Towards Healthy Cities

A planning perspective

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Abstract

Research has demonstrated that designing the built environment in a manner that is conducive to good health can increase the health and well being of inhabitants. The premise of this research is based on the assumption that people are more likely to make healthy behaviour choices when options are easily available to them; and thus environments that support or discourage unhealthy behaviours critically influence their health.

The town planning profession plays an important role in decision making and controlling orderly development of cities and therefore is the driving force of healthy urban planning. Effective planning policy and integration of health in the urban planning process can assist in alleviating preventable diseases and increase general well being through promoting physical activity by incorporating considerate land use and design principles.

Therefore the attitudes of planning professionals toward these ideals, together with professionals armed with the tools and means to positively alter unhealthy behaviours are crucial in producing healthy environments

This thesis investigates the attitudes, opinions and knowledge of planners in regard to health and healthy urban planning in Sydney. The research primarily focuses on the key human factors that influence the implementation of healthy urban practices and policy in local governments and current barriers within local governments today which inhibit the development of healthy cities.

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Table of Contents

List of Tables

List of Figures

Chapter One:
Introduction

Problem Setting

In recent times there has been growing concern regarding health problems within our communities and the association these have with our urban environments. It has been recognised that the way that urban areas including cities, towns and suburbs are designed impact and influence the way people live, work, play and engage with the environment (Frank et al., 2003:1).

Whilst technology, health facilities and educational programs improve, there are ever increasing incidences of diabetes, obesity, cardio-vascular diseases and mental health illnesses affecting the health and well being of our populations. In particular the health problems in Australia today are significantly associated with preventable and behaviour related diseases. In Australia, the annual direct healthcare costs related to physical inactivity are approximately $400 million with more than 8,000 deaths annually (Bauman et al 2002). Recent figures indicate that 50% of adults and 25% of children are obese and that 1.5 million young people under the age of 18 may be at risk of preventable chronic conditions such as type II diabetes, cardiovascular disease and stroke (Health Insite, 2004) (Farelly 2006).

Whilst it is recognised that genetics are a significant contributor to a person's health and longevity, ultimately daily habits and behaviour play an important role in determining a person's health and overall life expectancy (Frank 2003:42). In particular, it has been well documented in research all over the world that current health trends are related to a sedentary lifestyle resulting from a myriad of factors including technological advances, lifestyle, workforce changes and the quality and design of the built environment.

Research indicates that many problems in cities today including health are related to the quality of built environments, poverty, inequity, pollution, unemployment, lack of access to jobs, goods and services and lack of community cohesion (Barton et al., 2000:1). Population increases and sprawling development has given birth to the current trends of urban development which has produced housing estates and urban environments that have few community facilities, few local destinations, long distances to public transportation and reliance on the personal motor car.

These factors have been linked to causing negative effects on our health, both physical and mental and inhibit chances for active lifestyles. (Knox, 2003:319).

The acknowledgement of the effects of the built environment on health, has established that the management of built environment is integral to the health and well being of those who live, work and interact with that environment. Therefore health issues should not only be considered within the health care profession, but should involve all stakeholders who can influence built environment and in turn the health and well-being of a population.

The development of healthy cities has recently become a prevalent planning issue all over the world and has been the subject of many seminars, publications and recent media attention around the world. In particular, newspaper articles focusing on our 'Sick Cities' have been the subject of debate within the Sydney metropolitan region. Titles such as "Living ourselves to death" (Robotham, 2006), "Dead end suburbs means our health is going nowhere" (Padaram, 2006), "Finding a cure for our sick cities" (Capon 2006) and "Cities sick of urban sprawl" (Norrie, 2006) convey the attitudes and concerns expressed within the articles.

Despite the significant research established by planning academics, and the general 'buzz' from the media and health specialists on how considered healthy urban planning can promote health through the built environment, there is little known about how this issue is viewed by our planning practitioners.

As such this research project endeavours to gain an insight into the perceptions of town planners in relation to healthy planning principles in Sydney in light of recent media commentary on the state of our populations' health and its link to the built environment.

Research Objectives

It has been established that the built environment has an opportunity to be developed in a way that supports the health of city populations. The premise of this research is based on the assumption that people are more likely to make healthy behaviour choices when options are easily available to them; and thus environments that support or discourage unhealthy behaviours critically influence their health (Gebel et al., 2005:6).

Therefore, professions that have the knowledge and capacity to influence the built environment should be promoting and implementing strategies to encourage healthy behaviour and active lifestyles to support health. The profession of town planning significantly contributes to the social, physical and economic outcomes of an environment, and can ultimately influence the health and well being of inhabitants through decision making processes.

Planning academics have supported the theory of healthy urban planning as a direction for improving health through thoughtful design and regulation, however recent media attention, associating Sydney with 'sick cities', prompts the question of whether the issue of health is actually being addressed by practicing planners.

A study conducted for the Victorian branch of the Planning Institute of Australia, studied the attitudes and opinions of practicing planners in Victoria. The research revealed that Victorian planners had limited knowledge of how the built environment could influence health and had limited knowledge of the healthy urban planning practices, and as a result were not considering the implications of development on health as a town planner. (Foos, 2002)

Similar research in the NSW landscape is absent. As such this thesis aims to fill this void of knowledge and aims to gain an understanding of town planners' attitudes, knowledge and opinions regarding the health and the built environment. The research is based on the assumption that the attitude, opinions and knowledge of town planners regarding an issue, has a large influence on planning policy and planning outcomes. Therefore gauging the general opinions of planners will give an indication of whether health is being addressed within planning practice in Sydney today, or will be in the future.
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Although health considerations can and should be considered in all sectors and levels of governance in the planning field, this thesis focuses on planners who work within local government in the Sydney metropolitan region. This is based on the rationale, that the implementation of healthy planning principles is best when applied at the neighbourhood and community level in order to incorporate land use, connectivity and density principles of health urban planning. Furthermore planners within local governments have more of a significant influence on shaping outcomes through development regulation and policy as the key visionaries for Sydney's urban landscape.

The creation of healthy cities is a long term issue, that does not possess short term solutions, and requires on an going commitment from professionals within the built environment. Healthy urban planning requires the support and implementation firstly at the local government level to establish a benchmark of development standards and to pave the way for the development of healthier urban planning practices in Sydney.

As such the objectives of this thesis project are as follows:

- Develop an understanding of what knowledge base an individual planner has in relation to Sydney's health issues and healthy urban planning principles.
- Develop an understanding of the extent that health is considered within town planners in the Sydney metropolitan region.
- Make recommendations as to how healthy urban planning practices can be improved at the local level of government in Sydney.

Research Questions

The purpose of this research is to answer the following questions to address the above research objectives.

- Are planners aware of the current state of health of Sydney residents?
- What are the major causes of these health issues?
- Are planners aware of how the built environment can influence health?
- Do Sydney planners see a role in their profession in creating healthier communities?
- Do planners see that the issue of improving health as a relevant issue worthy of attention within planning practice today?
- Do planners implement health planning principles within the scope of their profession?
- Are Sydney councils actively seeking to address health through the implementation of healthy planning principles?

It is envisaged that answering the above questions will provide the necessary information to understand the extent to which planners are embracing the opportunities presented to positively influence the health of populations through the built environment. More importantly

these questions will provide an indication of the extent to which planners and councils are addressing health at the local government level of planning and develop an understanding of the future and direction of health urban planning in Sydney.

Definitions

For the purposes of this thesis, some key terms are defined below:

- Health:

    "Health is a state of complete physical, mental and social well-being and not merely the absence of disease of infirmity. The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being, without distinction or race, religion, political belief, economic of social condition."

    (WHO from Barton 2000:7)

- Built environment

    "Comprise urban design, land use and the transportation system, and encompasses patterns of human activity within the physical environment."

    (Handy 2002:65)

- Healthy cities:

    "The theme - health is the result of much more than medical care; people are healthy when they live in nurturing environments and are involved in the life of their community, when they live in Healthy Cities".

    (International Healthy Cities Foundation)

- Healthy urban planning:

    "Healthy urban planning is about planning for people. It puts the needs of people and communities at the heart of the urban planning process and encourages decision – making based on human health and well-being."

    (National Heart Foundation 2004:4)

Structure

Chapter two (2) of this thesis will describe the Healthy Cities Movement as the theoretical context of study. The main theories behind the Healthy Cities Movement will be explained in order to establish the origins of healthy urban planning and the relevance for examining the planning profession within the scope of this research.

Chapter three (3) examines the large body of research that has been conducted investigating the health of populations including the cause and effects of current trends in health problems. In particular the chapter examines the development of the built environment over time, and the ways planners more specifically can address health and well being through developing healthy environments which support mental and physical health through land use planning and urban design. In addition, previous studies are further consulted as a basis for developing the methodology adopted for the purposes of addressing the questions posed and the objectives set as a part of this thesis.

Chapter four (4) explains and justifies the chosen methods of research identifying the means and resources required, the political and ethical considerations of the study and the limitations of the chosen methodology.

Chapter five (5) presents the findings of the survey undertaken in order to understand the attitudes, knowledge and opinions of planners with regard to healthy urban planning, and its implementation within the local government sector of planning.

Chapter six (6) summarises the findings of the thesis project describing planner's attitudes and knowledge towards healthy urban planning and explores the future for healthy urban planning in Sydney.

Chapter seven (7) provides a summary of the research findings of the thesis, identifying further areas of research, recommendations for planners and local councils for the recognition, adoption and implementation of healthy urban planning in Sydney.

Chapter Two: Healthy Cities

In this chapter, the fundamental concepts of this research will be explored, looking at the development of the Healthy Cities Movement and its influence on the development of healthy urban planning. The chapter will establish the basic concepts behind healthy urban planning and its association with the planning profession and how it is relevant in today's context. The purpose of this chapter is to establish the relevance of healthy urban planning to planning practices within Sydney and the rationale for examining those associated with the profession of town planning.

The Origin of Healthy Cities

The practice of urban planning developed as a reactive response to address the health impacts of urban infrastructure back in the 19th century when poor living conditions created unsanitary housing and development caused by industrialisation and rapid urbanisation (Butterworth, 2000:2).

Poor health conditions were a result of overcrowding, poor water quality, unsanitary living conditions and an urban environment with little order which created environments under which public health epidemics could thrive (Ashton, 1992:2). The realisation of these problems prompted the proper organisation of urban areas by increasing the standards of housing and infrastructure including publicly funded sewerage systems and public water supplies, paved streets, land use zoning separating incompatible land uses which developed a planning approach that involved establishing basic standards of provision for new development (Barton et al., 2000:10).

