I think it's changed the local government and their policy. [IB7]

4. Discussion

Evaluating the full value of healthy planning and active living initiatives against a range of indicators is a difficult yet important task [90,91]. The findings of this paper indicate that partnership formation and an improved organisational setting (among others) can be a result of as well as a prerequisite for healthy planning and active living initiatives. In turn, this potentially presents yet another co-benefit of healthy planning and active living project uptake.

The concepts identified in Section 3 can be seen in other recorded examples of project implementation. For example, in an Australian project involving six Victorian LGs that aimed to 'strengthen local government capacity to adopt integrated planning to promote physical activity' [33] (p. 354), LGs each employed a staff member to help with this, and various other capacity-building efforts were made. Findings indicated that the project oriented the LG's focus towards physical activity promotion, although capacity building was an explicit aim

[33]. Nevertheless, it presents an example of such a virtuous cycle in effect. The (explicit) capacity building efforts from the project then had impacts on understandings of how LG could influence constituents' health, such as through development of partnerships and through changes made to planning processes, structures and policies, to assist integrated planning [33], which supports the findings outlined above. In that study, 'the project was used as an opportunity to put into practice this approach by councils which had a pre-existing readiness for this way of working' and where LGs 'used the MetroACTIVE strategy as a means of developing [integrated planning] further' [33] (p. 360). This reflects a virtuous cycle as outlined in Section 3.3, whereby LG internal functioning improved as a result of an initiative.

With regard to project wind-up, the possible (unintended) additional positive consequences of projects are widely acknowledged by advocates, yet specific examples of these have been largely overlooked in the literature and guidance, and so too has the notion that these might occur. While unintended positive consequences cannot, by definition, be identified prior to implementation, the fact they might occur can be. The possibility that projects might have even greater benefits than projected or forecast might assist in advocating for such changes. Forms of project wind-up are indeed often evident in evaluation of projects, such as where a program 'offered the capacity to generate substantial spin-off in terms of community activity around physical activity and healthy eating over and above funding levels' [92] (p. 14). The ability to communicate the possibility of this occurrence for future projects as 'project wind-up' (refer also Note 4 in Appendix A) could add weight to advocacy efforts of policy entrepreneurs [73], particularly with regard to the benefits of healthy planning policies and in settings where (healthy) planning decisions are politicised [36]. This consideration could also influence the political viability of healthy planning if unintended positive benefits are seen to commonly accompany such efforts.

In terms of partnerships and opportunities, while healthy planning literature has identified the need for partnerships for project uptake [29,51], relatively less attention is afforded the incidental partnerships that might develop as a result of implementation, and the opportunistic chances for future project uptake that they might provide. As an example, a healthy planning project implemented in Western Australia saw existing relationships, a result of previous projects, developed, with positive research and project outcomes resulting [93].

In this example, previous projects had a virtuous cycle effect through the relationships they had created. The importance of partnership development with 'external organizations, [such as with] community health centres, divisions of general practice and neighbourhood centres' has been demonstrated regarding implementation [33] (p. 358) (also [29,51]). As outlined in Section 3.2, healthy planning and active living projects can incidentally improve existing relationships and provide opportunities for new relationships to form. Yet if this often-unintended benefit can be explicitly identified, again with examples, it is likely to increase the political appeal of initial project uptake for practitioners and LGs, and add an extra benefit when healthy planning policy is considered against other options.

Improved organisational functioning (or capacity building [62]) as a result of projects has also been identified in other instances of project implementation. For instance, following an initiative in New South Wales, Australia, a project review identified 'a "shift in consciousness" and renewed thinking [. . .] that had impacted on practice' as well as direct impacts to the policy setting [94] (p. 4, original emphasis). Evaluation of a LG capacity-building project noted that LGs are able to 'capitalise' on changes brought about by initiatives, finding collaboration across LG departments and from management roles to be one of these changes, which can also provide more benefit than where projects were undertaken by one division of the LG [33]. The same study also noted that 'cross-organizational ways of working' and 'new planning processes and structures to support integrated planning for physical activity' resulted from the project [33] (p. 358).

Improved internal organisational functioning has been found to have multiple benefits, such as being 'instrumental to multiplying health gains' [38] (p. 31) (also [62]). Increases in capacity building can relate to improvements in service development provided by an organisation, improve sustainability of a program (refer also below), and increase problem-solving abilities of an organisation [38]. Capacity building can also change perceptions of health promotion activities, build knowledge, and shift organisational attention towards such efforts, including through the policy setting and resource allocation [62,95]. Changes to the policy setting have previously been framed as a co-benefit of reduced duplication, such as a Victorian program in Australia that promoted integrated planning [33]. Improved internal operations can also include individual-level capacity building for practitioners within a LG,

such as through greater awareness of the health challenges of a community, and potential ways an LG might influence these [62,94]. If projects can incidentally benefit the internal functioning of an LG, project uptake is likely to appeal to LGs hoping to improve their internal structures, particularly given the multiple benefits this can offer. Considering this, where healthy planning and active living initiatives are implemented, there might be value in measuring capacity building that results from such projects (such as, say, interdepartmental collaboration), in addition to community health benefits [38] and more commonly identified co-benefits.

Furthermore, as governance structures have been identified as a barrier to provision of more sustainable transport systems and urban forms in Australia [54] and as Australian LGs can be subject to bureaucratic inertia [53], situations that can change these governance structures and redirect bureaucratic inertia take on greater importance. In settings where there is a lack of a mandate for actions by LG at the state level, 'the challenge for local governments is to integrate healthy planning into their core business' [64] (p. 7). Undertaking initial projects, even as pilots or demonstration projects, can be a way to positively influence the governance structure and contribute to a positive inertia through changes that can result in the policy setting and practices of LG, while simultaneously contributing to the local evidence base to support action within that LG. Improved internal operations resulting from projects can be seen to be conducive to policy windows for LGs [73], or opportunities to make positive changes. This is likely the result of an improved political setting in LGs, where the benefits of healthy planning become evident, and of an improved policy setting, where the legislative setting becomes more conducive to healthy planning, or where it is considered more desirable to make such a change. A changed problem setting might also contribute to the improved likelihood of a policy window, such as where opinions might change to see 'community health' as being within the remit of LG.

Lastly, the importance of sustainable program implementation (Note 5 in Appendix A), and the challenge to achieving this in health promotion, have been noted [39]. As an example, across the world many organisations that regulate and influence the urban form have been structured to preference private, automobile transport for many decades, with resulting urban

environments (and population health) reflecting this [15,96,97]. Yet this is a problem that can be reversed.

The above three findings, for instance, indicate that a positive inertia can be created by project uptake. Consequently, one-off, ad-hoc projects in some instances become instated into LG policy and practice, improving project sustainability and offering the chance for subsequent initiatives to further offer such benefits. When viewed through an MSA lens, the likelihood of a policy window opening, with subsequent positive change, can be seen to directly relate to the above three occurrences, and is likely to both result from and cause more sustainable implementation of healthy planning and active living initiatives, throughout different stages of the policy cycle.

The findings presented above offer various, unintended benefits that can result from undertaking healthy planning and active living initiatives. The key implications of this are threefold. Firstly, added importance should be placed on LGs undertaking healthy planning and active living initiatives. Actually undertaking projects starts a positive cycle that creates conditions that make it both easier and more likely for subsequent healthy planning efforts to be considered and undertaken [29,51]. This can help to overcome bureaucratic inertia [78] and with each project subsequent project uptake and success becomes more likely [79]. As such, opportunities for project uptake could be considered 'critical junctures' [81,98] or as opening up 'policy windows' [73], improving the chance of subsequent, positive changes to enable healthy planning to be undertaken.

Secondly, when discussing the co-benefits of projects, advocates might be able to include the institutional and operational benefits that such projects can create, such as more integrated planning, reduction in siloed operations of LGs, improved policy efficacy and reduced service/policy duplication. Project uptake might be coined in more cyclical terms, or LGs might be shown to be starting on a path towards healthy planning as a result of project uptake.

Thirdly, and related to providing evidence to support the second aspect, when such initiatives are undertaken, monitoring should include the institutional setting in which projects came to be undertaken, the institutional benefits that projects provide, and the

subsequent opportunities projects might afford an LG in this space. Monitoring should be flexible and broad enough to allow for longer-term and less tangible benefits to be identified, even iteratively as the project is undertaken.

5. Conclusions

A lack of progress to date in implementing healthy planning on the ground in Australia supports the notion that '[r]eflecting on the kind of city we want is one thing; it is quite another to convert this into reality' [41] (p. 719). The need for partnerships, integrated planning and the discussion of co-benefits, among other considerations, have been noted to assist healthy planning, and to aid implementation of healthy planning and active living initiatives. Yet this study posits that the reverse is also true: where projects are implemented they can provide incidental benefits to collaboration and also provide better outcomes than originally anticipated, improve LG functioning, and in doing so become part of more sustainable implementation. While the challenges of gaining project uptake remain, this research places importance on action by LGs in this space, potentially also incentivising action through the identification of various incidental benefits that might arise from project uptake. Healthy planning and active living initiatives can help to shift the sustainable future city from concept to reality, through a virtuous cycle that assists in improving both planning and practice.

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Appendix

Note 1. The three primary areas the built environment can influence health have been identified as through 'physical activity; community interaction; and healthy eating' [99] (p. 240). The focus of this paper is the first of these domains, physical activity.

Note 2. Integrated planning is the 'management of cross-cutting issues that transcend the boundaries of established policy fields and that do not correspond to the institutional responsibilities of individual government departments' [100] (p. 306) (referenced in [101]).

Note 3. Path dependence is a concept whereby 'preceding steps in a particular direction induce further movement in the same direction [79] (p. 252), involving 'historical sequences in which contingent events set into motion institutional patterns or event chains that have deterministic properties' [78] (p. 507).