Various literature indicates that in contemporary planning, health is often not viewed as a prominent issue for consideration and is overshadowed by other social, economic, physical and political issues. Therefore health assessment today is reliant on the strategies and devises created back in the 19th century as a means of sanitising cities which included basic zoning, the provision of infrastructure and minimum housing standards. The urban environment today is exceptionally different to that of the 19th century and therefore there is a need for health to be addressed in today's context. (Butterworth, 2000:2)

World Health Organisation

The emphasis and importance of health policy today is due to the work of the World Health Organisation. The World Health Organisation developed the Healthy Cities Movement which recognised that public health is a complex issue and that improving health and wellbeing does not alone lie with health care professionals and the health care sector (Barton et al., 2000:25).

The World Health Organisation defines health as:

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease of infirmity. The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being, without distinction of race, religion, political belief, economic or social condition".

(World Health Organisation (1946) cited in Barton et al. 2000:7)

The World Health Organisation was developed by the United Nations with the intention of addressing health related problems in cities. The organisation established the 'Healthy Cities' project in an effort to enable health promotion to be developed through public policy and accountability from all sectors including public, private and voluntary associations. The Healthy Cities project aims to create a horizontal integration of health issues in order to work collaboratively to create healthier cities (Ashton, 1992:10).

The Healthy Cities Movement has recognised that the built environment and the profession of town planning play an important role in the goal of attaining healthier cities. Research has shown that the quality of an urban environment and the nature of development are major components of health (Barton et al., 2000:8). Figure 2.1 below adapted from Barton (2000) illustrates the four main factors determining health.

Figure 2.1 – Factors which determine health (Source: (Lalonde (1974) in Barton et al., 2000:8)
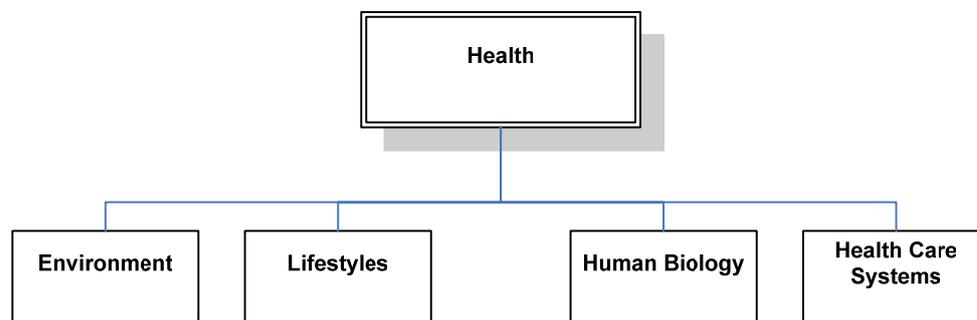
Healthy urban planning is the term used to describe planning's role within the Healthy Cities Movement. Through analysing Figure 2.1 above it can be determined that the both environment and lifestyles has a significant contribution in determining health. These two factors have the opportunity to be influenced through urban planning practices. The relationship between the environment and lifestyles is inextricably linked and will be explored further through the chapter.

Healthy Urban Planning

The National Heart Foundation defines Health Urban Planning as follows:

"*Healthy Urban Planning is about planning for people. It puts the needs of people and communities at the heart of the urban planning process and encourages decision – making based on human health and well-being.*" (National Heart Foundation, 2004:4)

This includes the health and well being of inhabitants. Health, as defined previously in this thesis, not only relates to disease and infirmity, but the quality of life of those experienced now and in the future (Barton et al., 200:7). The quality of the environment is a major contributor to the well being of those who inhabit the environment.

Healthy urban planning principles strive to address health objectives and recognise the health implications of the built environment and focus on how people interact with the environment. It is recognised that there a number of factors that influence a persons health, and that ultimately

choice and preference can be a core factor of health, however healthy urban planning aims to provide environments that shape a person's lifestyle and extend the opportunity to make healthier choices and lead healthier lifestyles.

Barton et al., (2000:11) summarises the ways in which the built environment and planning policy can determine a person's health into the following categories:

Individual behaviours and lifestyles

Behaviours and lifestyles can be influenced by providing environments which encourage healthier lifestyles through access to open spaces for physical activity, including walking, cycling, and running. Planning environments which support physical activity will be explored further within chapter three (3) of this thesis.

Social and community influences

A sense of community and camaraderie provides mental support and overall wellbeing within environments. Urban Planning has the opportunity to influence social outcomes of an area. Access to local facilities, sporting grounds, schools, post offices and pubs provides areas for that foster social interaction and support.

Local Structural Conditions

At a policy level, the availability of quality housing and employment can affect the instances of poverty and disadvantage. Localities of low socio-economic standing suffer from poor health as a result of poor access to health services, depression and social exclusion. A poor public transportation system also raises car dependency and reduces the instances of physical activity.

General socio-economic, cultural and environmental conditions

On a larger scale, the urban environment and planning can influence air, water and soil quality. The emission of greenhouses gases also has effects on the overall health of people, along with water quality and supply.
(Barton et al., 2000:11)

Today's Context

The lifestyles led a century ago when the profession of town planning was established, are somewhat different from the society in which we are planning for today. It has been established that healthy urban planning is about planning for people; therefore the way in which we plan our cities must adjust to the contemporary issues which encompass our changing urban fabric.

Sedentary Lifestyles

Many of the health problems that Australians face today are the result of our changing lifestyle choices and behavioural patterns creating a society of sedentary people. The changing nature of the workforce and employment has seen a decrease in agricultural, factory and construction work, which were formally the main source of employment opportunities and involved manual labour and physical exertion (Frumkin et al., 2004:91). The industrial evolution decreased manual labour associated with many jobs as machines and other technological devices replace jobs once performed by humans, shifting the bell of the employment curve to the typical office job. The post industrial economy has seen the labour force taken over by the professional force, in which many forms of employment can be performed from a desk (Frumkin et al., 2004:91).

Technology has contributed significantly to the evolution of the sedentary lifestyle. Simple tasks such as walking have been assisted by elevators and escalators in shopping centres, moving walkways in airports, and elevators to avoid climbing a simple flight of stairs. The private realm of our lives has also minimised physical activity for typical household chores. Ride on mowers, leaf blowers, clothes washing machines and dish washing machines are all examples of how technology has assisted how we function in our day to day lives at the expense of physical activity. The benefits of incidental exercise will be explored further in chapter three (3).

Travel patterns also have an effect on our lifestyles and health. During the first half of the 20th century, planning in Sydney was based around the rail network we see today. However, when the car became more affordable and more common, the emphasis on access to public transport was not as important and suburbs began to grow without sufficient transportation infrastructure (Capon: 2006). As a result car ownership increased which decreased the emphasis on public and active transportation and has created a car dependent city. The evolution of technology has seen the development of tools to reduced the physical exertion out

of tasks to make life easier, however, as a result has contributed to creating a culture of sedentary lifestyles.

Current state of health

In Australia, the annual direct healthcare costs relatable to physical inactivity are $400 million (Bauman et al, 2002). In particular, obesity in Australia is a cause for concern with the incidences of obesity almost doubling since 1980 (AIHW Obesity, 2003 cited in Johnson (ed) 2004:59).

> "If current trends continue, overweight and obesity will soon overtake smoking as the leading cause of chronic disease."
>
> (Gebel et al, 2005:11)

Professor Adrian Bauman notes in Johnson (ed) (2004) that trends in rates of physical activity have shown that the rates of obesity are not only a concern for Australian adults but for school aged children also. The annual 'Australian Health 2006' report released by the Australian Institute of Health and Welfare devotes a chapter to the health of children in Australia, raising the issue that whilst the general health of Australian children is fair, there are concerns regarding the future of their health as statistics show that more are overweight and obese and developing diabetes (Australian Institute of Health and Welfare, 2006:11).

Dr Tony Capon, medical officer of health in the Western Sydney Area Health Service, likens Australian suburbia's obesity epidemic to the 19th century public health crisis caused by overcrowding and unsanitary conditions (Farelly, 2006). The health issues associated with sedentary lifestyles such as cardio-vascular disease, type II diabetes, osteoporosis and obesity can be reduced simply by increasing the levels of physical activity (National Heart Foundation 2004: 6).

The relevance of the impending health issue is evident in the recent media attention which has been focusing on the state of our cities. The Sydney Morning Herald (2006) more specifically looked at the state of urban development in Sydney in a two part series titled *"Sick Cities, Fast Life, Slow Death"*. The series featured a number of articles looking at the state of Sydney's suburbs commenting on the high rate of car dependency, lower incidences of walking and recreational activities and extended journeys to work are all factors contributing to the declining

health of Australians (Sydney Morning Herald, 2006). In particular it is noted that the health problems faced by Australians are a result of their chosen lifestyle (Robotham, 2006). Robotham notes that;

> 'Work, food, suburbs, the fundamentals of our lives, are no longer calibrated to be in harmony with the human body and soul."
> (Robotham, 2006)

As outlined in chapter one (1), these articles act as an indicator of the prominence of this issue in an unhealthy milieu of urban development in Sydney. It is from this recent media attention and academic research of the issue, that the question is posed, where does health as a planning concept sit with Sydney's planning professionals, and is the profession looking to rectify the situation.

Role of the Planner

The Healthy Cities Movement recognises that health issues should be addressed by not only health professionals, but all parties associated with the well being of city dwellers. The research by the World Health Organisation and many academics has shown that the influences of health are multi-dimensional and the cause can only be remedied by a unified and collaborative approach. (Barton et al., 2000:7)

It is the role of decision makers to address health and develop strategies to mitigate the development of environments which inhibit physical activity and compromise the health and well being of its users. As outlined earlier in this thesis, the built environment has cumulative effects on not only the physical environment, but the economic and social environment of a city, including the health of those who dwell within it.

There are many factors of the built environment that can have beneficial impact on health and the quality of life and there lies an opportunity for planners, architects, project managers, developers, builders and financiers to learn more about healthy environments in order to deliver better outcomes (Johnson (ed), 2004:16).

More specifically, town planning plays a role in the decision making and control in the orderly development of cities. Effective planning policy and integration of health in the urban planning

process can assist in alleviating preventable diseases and increase general well being through promoting physical activity by incorporating considerate land use and design principles.

The utilisation of good urban design and land use policies and their endorsement by planners can be linked with positive health outcomes including the encouragement of healthy lifestyles that include healthy eating, sun protection and physical activity (Knox, 2003:318).

A large body of research identifies three (3) main areas of urban planning in which planners can address health issues, which include, land use patterns, design characteristics and transportation systems all of which will be discussed in chapter three (3) of this thesis (Frumkin et al,. 2004).

Conclusion

The Healthy Cities Movement was established to improve the health and well being of city dwellers and involve all stakeholders with the ability to influence health to join together to make cities healthier places to live. Healthy urban planning is the term used to describe the ways in which health can be addressed through the thoughtful consideration of the built environment and its impact on the people who live there. This chapter explored the context of Sydney's urban environment in order to provide a basis for developing this research and the role of the planner in the context of the Healthy Cities Movement.

Chapter three:
Literature Review

The previous chapter demonstrated the rationale for the thesis project outlining the Healthy Cities Movement as the basis for addressing health issues in conjunction with the development of the built environment. A large body of research has been conducted investigating health of populations including the cause and effects of current trends in health problems. More specifically the research explores the nature versus nurture effects of health, looking at how environment and behaviours affect health. This chapter will look at the previous research, planning theories and studies conducted in the field that relate to the importance of planning and the role of the planning profession within the Healthy Cities Movement.

The purpose of conducting a literature view is to draw upon knowledge, methodologies, and supporting information to the topic examined within this thesis. This chapter will explore the themes that have been extracted from the extensive review of journal articles, books and government publications which have been studied in the process of establishing this research. The main themes include trends in the built environment over time, the relationship between the built environment and health and the relationship between and planning and health within Australia.

This chapter reviews the research which has been undertaken in support of this thesis and illustrates its role and relevance of the planner in the implementation of healthy planning policy within NSW.

Trends and the Evolution of the Built Environment over Time

As discussed in within chapter two (2) of this thesis, the profession of town planning evolved from poor living conditions in urban areas as a result of the disorganised development of overcrowded, dense, and unhealthy living conditions which caused a significant concern for public health (Butterworth, 2000:2). The introduction of public policy and regulation within the built environment has further evolved into the environment that we live in today. The changing nature of the built environment will be discussed further below with reference to the affects on public health.

Urban Sprawl

The function and the physical appearance of the built environment in Australia has changed over time. As a result of growing populations, employment opportunities and housing, development began to be organised into the suburbs we see today. Over time, the standards, expectations, choices of housing and living have evolved and the shift of populations to cities and migration to Sydney has given birth to sprawling suburbs (Sloane, 2006:10).

A major factor in the formation of the our newer suburb development has been the change in housing expectation which has seen the average Australian home today, almost doubling in size to what was once considered average, with floor spaces increasing, backyards decreasing and the provision of 4 car garages (Farelly, 2006).

This new housing phenomenon raises issues for urban 'city' areas with recent urban development trends showing that the shift from people to cities is constant with more than half of the world's population estimated to be living in the city by 2007 (Freudenberg et al., 2005:1). This population expansion causes land use issues and land supply restraints as development expands and spreads from the nucleus of a city out to the fringes of the city. The fluctuation in populations, and changes in housing expectations with 'bigger and better' homes becoming the norm, in conjunction with the rise in car dependency has forced cities to grow, and has given birth urban sprawl. Various studies have developed a relationship between urban sprawl and its effect on individual's health. Kelly-Shwartz et al (2004), demonstrates the relationship succinctly in Figure 3.1.

Figure 3.1: The sprawl health connection. (Source: Kelly-Schwartz 2004:185)
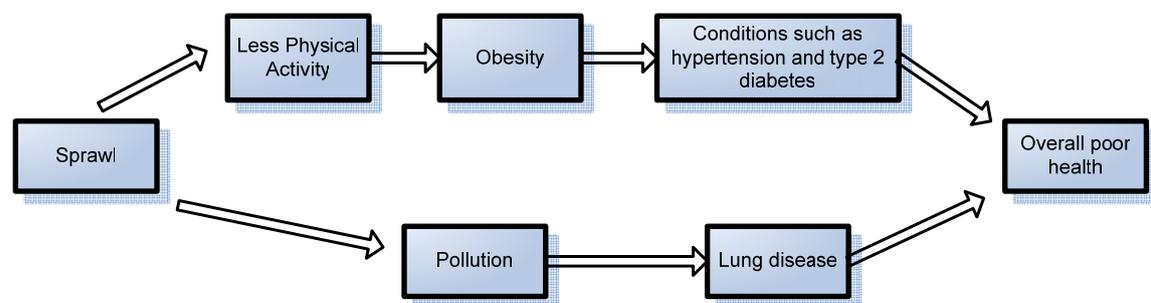
The literature examined as part of this research raises the argument that the urban fabric of sprawling cities is one that consists of dispersed uses that obligates users to travel via personal vehicles. This therefore decreases the chances for public transportation and forms of personal transportation such as walking ad cycling and effects rates of physical activity. It is a commonplace in today's fast paced society that people are complaining of being 'time poor'. Increasing travel time to work, school and recreational activities as a result of sprawling development, takes over time and energy that could be spent on physical activity to stimulate mental and physical health (Thompson 2005:3).

This thereby creates environments which breed populations which develop diseases associated with a lack of physical activity and diseases caused as a result of increased pollution (Kelly-Shwartz 2004:185) (Frank 2006:75).

Car dependency

Literature review as a part of this study suggests that the driving force of sprawl has been spawned by auto mobiles. As car ownership began to rise as a result of increased affordability, diminishing reliance on public transport and the expanding city belts. The unrestricted benefits of car ownership impacted the housing market with the development of residential suburbs with little or insufficient public transport infrastructure to support moving populations. The introduction of the car to Australian common society was a large contributor to the sprawling and decentralisation of cities. (Nixon 2006)

Figures indicate that in 2001 more than 150, 000 homes in Sydney have 3 or more cars per dwelling. (Capon 2006) The private car phenomenon has created car dependent developments that neglect the provision of active or public forms of transportation. These developments assume that all have access to cars and do not provide for alternative modes of active transportation. Large scale regional shopping centres, the decline of the corner shop and the rise of the service stations and cul-de-sac suburbs located distances from accessible efficient public transportation are all examples of types of developments that evolved from car dependency (Capon: 2006).

The sprawl phenomenon has created a cycle of car dependency, and has inhibited transportation choices within existing suburbs. The cumulative effects of car usage have been noted, indicating that car usage not only discounts the chances for active lifestyles but also

creates air pollution, which can contribute to respiratory diseases and can have adverse effects on mental health with road rage being a factor in 56% of all fatal crashes (Low 2003:5)(Jackson 2002:197).

The literature does not simply conclude that car dependency is the lone factor which has created the trend in sedentary lifestyles in current populations; rather it notes that car dependency is a contributing factor as a result of sprawl among others that has reduced the opportunities for incidental exercise and an environment more conducive to active lifestyles.

Safety

Crime and the fear of crime is an element of society which affects people's lifestyles and their interaction with the built environment. The incidence and the nature of crime has changed significantly over time. Ellen, (2001) states that in the United States of America there is strong evidence that neighbourhoods, especially the levels of crime or violence, within neighbourhoods shape health related behaviours and mental health (Ellen, 2001:397). Crime statistics, media reports and the fear of crime are all factors which influence people's behaviours and lifestyle. In particular young children and women are the subject of fear of crime in Australia which is evident in the lifestyle choices of today where home and indoor based time and recreational activities (television, computers etc.) for children are preferred due risks associated with outdoor recreational time (noise, traffic and crime) which deters outdoor physical activity (Barton et al., 2000: 121).

A study conducted by Health Canada in 1997 found that crime was directly impacting on the health of Canadians, with survey results indicating that more people were in fact experiencing significant stress arising form the fear of crime than any direct experience of crime (Butterworth, 2000:16). In particular, research conducted by Doyle found that those who live in walkable communities that have low crime rates have lower Body Mass Indices than people in less walkable and crime-prone areas. The study assumed that higher Body Mass Indices was an indicator of not being healthy. The argument presents itself that if a neighbourhood is walkable but unsafe, resident's behaviour will be influenced and they will be far less likely walk as an active form of transportation or recreation (Doyle et al., 2006:29).

The literature has indicated that the creation of clean, safe and active environments can encourage participation in physical activity and increase the health and well being of

inhabitants. As a result of these findings, it has been recognised that crime can be mitigated through the strategic design and placement of walkable, public and private spaces (Geason et al., 1989:2). Designing environments which discourage instances of crime is known as 'Crime Prevention through Environmental Design' which will be discussed further within the chapter.

The Relationship between the Built Environment and Health

Mental Health and Well Being

Media attention and research conducted in the United States of America has focused on the obesity epidemic as an indicator of health. Whilst obesity is labelled an epidemic and the cause for much research regarding 'preventable' health, the Healthy Cities Movement, takes a more holistic approach to health recognising that physical, mental and social factors all contribute to a person's well being and overall good health. It is for this reason that the research looks at the relationship between both mental and physical health and the environment.

A common theme amongst creating healthy urban environments is the importance of mental health as an integral support to physical health. The social and mental well being of a community is influenced by the sense of community that is present within that environment. Environments which have a strong sense of community are those which encourage social interaction and participation, develop networks and have social cohesion (Butterworth, 2000:4).

It is through urban development that environments can be created that support the growth of social cohesion and social capital within communities by providing access to open spaces, community facilities, schools etc, that are safe and usable. Social support can be most beneficial to disadvantaged communities by providing opportunities to create social networks and social and mental support (Barton et al., 2000:11).

Physical Health and Active Lifestyles

The design of cities, suburbs and towns impact the people work, live and play. Numerous studies have shown that the layout, placement and other elements of the built environment have a significant impact on the way that we spend our time and how we engage with the built environment (Frank, 2003:1).

As discussed within Chapter two (2) of this thesis, a large proportion of incidental physical activity has been engineered out of everyday life. The literature has also established how the changing nature of the built environment, land use and settlement patterns influences health, both physically and mentally. This relationship has prompted research examining how the built environment can be manipulated to reverse the negative impacts of the environment on health, promote healthy lifestyles and increase the general health and welfare of inhabitants. These strategies will be discussed further in this chapter.

There is consistent research demonstrating that those who participate in regular physical activity are not obese and show benefits in terms of a prolonged life, and a reduced risk of other health risks such as cardiovascular disease, diabetes, hypertension, protection from some cancers, and improved quality of life. (Johnson, (ed) 2004: 59). Frank (2004) raises the argument that, despite the choice and preference of individuals in regards to maintaining healthy and fit lifestyles, the fact remains that incidental exercise alone can improve the health of populations.

> "Contrary to popular opinion, such (*physical)* activity does not need to be accumulated in one activity session, such as a gym workout. Multiple episodes during that day, as short as eight or ten minutes, offer the same benefit: This has implications for the built environment design: places designed so that people walk on multiple occasions during the day may go a long way toward helping them reach recommended levels of physical activity" (Frank et al., 2004: 91).

The literature discusses the importance of active and liveable cities which promote walking, cycling and active behaviour. Low (2006) describes the active city as a place where walking/cycling, collective transport and private vehicles are integrated together to create a more liveable and 'active' city. In particular an active city allows physical activity to occur in all facets of life. Low uses Melbourne as an example, with the "Melbourne 203 Plan" promoting transport choice, with a goal of increasing the numbers of people who use public transport, cycle or walk, as an example of a place looking towards achieving the goal of an active city (Low, 2003:6). Figure 3.2 models the benefits of creating active cities to achieve overall better health and well-being for communities.