Note 4. The term 'wind-up' or 'project wind-up' is used throughout this paper to refer to a situation where the impact of implementation during the original project timeframe is greater than originally anticipated, or where the project gains positive momentum and 'winds-up'. A more common meaning of 'project wind-up' is project completion. There may be value in future work in this emerging area to re-label this phenomenon, ensuring clarity.

Note 5. Program sustainability is 'the general phenomenon of program continuation [. . .] that incorporates essential notions in continuation (permanence, time) without limiting its manifestations to any particular form [. . .] sustainability does not imply a static program' [39] (pp. 92–93).

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APPENDIX 1: SURVEY AND INTERVIEW PARTICIPANT OVERVIEWS

A1.1 Survey Participants

Table A1.1.1: Survey participant summary table.

Respondent[12]	Respondent Gender	Respondent Field	Source	State of Respondent's LG
	(M/F)	(CH = Community Health; BE = Built Environment)	(HF 2014/15 = Heart Foundation Awards 2014/15; HSAP = Healthy Spaces and Places online resource)	
1	F	CH	HF 2014	Northern Territory (NT)
2	F	CH	HF 2015	South Australia (SA)
3	M	BE	HF 2015	SA
4	M	CH	HF 2015	SA
5	F	BE	HF 2015	New South Wales (NSW)
6	F	CH	HF 2014	SA
7	M	CH	HF 2014	Tasmania (Tas)
8	F	CH	HF 2015	Victoria (Vic)
9	M	BE	HF 2015	Tas
10	F	CH	HF 2015	Queensland (Qld)
11	F	CH	HF 2015	Vic
12	M	CH	HF 2014	Qld
13	F	BE	HF 2015	NSW
14	F	BE	HF 2015	Tas

[12] Different identifiers were used to identify survey participants across papers, this is an internally allocated identification only.

15	M	CH	HF 2014	SA
16	M	BE	HSAP	Qld
17	M	BE	HSAP	Vic
18	F	BE	HSAP	SA
19	F	CH	HSAP	NSW
20	M	BE	HSAP	NSW

Figure A1.1.1: Survey participants by gender.

Survey Participants by Field
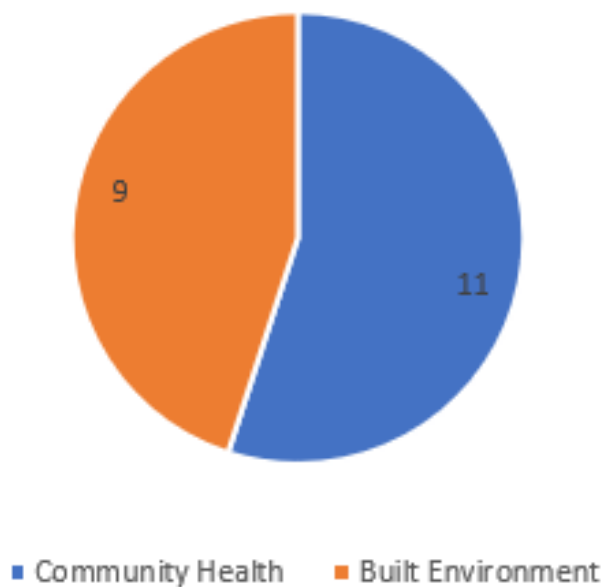
Figure A1.1.2: Survey participants by field.

Survey Participant Source
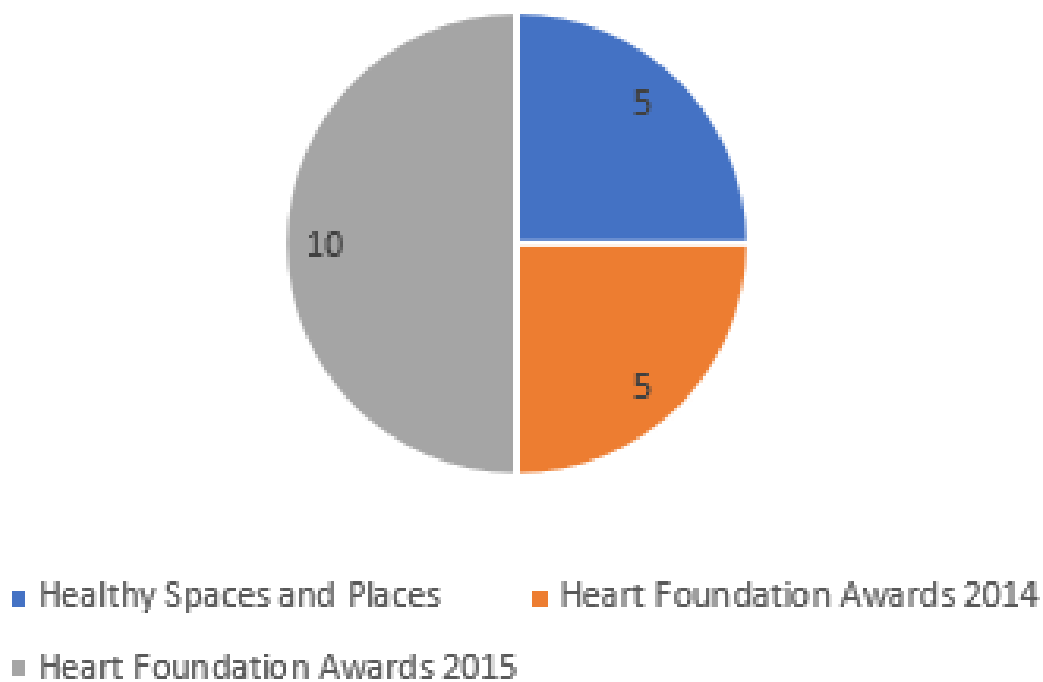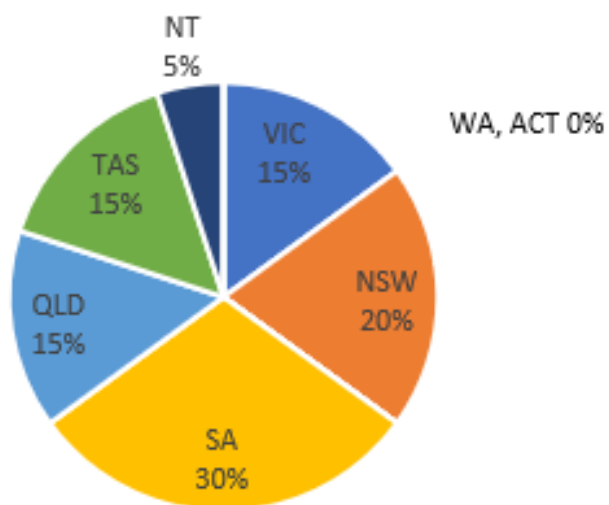