Figure 3.2- The Link between active and environments and health. (Source: Doyle 2006:20)

A study conducted by Brownson (2001) indicated that the presence of side walks, busy streets, enjoyable scenery promote walking for exercise. (Brownson 2001: 17) The pedestrian path is a large component of neighbourhood design which can contribute to influencing physical activity, by providing links that integrate walking to perform daily errands such as shopping and going to work as an alternative to structured exercise (Jackson, 2002:195).

Walkability, car dependency, safety and access to facilities are factors that encompass the built environment that can influence health. The recognition of the opportunities and constraints of these factors has prompted the creation of a number of documents produced by experts within the field of the built environment and health sectors, providing suggestions for designing spaces which promote active living and healthy lifestyles.

The following areas of focus have been identified in the literature and offer general advice as to how spaces be designed in such a manner that creates environments that support active living and healthy lifestyles.

<u>Land Use Patterns</u>

The arrangement of land uses impacts/dictates the distance between various uses and effect accessibility to facilities. Distance between uses increases travel times between activities and lowers in the incidences of active types of transportation like cycling and walking. By creating mixed use developments there are greater chances for interaction to enhance community cohesion and social capital to aid mental health, along with providing environments which are conducive to active forms of transportation, recreation and physical activity (Gebel et al., 2005: 27). Figure 3.3 illustrates mixed used developed in Nelsons Ridge, a masterplanned community within Sydney, which demonstrates elements of healthy urban design. Residential, recreational, and cycling facilities are interconnected in order to connect facilities and promote physical activity.

The density of housing should also give consideration to the location of services and accessibility to active modes of transportation and recreational spaces. Large portions of low density housing, make distances to destinations longer, and are more expensive to provide public transport links to and rely heavily on the personal vehicle. Mixed densities as identified above are preferable to encourage physical activity which will aid mental health (Gebel et al., 2005: 27).

Figure 3.3 – Mixed uses in Nelson Ridge, Pemulwuy (Source: Author 2006)

Urban Design Characteristics

Providing quality open and recreational spaces that are usable, green, safe, clean and aesthetically pleasing provide opportunities for active participation in sport and physical activity. Recreational spaces have also been related to providing spaces to aid mental health and places for interaction. Open spaces should be located within 500m walking distances from dwellings and should be designed in a fashion that encourages usage (National Heart Foundation, 2004:15). Figure 3.4 illustrates a pocket part amongst residential development in Newbury estate. The location of the park allows easy access for residents and provides a linkage between streets to encourage recreational activities and active transportation.

The design and layout of streets should be logical and be attractive and safe to encourage people to be active either on foot or by cycling as an alternative form of transportation. Streets should provide areas for cyclists only, (Figure 3.5) and provide frequent pedestrian crossings to ensure the safety of those who wish participate in active transportation (National Heart Foundation, 2004: 12, Gebel et al., 2005:27).

Figure 3.4 – Pocket Park - Newbury Estate (Source: Author)

Transport

Public transport services provide alternatives for travel to connect people to places. Public transport should be accessible, cheap, efficient and safe to encourage its usage. The benefits of transportation systems include, increasing physical activity, decreasing pollution and congestion on roads (National Heart Foundation, 2004: 16).

Footpaths and cycleway facilities should be provided to create opportunities for active transportation. The provision of walking and cycling facilities promotes and encourages physical activity, which increases physical fitness and reduces the incidences of car dependency. As discussed within this thesis so far, the effects of car usage are cumulative, with increased pollution, incidences of obesity and sedentary lifestyles. Footpaths and cycleways should be designed for two purposes, the first for leisure and the second as a convenient transportation alternative for direct access to destinations such as shops, schools, parks, bus stops etc and should be safe and attractive for users (National Heart Foundation, 2004:16) (Gebel et al., 2005:27).Figure 3.5 illustrates cycle paths in Nelsons Ridge that are safe, dual use and maintained in a manner that is conducive for regular use.

Figure 3.5 – Cycle network in Nelsons Ridge, Pemulwuy (Source: Author)

Planning and Health in NSW

<u>The influence of planners in the achieving healthy cities</u>

The literature reviewed thus far within this chapter establishes the link between the built environment and its influence on health. The role of the planner within the process of the development of the built environment is therefore integral to the development of healthy cities.

The literature has demonstrated the ways in which the built environment can contribute to the health and well being of its inhabitants through creating supportive environments which encourage physical activity and promote healthy lifestyles. It has been established that health is subject to individual behaviour which can ultimately be influenced by the built environment. In order to create healthier environments, current unhealthy behaviours should be converted through education and the construction of built environments that encourages heather lifestyles.

Town planners play a key role in the development of the built environment and therefore are a vital stakeholder in the Healthy Cities Movement. In order to create healthier built environments requires the support of those who have the power to make changes to aid in supporting the health of populations. Gebel (2005) describes the relationship between the attitudes of vital leaders and stakeholders in creating healthier outcomes in the context of the built environment in Figure 3.6.

Figure 3.6 – The link between professionals, the built environment and improved health. (Source: Gebel et al 2005:18)
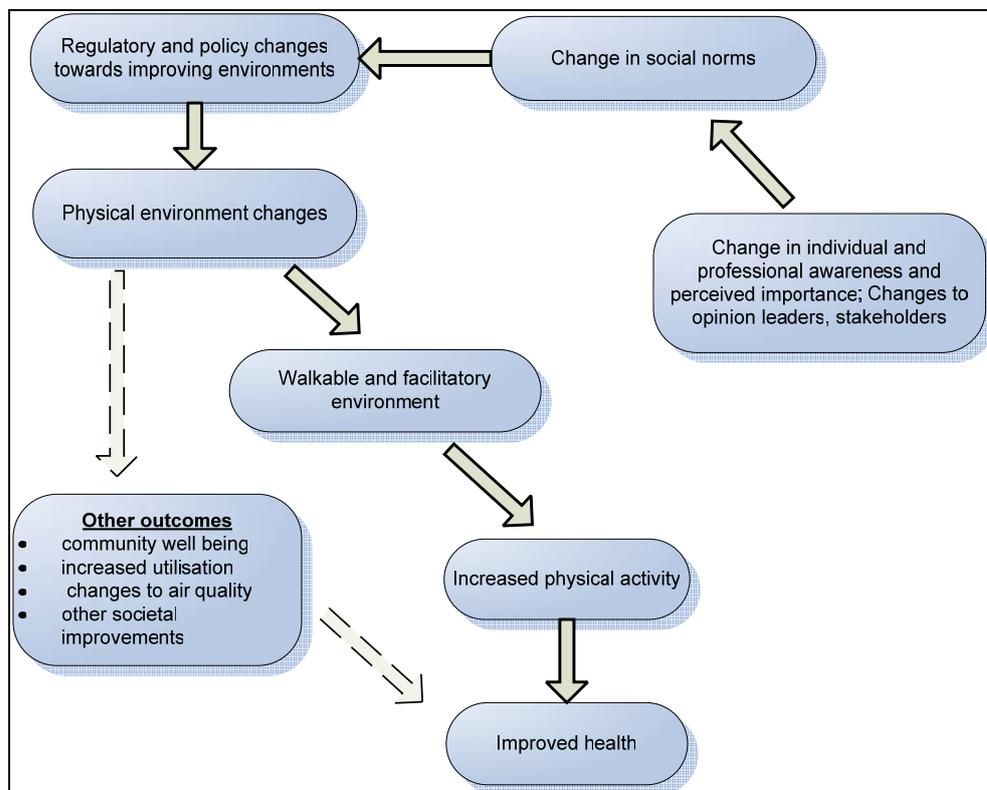
This figure demonstrates the importance of educating and developing awareness amongst professionals who have the tools and power to contribute to changing attitudes and behaviours in an effort to create healthier environments. Such tools within the context of the planning profession and government regulations will be discussed further within this chapter.

A study conducted on behalf of the Victorian branch of the Planning Institute of Australia endeavoured to understand what planners in Victoria know about current health issues and their role in planning for a more active community. The study was undertaken in order to understand the extent of planners' knowledge regarding the link between health and the built

environment in order to assist in producing a planning for health program that was to be developed by the Department of Human Services and 'VicHealth'. (Foos et al., 2002)

The research demonstrated that there was an acknowledgement of the health problems within Victoria amongst town planners and that there was a general consensus that there was a link between health and the built environment. The research did reveal that the importance of health in the planning process was overshadowed by other factors deemed more important such as parking and traffic. The research concluded that planners were generally aware of health issues and the link between health and the built environment; however there was a need for more consideration of health issues when developing planning policy and legislation. The research also concluded that information programs are required for planners, together with community consultation and a need to create a closer link between Planners and the Health Profession (Foos et al., 2002).

Regulation at the Government level

The development of environments that promote healthy lifestyles and healthy outcomes requires engagement with all stakeholders involved in creating the built environment. Designing environments which support healthy lifestyles and promote healthy living can be achieved at the local government level through strategic development and policy integration.

Adopting a strategic development method to healthy urban planning takes a holistic approach to addressing health issues not only within the planning field, but across various departments of local councils as an integrated approach to ensuring the built environment is not only influenced at the development stage, but across all facets of council governance which can impact health of populations (National Heart Foundation, 2004: 33).

A policy approach is a more specific utensil used to incorporate healthy design considerations directly into the built environment. Such policies could include developing a plan for a new cycle/walking network, incorporating design guidelines focused towards health at the development control stage and through planner and developer awareness to create healthier and more sustainable environments (National Heart Foundation, 2004: 33).

<u>Support and guidance for health urban planning</u>

A number of documents have been produced within Australia promoting the application of health related design of communities which support active living increase health and well being. These documents have been written by health care professionals and government departments and are referenced within this thesis.

The Victorian government has produced a range of documents including, 'Leading the Way – Council's creating healthier communities' (2002) and 'Healthy by Design: a Planners guide to environments for Active Living (2004).' Both documents were specifically prepared for the implementation of healthy urban planning principles through urban planning and regulation and include design tools and characteristics for those professionals associated with the built environments, and more specifically where these can be implemented in local government.

The Premiers Council for Active Living (PCAL) is a specific New South Wales organisation developed in 2004 which aims to build and strengthen the physical and social environments in order to facilitate and encourage active living through policy and legislative requirements for physical and social environments. The PCAL supports leaders in the public, private and non-government sectors to make decisions that facilitate and encourage active living. PCAL aims to build sustainable partnerships across the public, private and non-government sectors for policies, programs and products that facilitate and encourage active living. (Premiers Council for Active Living 2006)

The Sydney Metropolitan Plan released by the Department of Planning addresses healthy urban planning principles through its various strategies. Part B of the strategy looks at centres and corridors and Part F of the strategy looks at parks and public Spaces. The strategy incorporates healthy planning principles by ensuring that parks and public places are considered in the development of new centres, along new corridors and new communities to facilitate active, healthy lifestyles and community interaction. (DOP 2005)

The above documents provide a snap shot of the range of formats and the direction that the healthy cities approach is taking in Australia. The documents do however only come in the form of best practice guidelines and informative documents for planners and local governments. Whilst the 'Sydney Metropolitan Strategy' (2004) notes that the desire to create healthy and active environments, the onus is on Local Government, and private developers to deliver

healthy urban planning outcomes. It is evident that much of the focus of healthy urban design is subject to the initiative of individual local councils.

The research conducted as part of developing this thesis has discovered that State Governments have recognized the opportunities for health to be addressed through urban development; however there appears to be a lack of government incentive for these strategies to be implemented.

Conclusion

There is a large body of literature commenting on health and its link with the built environment. This chapter has provided a snapshot of the relevant issues and debates that relate to the scope of this thesis. More specifically the chapter has demonstrated how the built environment has evolved over time and the influences that development trends have had on physical and mental health. By establishing the negative effects that the built environment has had on health in the past, steps can be taken to reverse these effects and create environments that provide opportunities for active lifestyles and support the health of inhabitants in the future.

This literature review reveals that there is an opportunity for healthy planning outcomes to be achieved through planning policy, design and regulation of the built environment. However, to achieve this requires the implementation of such strategies from those who have the means to influence and regulate the built environment in an effort to improving the health of city dwellers.

Chapter Four: Methodology

The thesis thus far has established the premise of the research and the influences that the built environment has on the health of inhabitants and as a result the implications for planning practice. The purpose of this research is to gain an understanding of the general attitudes, opinions and knowledge of planners regarding planning and health. Previous chapters have established the foundation for health urban planning practices through the Healthy Cities Movement and investigated the various literature including books, journals, newspaper articles, previous study results and related reports as a basis for the primary research methodology.

This chapter will describe the methodology used in order to answer the questions posed as a part of this thesis project. This includes the research style used, and rationale behind the research methods of collection, collation and sample size. Finally, the ethical and political considerations will be addressed, inclusive of research limitations.

Selection Criteria

This research focuses on the planning profession and their contribution to the development of healthy cities. As previously explored in this thesis, primary research stems from recent research and commentary linking the built environment and health with a focus on Sydney and the Local Government sector. The research question was formulated using theoretical literature which explores the topic of healthy cities. Further, research methods were borrowed from the study undertaken by Foos and Maddern (2002) of the Victorian branch of the Planning Institute of Australia for the Victorian branch of the Planning Institute of Australia which measured the attitudes of planners to health issues within Victoria and adopted similar research methods. This was modified in order to be applied to the NSW example. As such, the following question was posed;

What are the attitudes, opinions and general knowledge of Sydney metropolitan town planners in regards to health and healthy urban planning?

The literature review has established that a unified approach both between government and health related sectors, as well as within organisation is needed to attain the goal of achieving healthy cities. (Barton, 2000:25) This thesis takes the view that the implementation of healthy urban planning can be achieved at the local level through strategic policy formation and

regulatory planning. As such, this research targeted town planners employed in the local government sector within the Sydney metropolitan region.

The Department of Planning defines the Greater Metropolitan Region (GMR) of Sydney as the area extending from the lower Hunter in the north to the Illawarra region in the south and west to the Blue Mountains which includes 51 local government areas (Department of Planning 2004). The Sydney Metropolitan Plan divided the GMR into 4 regions which encompasses the 51 local government areas (LGA) in the Sydney metropolitan region. Figure 4.1 illustrates the geographical areas and sizes of the 4 regions.

The four regions are listed below:
- Sydney East Region,
- Sydney South West Region
- Sydney North West Region
- Central Coast Region.

Figure 4.1 – Sydney Metropolitan Regional Council's. (Source: Department of Planning February 2006)
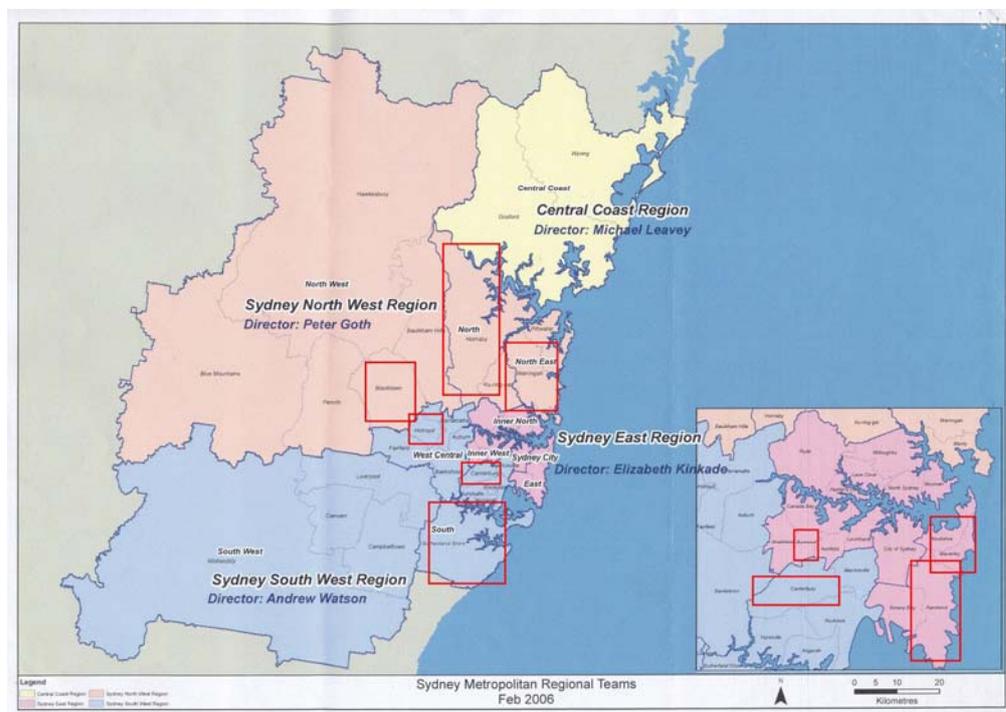
Given the time and geographical distance constraints in collecting data from all local government areas in the Sydney metropolitan region, for the purposes of this research, the

sample only includes local government areas in the Sydney basin, bound by Hawkesbury to the North, Blue Mountains to the West and Sutherland to the south. The Central Coast Region is therefore excluded from this study.

The exclusion of the Central Coast region will not adversely affect the outcome of the data as the purpose of this research is to ascertain the views of planners who work within an urban/semi-urban context. Information received from the Information Centre at the Department of Planning on 31 August 2006 indicated that the following suburbs were included within each of the 3 regions within the Sydney region used for this research.

Table 4.1- Council's within each Sydney Metropolitan Region. (Source: Department of Planning. 31 August 2006)

Sydney East Region	Sydney North West Region	Sydney South West Region
The Council of the Municipal of Ashfield The Council of the City of Botany Bay Burwood Council Canada Bay Council City of Sydney Council Hunter's Hill Council Lane Cove Municipal Council Leichhardt Municipal Council Mosman Municipal Council North Sydney Council Randwick City Council Ryde City Council Strathfield Municipal Council Waverley Council Willoughby City Council Woollahra Municipal Council	Baulkham Hills Blacktown City Council Blue Mountains Hawkesbury Council Hornsby City Council Ku-ring-gai Council Penrith City Council Pittwater Council Warringah Council	Auburn Council Bankstown City Council Camden Council Canterbury City Council Fairfield City Council Holroyd Council Hurstville City Council Kogarah Municipal Council Liverpool City Council Marrickville Council Parramatta City Council Rockdale City Council Sutherland Shire Council Wollondilly Council

In order to gain a cross section of the Sydney region, three (3) local government areas were selected from each sector of the Sydney region as defined by the Department of Planning to be sampled of the purposes of this research. The local government areas selected from each region to be included in the sample included the councils nominated within Table 4.2 and are highlighted in Figure 4.1.

Table 4.2 – Local Government areas targeted for analysis. (Source: Author)

Sydney East Region	Sydney North West Region	Sydney South West Region
Burwood Council	Blacktown City Council	Canterbury City Council
Waverly Council	The Council of the Shire of Hornsby	Holroyd City Council
Randwick City Council	Warringah Council	Sutherland Shire Council

It is envisaged that taking this balanced approach will take into account the variables between each local government area including geographical size, population size, demographics, economics, etc to give an approximate indication of the attitudes of planners in the various local government areas over Sydney. This resulted in a sample size of 72 town planners over 9 Sydney Local Government Areas. The method of sampling is discussed in further in this chapter.

Sampling Method

Babbie (1995) states that survey research is probably the best method available to researchers interested in collecting original data for describing a particular population that is too large to observe directly and surveys are excellent vehicles for measuring attitudes and orientations in a large population (Babbie 1995:26). Further, self-administered questionnaires are generally associated with a high response rate, accurate sampling, and a minimum of interviewer bias, providing necessary explanations without alluding to interpretation (Oppenheim, 1966:36).

Given the research objectives, it was considered that a large amount of data needed to be collected, relative to the time constraints of this thesis, to make generalised inferences about town planners employed in the local government sector within Sydney. Given the numbers of responses required, a quantitative approach was therefore found to be more appropriate in achieving the aims of the research.

The research has been formulated as an extension to the study conducted by Foos and Maddern (2002). As such, a similar method of data collection was found to be most appropriate. However, given the differences in resources available to this specific project and the research company who administered the Victorian study, it was considered unrealistic to mirror the specific methodology for this research - namely conducting a series of short phone call interviews.

As an alternative solution, the research methodology was tailored to a method that was conducive to the word limitation, time, resource constraints associated with this thesis project. The methodology was adapted to be administered via a short self administered written questionnaire rather than as series of telephone interviews. The local government areas targeted to participate in the research were contacted and asked to participate in the research. The nature of the research was explained and the surveys were distributed to the planning staff to be completed to the research either by mail or to be picked up personally by the researcher.

When deciding how many questionnaires were to be distributed as a part of the survey process, the population distribution and geographical size of each LGA was taken into account. It can be assumed that this would reflect on the relative size of the planning staff available within each council area. Although eight (8) questionnaires were sent to each local government area, response rates can be considered a reflection of resourcing available to each council.