Figure A1.1.3: Survey participant sources.

Figure A1.1.4: Survey participants by state.

A1.2 Interview Participants

Table A1.2.1: Interview participant summary table.

Respondent[13]	Respondent Gender	Respondent Field	Respondent Professional Role	Respondent State of Residence
	(M/F)	(CH = Community Health; BE = Built Environment)		
1	M	CH	Non-governmental organisation (NGO)	Western Australia (WA)
2	M	CH	Government - Regional	New South Wales (NSW)
3	M	CH	Government - Regional	NSW
4	M	CH	LG	Victoria (Vic)
5	M	BE	Private	NSW
6	M	CH	Government - Regional	NSW
7	F	BE	Advocacy/Academia	NSW
8	F	CH	Government - Regional	NSW
9	M	BE	Academia	NSW
10	M	BE	State government/Academia	NSW
11	M	BE	LG	WA
12	M	CH	LG	WA
13	M	BE	LG	WA
14	M	BE	LG	WA
15	M	BE	State	WA
16	M	BE	State	WA

[13] Different identifiers were used to identify survey participants across papers, this is an internally allocated identification only.

17	F	CH	State	WA
18	F	BE	Academia/Advocacy	NSW
19	F	CH	Government - Regional	NSW
20	F	CH	Government - Regional	NSW
21	M	CH	Government - Regional /LG	NSW
22	M	BE	Private	NSW
23	F	BE	Academia/Advocacy	Vic
24	F	BE	Academia/Government - Regional /LG	South Australia (SA)
25	F	CH	NGO	SA
26	F	CH	NGO	SA
27	F	BE	Private	SA
28	M	BE	Government – Regional/ Academia	Vic

Interview Participants by Gender

Sample = 28

39%

61%

■ Male   ■ Female
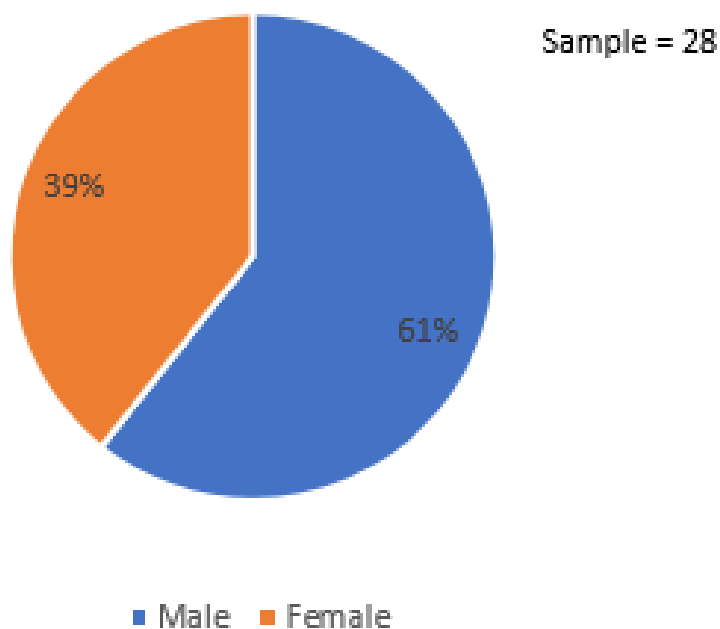
Figure A.1.2.1: Interview participants by gender.

Interview Participants

13

15

■ Community Health practitioners   ■ Built environment practitioners
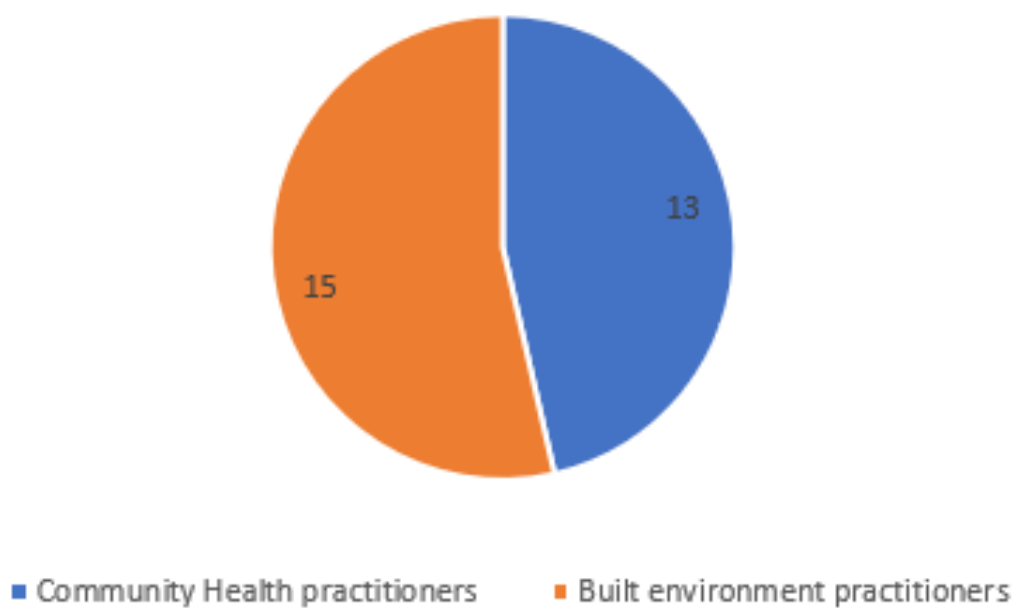
Figure A.1.2.2: Interview participants by field.