Babbie (1995) indicates that in order for the research to be less prone to significant bias and considered valid, a minimum response rate of 50% is required for analysis and reporting, with a response of at least 60% being classified as good and a response rate of over 70% as very good (Babbie 1995:261). The distribution and response rate of the questionnaires are outlined below in Table 4.3.

Table 4.3 – Response rate of self-administered questionnaire (Source: Author)

Local Government Area	Number of Survey's distributed	Number of Surveys returned	Response Rate
Burwood Council	8	8	100%
Waverley Council	8	3	33%
Randwick Council	6	3	50%
Blacktown Council	8	8	100%
The Council of the Shire of Hornsby	6	6	100%
Warringah Council	8	6	75%
Canterbury Council	8	4	50%
Holroyd City Council	8	6	75%
TOTAL	72	50	72%

The response rate received was 72% which deems the data collected to be valid. The design of the questionnaire was a fundamental part of the methodological process and will be discussed below.

Questionnaire Design

The questionnaire was tailored to the specific research questions as outlined in chapter one (1), namely:

- Are planners aware of the current state of health of Sydney residents?
- What are the major causes of these health issues?
- Are planners aware of how the built environment can influence health?
- Do Sydney planners see a role in their profession in creating healthier communities?
- Do planners see that the issue of improving health as a relevant issue worthy of attention within planning practice today?
- Do planners implement health planning principles within the scope of their profession?
- Are Sydney councils actively seeking to address health through the implementation of Healthy Planning Principles?

The questionnaire included a mixture of open ended questions, closed questions, Likert scale questions and filter questions. Given this thesis is investigative rather than prescriptive, open ended questions were numbered highly within the questionnaire to provide respondents with the opportunity to 'list' or 'describe' in response to a number of key questions. Respondent's ideas and knowledge base was sought, which is more appropriately formulated from open ended questions. There allow the respondent to answer freely within their own thoughts and ideas instead of selecting a choice from a prepared set of replies (Oppenheim 1966:41).

Inevitably when open ended questions are coded into themes within the process of analysing the data, some of the richness is lost. However it is envisaged that vital and interesting points made within these answers can be extracted, with quotes and further analysis extrapolated from key respondents. Qualitative methods of analysis can thus be applied within the discussion of the results (Oppenheim 1966:41). Similarly, the anonymous nature of self-administered questionnaires allows the respondent to give a true indication of their own

opinion, without fear of judgment as can occur with some forms of qualitative research (Reich et al 1966:37).

Thrustone and Likert scale techniques were used, as a tool for measuring planners' attitudes to health issues. Thrustone believed that with any attitude subject/object, by constructing a series of statements that ranged from extremely favourable to extremely unfavourable; one should be able to distinguish between people as to the degree they differ on an issue (Reich et al 1976:31).

The content of the questionnaire was based on the questions posed as a part of this thesis, and is attached in Appendix A.

A summary of the issues covered within the questionnaire are detailed below:

- Role and experience in Local Government
- Perception of health problems/ issues and their cause within Sydney.
- Link between the built environment, health and the planning profession
- Consideration of health within Local Government
- Educational exposure to healthy urban planning principles, guides, seminars etc.

The results of the questionnaire were then analysed using Statistical Package for Social Sciences (SPSS) in order to perform a statistical analysis of the data. The results will be discussed further in Chapter five (5).

Limitations

The limitations that may potentially occur within this study were considered when formulating and considering methodological options in order to answer the questions posed as a part of this thesis project.

Given the time constraints of this thesis, it was deemed inappropriate to use qualitative methodologies to address the research questions. This is due to the sample size of the data needed extrapolate generalised results for local government throughout the Sydney basin. Throughout the discussion of the methodology used within the study, limitations of various

types of methods have been addressed and examined and with these considerations, the method presented as a part of this research was considered most appropriate.

Ethical and Political Considerations

As noted by Babbie, (1995) ethical and political issues within social research are *'important and ambiguous'* (Babbie, 1995:456). Whilst ethics and politics are associated closely with each other, within the context of social research, ethics is related to the methods of research, whilst political issues are more concerned with the use of the data and research (Babbie, 1995: 461).

As a part of this data collection process, the ethical and political implications of the study were taken into consideration by the University of New South Wales Human Research Ethics Board. The board reviewed the research proposal and agreed that the research did not have any adverse effects, and granted approval. A copy of the Human Research Ethics Approval is available in Appendix 2.

In addition to this, the participants were briefed on the study and given the opportunity to withdraw their contribution to the research via a project information statement. The study did not require the respondent's to reveal their name, only their place of work and job description, in order to analyse the different responses within each geographical location as a way to ensure that sampling was fair and provided a snapshot of the Sydney metropolitan region.

Chapter Five: Attitudes and Knowledge of Sydney Planners
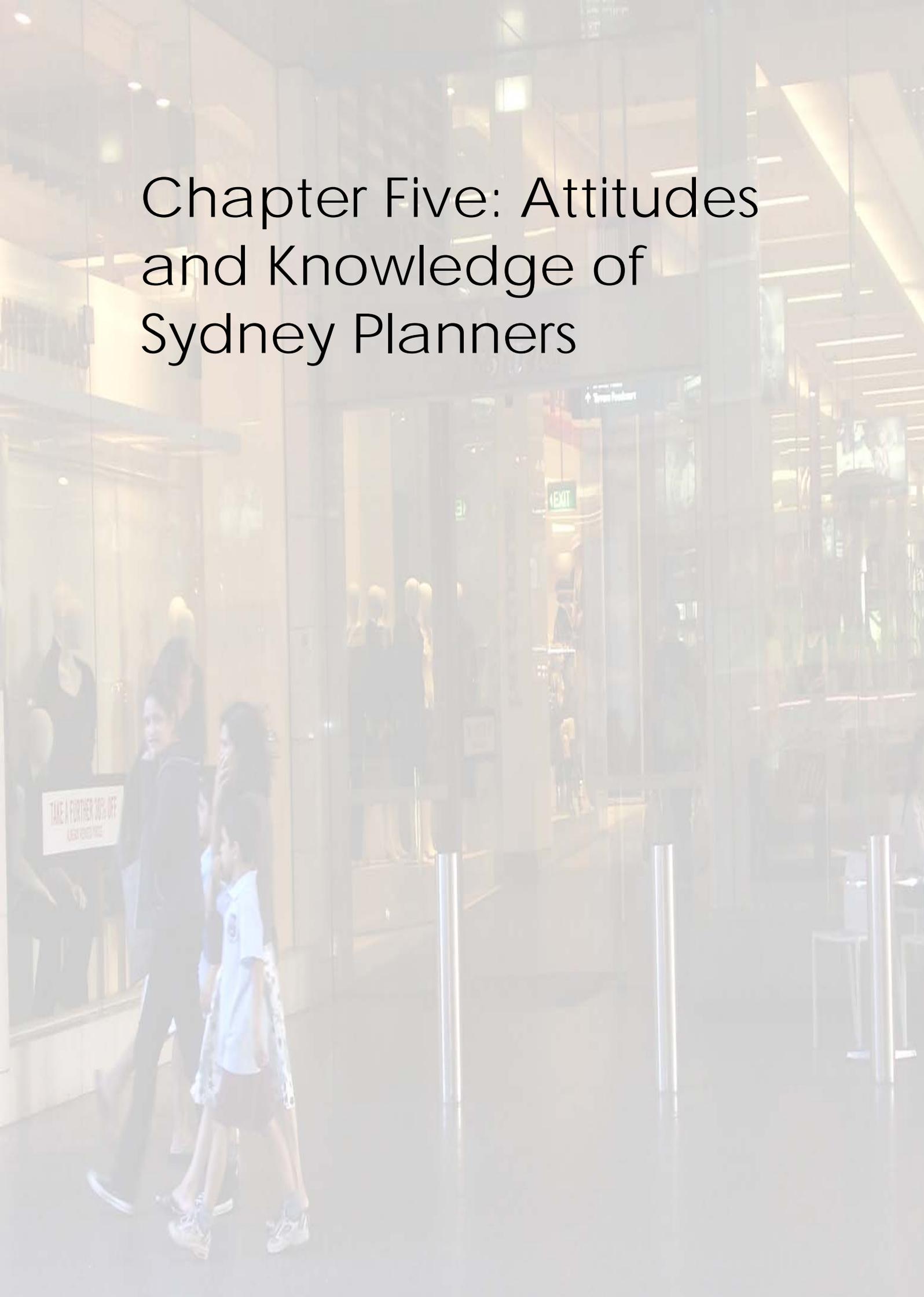
The thesis thus far has established the importance of the planning profession in creating healthy environments for populations. This research aims to obtain the general attitudes and knowledge of Sydney planners in order to develop and understanding of the future of healthy urban planning practices within the local government planning sector in Sydney.

This chapter presents the findings of the research questions posed in chapter one (1) and has been conducted via a self administered questionnaire as described in chapter four of this thesis. The results are presented and analysed with respect to:

- Planners knowledge of health related issues
- Link between the built environment and health
- Importance of the Healthy Cities Movement
- Health planning in councils.

The characteristics of the sample respondents that took part in the survey are summarised in the table below. Respondents were selected based on their employment as town planners in the specific council local council areas (LGA) defined in chapter four (4). The highest percentages of respondents were from LGAs in the north west region of Sydney. Forty four per cent of respondents were development assessment planners, whilst only 17 per cent were strategic planners. Twenty three per cent of respondents were in management roles, however, a higher percentage of strategic managers responded to the questionnaire as opposed to development assessment managers. This has important implications for policy implications which will be discussed in chapter six (6).

Table 5.1 – Position Description of Respondents (Source: Author)

POSITION DESCRIPTION	COUNT	PERCENTAGE
Development Assessment Planners	23	44
Development Assessment Management	4	8
Strategic Planners	8	15
Strategic Planning Management	9	17
Unspecified Town Planner	8	16
TOTAL	52	100

Table 5.2 – Number of Respondents from each LGA & LGA Region (Source: Author)

REGION	COUNCIL	COUNT	PERCENTAGE	REGION PERCENTAGE
Sydney East Region	Burwood	8	15	27
	Waverley	3	5	
	Randwick	3	5	
Sydney North West Region	Blacktown	9	17	42
	Hornsby	7	13	
	Warringah	6	12	
Sydney South West Region	Canterbury	4	8	31
	Holroyd	6	12	
	Sutherland	6	12	
TOTAL		52	100	100

Health and the Healthy Cities Movement.

For healthy urban planning to succeed requires the support of planners. Therefore it is important that planning professionals are familiar with and recognise the benefits of planning for health. The basic theory for planning for health was established by the Healthy Cities Movement as previously discussed within this thesis. As such, a series of questions was asked within the questionnaire that provided an indication of knowledge of the Healthy Cities Movement and general health issues within the context of the Sydney metropolitan region.