Interview Participants by Professional Role
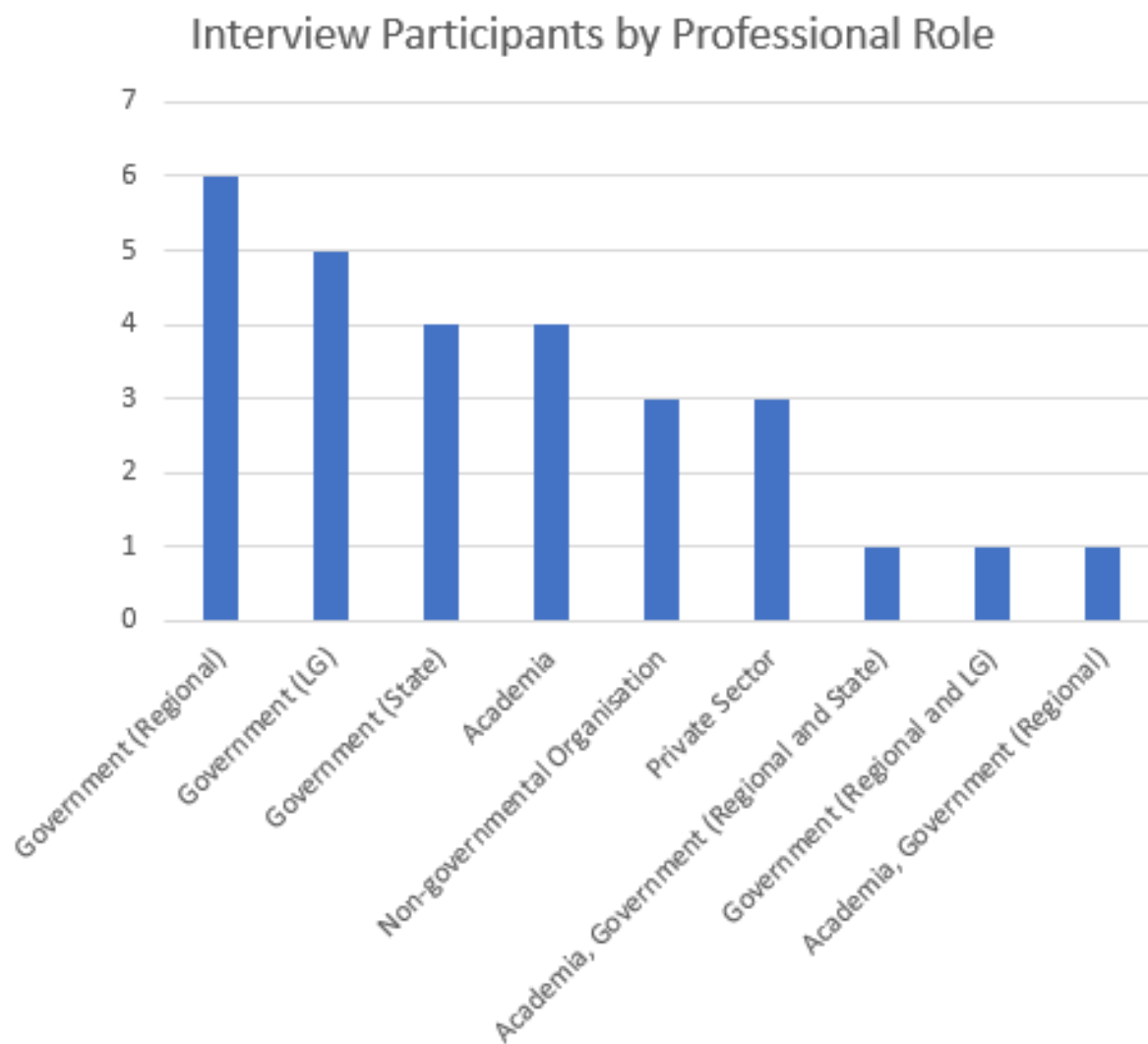
Figure A.1.2.3: Interview participant by professional role.
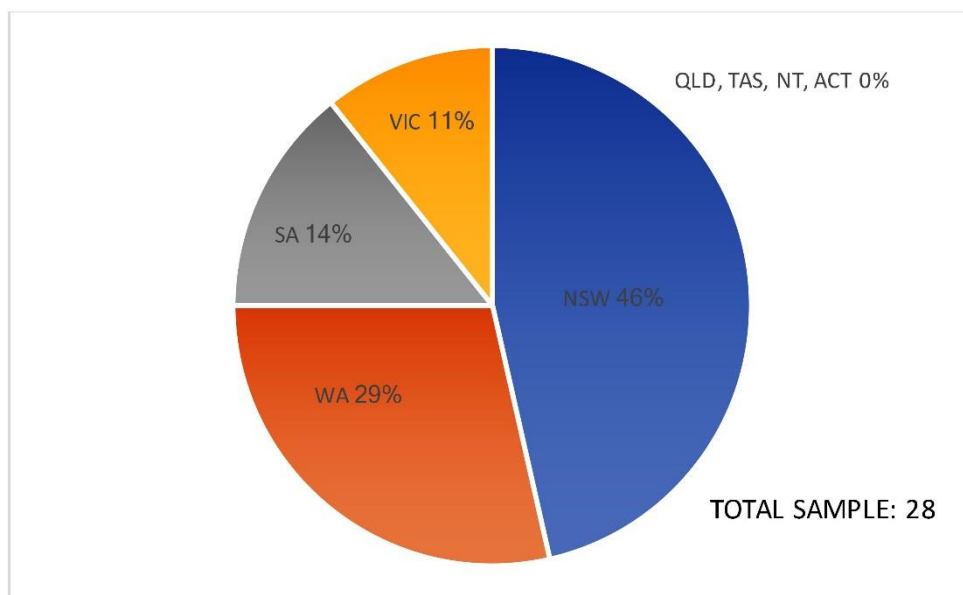
Figure A.1.2.4: Interview participants by state.

A1.3 Interview Questionnaire[14]

GENERAL

1. What role do you see for local government, particularly with in planning, in addressing community health through healthy design initiatives?
2. What are the major changes evident in the recent creation of healthy urban design initiatives?
3. Do you believe there is awareness in local government of this healthy urban design research and knowledge?
4. Is there willingness by local government to incorporate this knowledge and guidance into daily operations?

POLICY

1. Are there any specific policies within local government that assist healthy urban design to be a consideration?
2. Does your organisation have specific policies to help local government to implement heathy urban design?
3. Are there any specific policies within local government that make consideration of healthy urban design especially difficult?
4. Can you think of any policies external to local government that either assist or make healthy urban design especially difficult?
5. Overall, how supportive do you feel the current policy framework is for allowing healthy urban design projects to be implemented?

POLITICS

1. Are there any aspects that make healthy urban design especially viable or attractive for implementation?
2. What do you perceive as the biggest political enablers or challenges in general regarding healthy urban design?

LESSONS LEARNED

1. How could healthy urban design initiatives and policies be made more relevant for a local government context?
2. Can you explain one essential aspect that you believe is necessary for healthy urban design projects to go ahead?

SUMMING UP

1. What do you consider the role of local government to be in terms of healthy urban design?
2. If there is a role, what would you consider to be the biggest challenge in incorporating health into local government functioning?
3. What do you consider the role of healthy urban design advocates to be in terms of advocating or advising local governments?

---

[14] Note: This is a sample questionnaire that was approved for Ethics RDHU-239-15 on 29 October 2015. The semi-structured interview method allowed for additional topics to be explored with each participant as they arose. Furthermore, the iterative approach adopted allowed for topics to be explored in greater depth in subsequent interviews, informed by previous data.

A1.4 Survey Questionnaire[15]

SURVEY COMPLETED BY:

Name:

Role/job title:

SURVEY QUESTIONS

GENERAL

1. What was the main reason for your organisation to nominate for the Heart Foundation Local Government Awards?

2. Has alignment with the Heart Foundation Local Government Awards assisted your organisation to promote healthy design, or to bring health to the forefront of its plans?

3. If health is now a greater consideration in your organisation, how have the Heart Foundation Local Government Awards assisted changes in current programs or the addition of new ones?

4. What other professionals or departments within local government did you work closely with on the project(s) for which you nominated for the Heart Foundation Local Government Awards ('the project')?

5. What would you consider the biggest achievement regarding the project?

---

[15] Note: This is a sample survey that was approved for Ethics RDHU-239-15 on 29 October 2015. Surveys varied only in the resource questions focused on (e.g. the Heart Foundation Awards or the Healthy Spaces and Places cases).

HEALTH

1. Can you briefly summarise where the initial interest in this project came from?

2. How commonly are concepts of community health explicitly or implicitly considered in your role?

3. In addition to the Heart Foundation Local Government Awards, what further research or guidance from health advocate groups or organisations are you aware of, and how useful are these in your role?

POLICY

1. Are there any specific policies within your organisation that assisted the initiation of this project?

2. Are there any specific policies within your organisation that made this project especially difficult?

3. Overall, how supportive do you feel the current policy framework is for allowing healthy urban design such as this project to be implemented?

POLITICS

1. Are there any aspects that made this project especially viable or attractive for implementation?

LESSONS LEARNED

1. Regarding this project, what are the most significant lessons you learned from your organisation's involvement?

2. In what ways could the Heart Foundation Local Government Awards be improved, or better tailored to your organisation's needs?

SUMMING UP

1. What do you consider the role of health in your profession to be?

2. If there is a role, what would you consider to be the biggest challenge in incorporating health into your profession?

3. Are you able to briefly sum up the overall experience of your organisation being involved in this project?
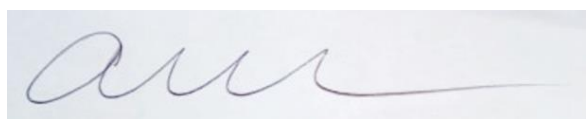
APPENDIX 2: STATEMENT FROM THE JOINT AUTHORS

<u>Publication 2</u>

Barriers and Enablers to Planning Initiatives for Active Living and Health.

Statement of Contributions of Joint Authorship

McCosker, A.   (PhD Candidate)   (75% Contribution)

Writing and completion of manuscript, established paper methodology and theoretical framework.

Anthony McCosker, PhD Candidate

Matan, A.   (Supervisor)   (25% Contribution)

Guided establishment of methodology, supervised and assisted with manuscript complication, editing and co-authorship of manuscript.
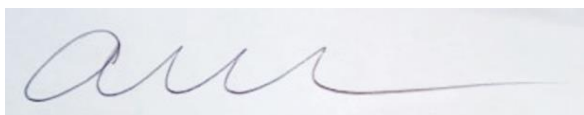
Anne Matan, Supervisor

Publication 3

Policies, Politics, and Paradigms: Healthy Planning in Australian Local Government. Statement of Contributions of Joint Authorship

McCosker, A.   (PhD Candidate)   (70% Contribution)

Writing and completion of manuscript, established paper methodology and theoretical framework, analysed the data.

Anthony McCosker, PhD Candidate

Matan, A.   (Supervisor)   (15% Contribution)

Guided establishment of methodology, supervised and assisted with manuscript complication, editing and co-authorship of manuscript.

Anne Matan, Supervisor

Marinova, D.   (Principal Supervisor)   (15% Contribution)

Guided establishment of methodology, supervised and assisted with manuscript complication, editing and co-authorship of manuscript.

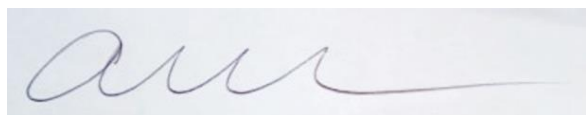Dora Marinova, Principal Supervisor

Publication 5

Implementing Healthy Planning and Active Living Initiatives: A Virtuous Cycle.

Statement of Contributions of Joint Authorship

McCosker, A.   (PhD Candidate)   (80% Contribution)

Writing and completion of manuscript, established paper methodology and theoretical framework, analysed the data.

Anthony McCosker, PhD Candidate

Matan, A.   (Supervisor)   (10% Contribution)

Guided establishment of methodology, supervised and assisted with manuscript complication, editing and co-authorship of manuscript.

Anne Matan, Supervisor

Marinova, D.   (Principal Supervisor)   (10% Contribution)

Guided establishment of methodology, supervised and assisted with manuscript complication, editing and co-authorship of manuscript.

Dora Marinova, Principal Supervisor

APPENDIX 3: COPYRIGHT RELEASE FOR PUBLISHED MATERIAL

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McCosker, A. (2017). *Planning for health: Barriers and enablers for healthy planning and design at the local government scale*. Paper presented at the 10th Making Cities Liveable Conference, Brisbane, Qld: Association for Sustainability in Business Inc.