The respondents were asked to nominate what they perceived to be the major health issues facing Sydney residents today. The question was open ended and the respondents were encouraged to provide multiple issues where they saw fit. One hundred and fifty four (154) health related issues were identified from the 52 respondents. These have been further categorised into the 20 health problems detailed in Figure 5.1.

Obesity was identified as the main health issue facing Sydney today equating to 65 per cent of responses. The health effects of air quality was the second most prominent health issue representing approximately 14 per cent of responses, followed by asthma/respiratory diseases with approximately nine (9) per cent of the total responses. A series of other health conditions were nominated, the most frequent being, anxiety with approximately eight per cent, mental health and physical inactivity with approximately six (6) per cent, followed by diabetes and cancer with approximately five (5) per cent of the total responses.

Figure 5.1 –Current health issues facing Sydney metro region today. (Source: Author)

HEALTH ISSUES FACING SYDNEY TODAY

Health Issue	% of total
Allergies	0.6
Drug use	1.9
AIDS	1.3
Asthma/respiratory diseases	9.1
Aged/childcare	3.9
Cancer	5.2
Density	0.6
Traffic congestion	1.3
Global warming	1.9
Site contamination	1.3
Water quality	4.5
Air quality	13.6
Anxiety	8.4
Nutrition	1.3
Diabetes	5.2
Heart disease	3.9
Physical inactivity	5.8
Obesity	22.1
Mental health	5.8
Social isolation	1.9

% of total

■ Number of times health issues were mentioned (n=154)

In order to establish how many respondents were familiar with the Healthy Cities Movement, planners were asked to indicate their relative exposure to the topic. Planners were presented with a number of options, ranging from having extensive knowledge of the topic, to having no exposure to the topic. The results are shown in Figure 5.2.

The results indicate that 49 per cent of the respondents have had no exposure to the topic of healthy cities with 36 per cent of the planners having heard some commentary on the subject, but are not entirely familiar with the content of the movement. No planners nominated that they had any extensive knowledge of the topic.

Figure 5.2 – Planners knowledge of the Healthy Cities Movement (Source: Author)

FAMILIARITY WITH HEALTHY CITIES MOVEMENT

- HAVE HAD NO EXPOSURE
- HAVE HEARD SOME COMMENTARY
- FAMILIAR WITH SOME MEDIA/LITERATURE
- HAVE EXTENSIVE KNOWLEDGE OF THE TOPIC
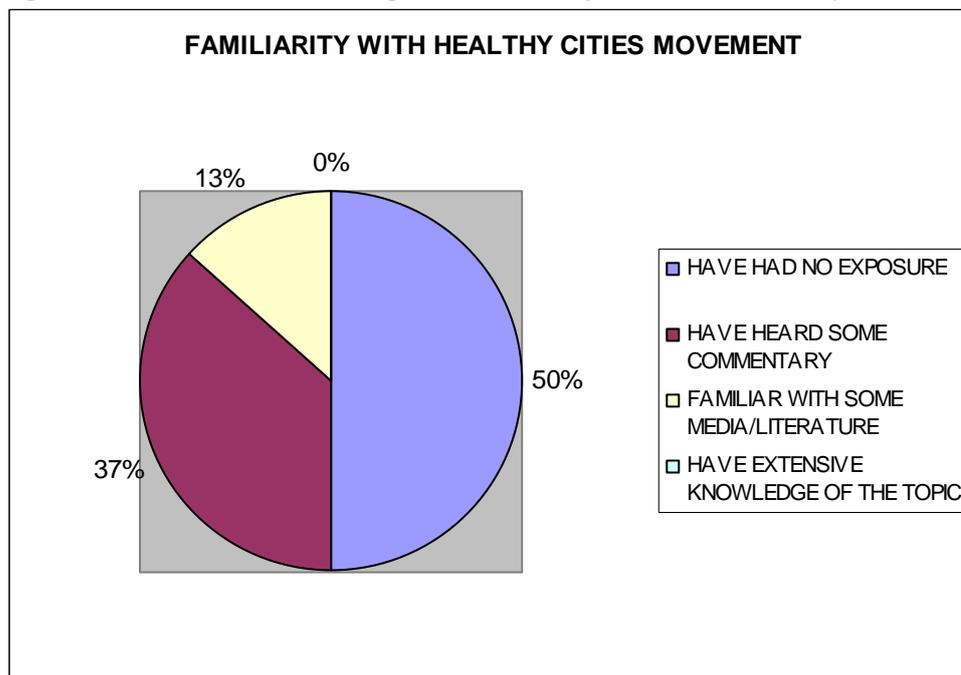
In order to support the above data, respondents were also asked to nominate their exposure to a selection of published health urban planning documents. The selected documents were composed by various authors within government organisations or the health industry.

The documents presented to the respondents within the questionnaire include:

- *Leading the Way- Councils Creating Healthier Communities-* Victoria Health
- *Healthy Environments -* Chris Johnson (ed)
- *Creating Active Communities – Physical Activity Guidelines for Local Councils -* NSW Department of Local Government
- *Healthy By Design, a planners guide to environments for active living* – National Heart Foundation

The respondents were prompted to indicate their relative exposure to the document through the following options;

a) Have not heard of document

b) Have heard of document, but not read document

c) Am familiar with document and have read.

The results are in presented in Figure 5.3 below. The most identified document was "Healthy by Design" (National Heart Foundation, 2004) with 37 per cent of respondents indicating that they had heard of the document, but had not read the publication. Overall only 10 per cent of respondents had indicated that they had read and were familiar with one of the four documents specified.

The majority of respondents indicated that they had not heard of the documents. "Leading the Way" was least recognised, with a 83 per cent of respondents indicating that they 'have not heard of the document'. The majority of the planners had not heard of any of the listed documents.

Given that a small percentage of respondents indicated that they had read one of the documents, it is clear that local government planners have had little or no exposure to healthy urban planning documents. This could be seen as a direct link to planner's limited knowledge of the Healthy Cities Movement.

Figure 5.3 – Planners Familiarity with Healthy Planning Documents. (Source: Author)
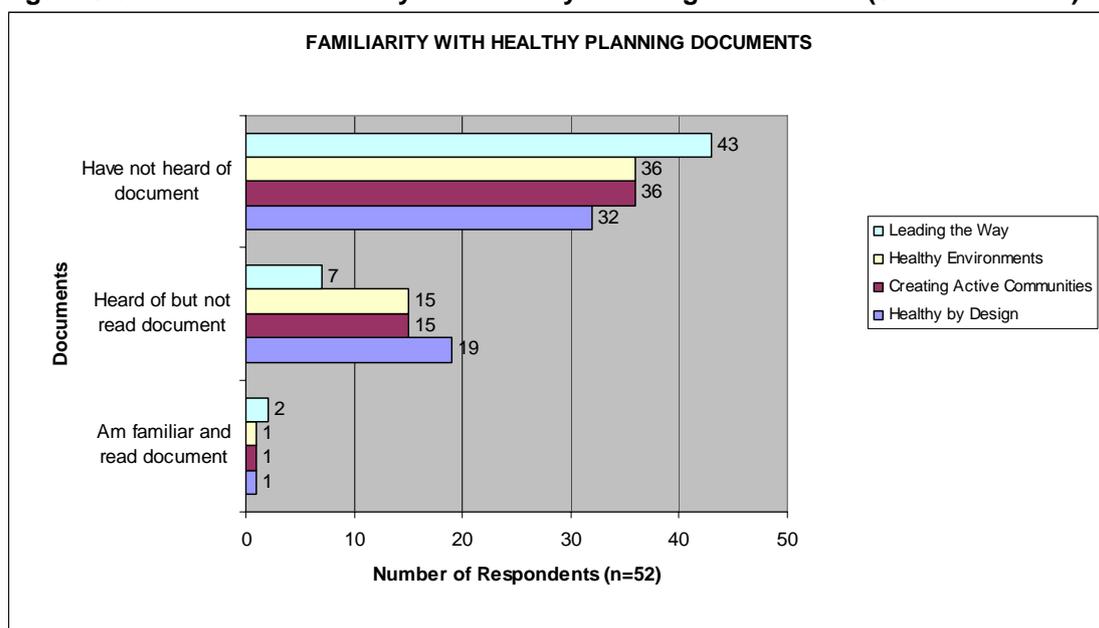
The Link between the Built Environment and Health

The Healthy Cities Movement acknowledges the relationship between the built environment and health, and recognises that healthy urban planning can significantly contribute to increasing the health of populations through thoughtful planning practices. Whilst not all planners would be familiar with the Healthy Cities Movement, it is envisaged that a number of respondents would exhibit some understanding or acknowledge the link between the built environment and health. Therefore planners were asked as series of questions regarding the built environment and health. Through developing and exploring the level of knowledge of Sydney planners in relation to health and the built environment, the significance and need of further information and programs in regard to healthy urban planning can be ascertained

Planners were asked whether they agreed that there was a link between the built environment and health. Sixty two (62) per cent of respondents agreed there was a link between the built environment and health, 30 per cent of the respondents strongly agreed, and four (4) per cent of the respondents (2 people) nominated they were undecided.

Figure 5.4- The perceived link between the built environment and health (Source: Author)
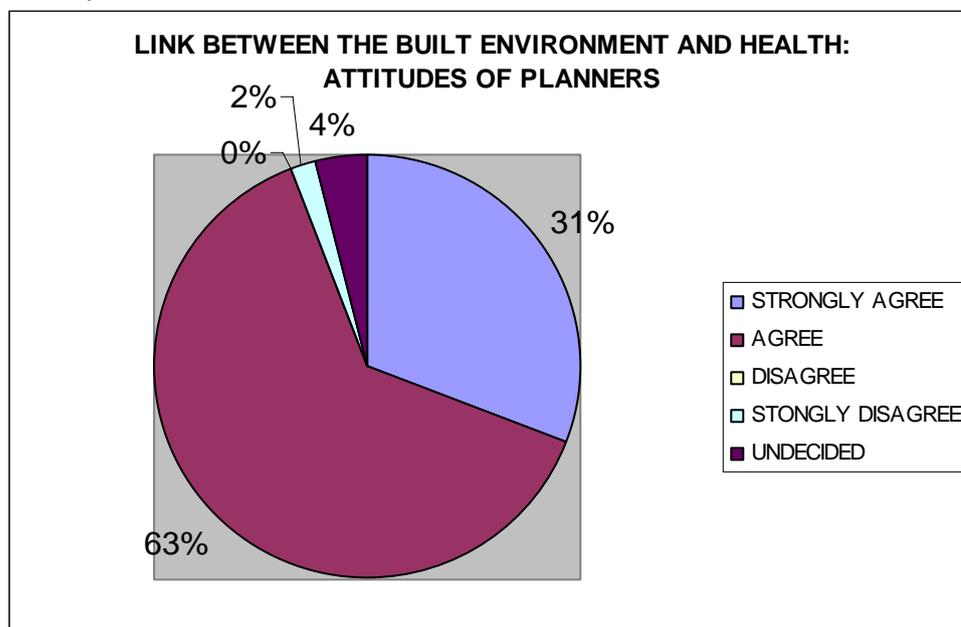
The results indicate that the majority of planners are unaware of the healthy cities movement. They are however aware of the link between health and the built environment. It is worth noting

that one respondent strongly disagreed that there is a link between the built environment and health. This respondent was of a senior management position within the Sydney area.