28 July 2018

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<u>Publication 2</u>

McCosker, A., & Matan, A. (2018). Barriers and enablers to planning initiatives for active living and health. *Sustainable Development, 11*(1), 68-82. http://dx.doi.org/10.5539/jsd.v11n1p68

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Publication 3

McCosker, A., Matan, A., & Marinova, D. (2018). Policies, politics and paradigms: Healthy planning in Australian local government. *Sustainability, 10*(4), 1008. http://dx.doi.org/https://doi.org/10.3390/su10041008

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Cc:

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Regards

Paul

Publication 5

McCosker, A., Matan, A., & Marinova, D. (2018). Implementing healthy planning and active living initiatives: A virtuous cycle. *Urban Science*, *2*(2), 30. http://dx.doi.org/10.3390/urbansci2020030

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Figure 1: The health map

Barton, H., & Grant, M. (2013). Urban planning for healthy cities A review of the progress of the European Healthy Cities programme. *Urban Health, 90*(Suppl. 1), S129-S141. http://dx.doi.org/10.1007/s11524-011-9649-3

(included in Publication 1: Planning for health: Barriers and enablers for healthy planning and design at the local government scale)

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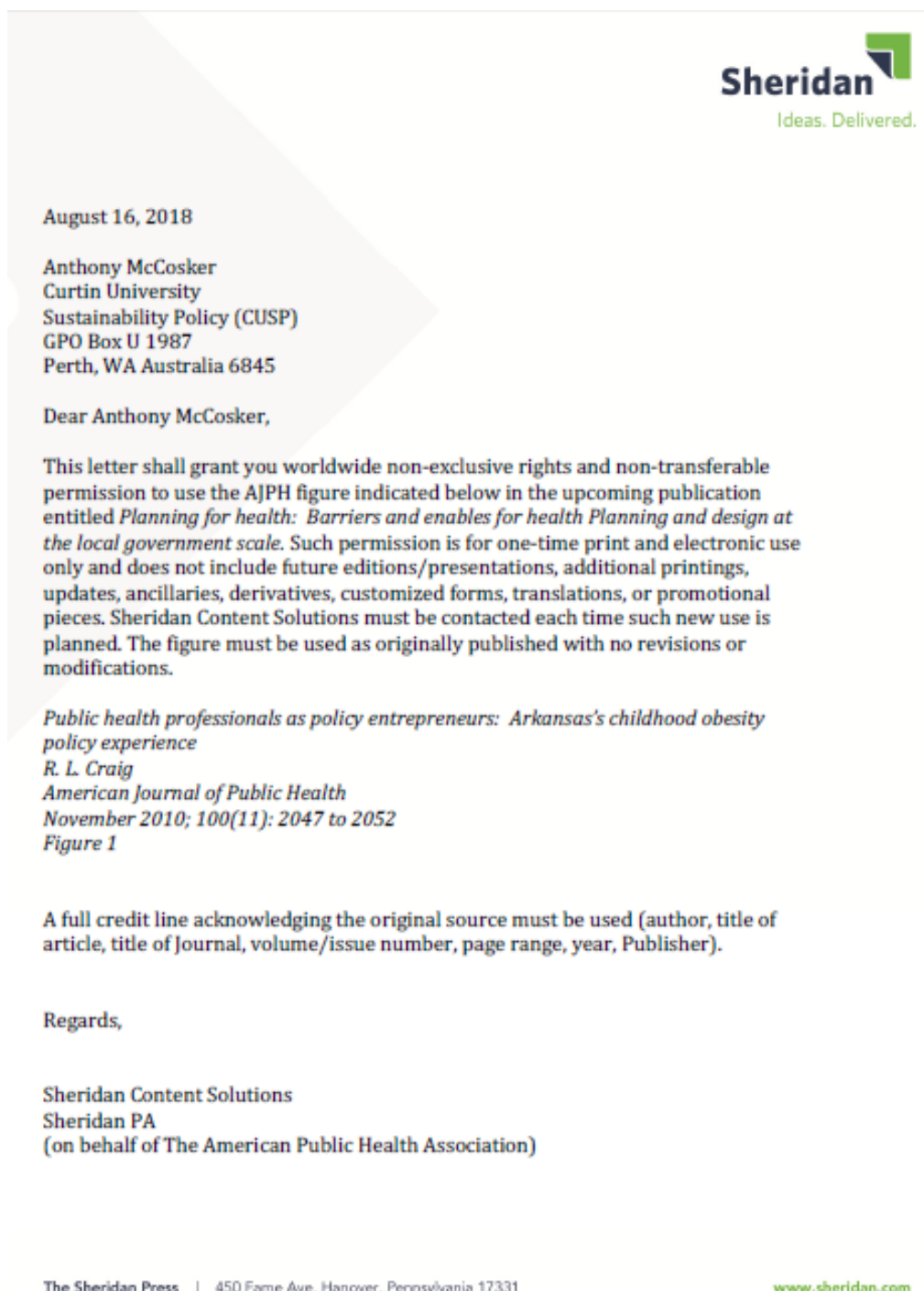
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