A bivariate regression analysis is a useful tool in determining factors which are the best predictors of a certain variable. In this research, a bivariate regression analysis was used to determine which factors best influenced planners perception of the link between the built environment and health. This is illustrated in Table 5.3 below.

Given that the Healthy Cities Movement is a planning initiative that has recently been revisited in the last 5 years, it was hypothesised that planners, who had recently undertaken tertiary study, would be more exposed to new planning approaches and theories such as this. Therefore a bivariate regression was run analyzing experience in working planning profession versus planners opinions regarding the link between the built environment and health.

A greater understanding would then be displayed between the influences of planner's opinions regarding the built environment and health in the context of the Healthy Cities Movement. The results produce a significance level of 0.2999, which indicates that the results are valid. However, the 'beta' value of 0.147 indicates that a relatively weak link exists between the two variables measured.

Table 5.3 – Bivariate Regression – Planners experience vs. perception of the link between the built environment and health. (Source: Author)

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	YEARS OF EXPERIENCE IN PLANNING(a)		Enter

a All requested variables entered.
b Dependent Variable: LINK BETWEEN BUILT ENVIRONMENT AND HEALTH

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.147(a)	.022	.002	.848

a Predictors: (Constant), YEARS OF EXPERIENCE IN PLANNING

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.791	1	.791	1.099	.299(a)
	Residual	35.978	50	.720		
	Total	36.769	51			

a Predictors: (Constant), YEARS OF EXPERIENCE IN PLANNING
b Dependent Variable: LINK BETWEEN BUILT ENVIRONMENT AND HEALTH

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.635	.233		7.024	.000
	YEARS OF EXPERIENCE IN PLANNING	.112	.107	.147	1.049	.299

a Dependent Variable: LINK BETWEEN BUILT ENVIRONMENT AND HEALTH

The results thus far have shown that the majority of planners believe that there is a link between the built environment and health. To further understand planner's knowledge of the link between health and the built environment, respondents were asked to specifically nominate the components/factors of the built environment which they believed would influence the health of inhabitants via an open ended question. The results are shown in figure 5.5.

The most frequently nominated response was the quality of open space, receiving approximately 19.8 per cent of responses, closely followed by quality of public transport which received 18.3 per cent of responses. Access to amenities including community facilities and

retail received 12.9 per cent of the responses. It is noteworthy that approximately six per cent (6.4 per cent) of the respondents nominated that a factor that influenced health was poor planning practices.

Whilst some planners recognised the effects of the built environment on health, others did not agree that the built environment was solely the influence on health;

> "Notwithstanding (influences of the built environment on health), the influence of lifestyle and attitudes to health are greater than the built environment factors."
> (Anonymous respondent No.11, 2006)

> "Media control/advertising influence upon society. eg. car *(advertising)* and fast food advertising influence children".
> (Anonymous respondent No.22, 2006)

> "Less time working, more time playing".
> (Anonymous respondent No. 16, 2006)

These comments indicated that planners do recognise the built environment's influence on health, however they believe that ultimately personal choice, (respondent No. 11, 2006), media influences (respondent No.22, 2006) and lifestyles (respondent no. 16, 2006) are equally as important factors that influence health.

Furthermore, other respondents took the view that the current state of the built environment today is not conducive to improving health;

> "There is not adequate public transport and Sydney is not designed to encourage walking, hence cars are used for the majority of trips, affecting everyone (*everyone's health)*"
> (Anonymous survey No. 32)

> "Toll Roads represent the 'true' environmental and health costs of private vehicle use and its pollution" (Anonymous respondent No.29)

In collating the data, common themes were found in the responses, it was evident that planners believe that access to facilities and active transportation were the main components of the built environment influencing health. From the responses it also became evident that planners recognise the role planning plays in influencing health. This will be explored further within this chapter.

Figure 5.5 – Factors of the built environment which influence the health of inhabitants. (Source: Author)

FACTORS OF THE BUILT ENVIRONMENT THAT INFLUENCE HEALTH

Factor	% of total
Location of fast food	1.0
Land value and affordability	1.5
Government funding	0.0
Solar access	2.5
Poor planning	6.4
Pollution/noise/traffic	1.5
Crime prevention	1.5
Access to health care	3.5
None	0.5
Location of employment	2.0
Residential amenity	9.9
Quality of open space	19.8
Access to amenities/comm. facilities/retail	12.9
Quality of walking paths/cycle ways	8.9
Quality of public transport	18.3
Safety	2.0
Density	7.9

□ Number of times built environment factors were mentioned

Planners were also asked to nominate what planning tools/strategies they believed could be used to influence a healthy and more physically active community. The results are shown in Figure 5.6.

The provision of cycle paths was the most suggested tool and strategy nominated by planners gaining 92.3 per cent of responses, followed by walking paths with 90.4 per cent of responses. 'Attractive and safe public spaces' was nominated by 88.5 per cent respondents. Open space and recreational facilities were the fourth and fifth most frequent strategies nominated, each receiving 84.6 per cent of responses.

11.5 per cent of the respondents nominated an alternative tool or strategy to the options given within the questionnaire. Suggestions included dog friendly environments, education,

stormwater quality management, landscaping/tree planting, pollution control and housing affordability.

Figure 5.6- Planning tools/strategies that could influence a healthier, active environment. (Source: Author)

PLANNING TOOLS AND STRATEGIES FOR BETTER HEALTH

Category	%
Other	11.5
Medical facilities	42.3
Narrow traffic calmed roads / connected streets	32.7
Safe road crossings	44.2
Community consultation	36.5
Promotion of healthy lifestyles	59.6
Parks	78.8
Sporting facilities	80.8
Recreational facilities	84.6
Walkable neighbourhoods	82.7
Open spaces	84.6
Wide dual use footpaths	53.8
Promote mixed use developments	40.4
Require all developments to include local facilities	26.9
Good public transport	75.0
Walking paths	90.4
Cycle paths	92.3
Attractive and safe public places	88.5

% of total respondents

The results indicate that planners are aware of the various strategies available for promoting better health, and were more likely to nominate strategies that were associated with increasing physical activity.

Importance of the Health

The results so far have demonstrated the extent to which town planners are aware of the relationship between healthy cities and planning. It has been identified in the literature that a fundamental factor in development of healthy cities is the attitudes and opinions of those stakeholders who hold the power and influence to determine the outcomes of the built environment. As such the respondents were asked whether they felt the creation of healthy cities and active environments was an important issue in Sydney today. The results will be specifically examined under the following groupings and breakdown of respondents:

- General Results (all planners)
- Local Government Regions
- Position Description

General Results

Respondents were asked to rank the importance of creating healthy cities on a scale of one to five, nominating 1 as not very important and 5 being very important. The scale is illustrated in Figure 5.7.

Figure 5.7 – Question 18, extract from questionnaire (Source: Author).

☐1	☐2	☐ 3	☐4	☐ 5
Not very Important		Has some importance but other planning issues are more relevant		Very Important

The results indicate that overall 52 per cent of planners considered the importance of creating healthy cities as very important. 13.5 per cent of the planners nominated that they thought that the issue has some importance but other planning issues were more relevant. Only 1.9 per cent of the responses stated that the healthy cities movement was 'not very important'. Therefore, overall, the majority of the planners rank healthy urban planning as an important issue.

Local Government Areas

A comparison of responses from different local government areas was conducted in order to determine whether responses differed accordingly to various geographical and population characteristics of the Sydney area. It is envisaged that the councils located within the north west and south west regions would have more of an opportunity to influence health planning principles at a larger scale in new release areas and masterplanned communities. The local government areas were categorised into the three regions as defined by the Sydney Metropolitan Plan (Department of Planning, 2004). The results are shown in Table 5.4.

Table 5.4 – Importance of Creating Healthy Cities by LGA Region (Source: Author)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Per cent	N	Per cent	N	Percent
RANK IMPORTANCE OF CREATING HEALTHY CITIES * LGA BY REGION	52	98.	1	1.9	53	100.0%

RANK IMPORTANCE OF CREATING HEALTHY CITIES * LGA BY REGION Crosstabulation

			LGA BY REGION All figures in per cent			
			SYDNEY EAST REGION	SYDNEY NORTH WEST REGION	SYDNEY SOUTH WEST REGION	Total per cent
RANK IMPORTANCE OF CREATING HEALTHY CITIES	"NOT VERY IMPORTANT"	% within IMPORTANCE OF CREATING HEALTHY CITIES	100.0	.0	.0	100.0
		% within LGA BY REGION	7.1	.0	.0	1.9
	"SOME IMPORTANCE/OTHER PLANNING ISSUES MORE RELEVANT"	% within IMPORTANCE OF CREATING HEALTHY CITIES	42.9	42.9	14.3	100.0
		% within LGA BY REGION	21.4	13.6	6.3	13.5
	"SLIGHTLY MORE IMPORTANT THAN OTHER PLANNING ISSUES "	% within IMPORTANCE OF CREATING HEALTHY CITIES	17.6	23.5	58.8	100.0
		% within LGA BY REGION	21.4	18.2	62.5	32.7
	"VERY IMPORTANT"	% within IMPORTANCE OF CREATING HEALTHY CITIES	25.9	55.6	18.5	100.0
		% within LGA BY REGION	50.0	68.2	31.3	51.9
TOTAL PER CENT		% within IMPORTANCE OF CREATING HEALTHY CITIES	26.9	42.3	30.8	100.0
		% within LGA BY REGION	100.0	100.0	100.0	100.0

NB: This table has been summarised. See Appendix 3 for further details.

The majority of planners from councils within the Sydney north west region (approximately 68.2 per cent) and the Sydney east region (approximately 50 per cent) ranked healthy cities as 'very important'. Alternatively, the majority of planners (62.5 per cent) in the Sydney south west region are more than likely to think that the issue has some importance but other planning issues were more relevant. It is noteworthy a respondent within the Sydney East region nominated that the issue is not very important.

<u>Position Description</u>

The roles and responsibilities of planners within each council differ according to position description, roles, responsibilities and hierarchy. The degree of influence between job descriptions either development assessment and strategic, or management can ultimately influence the implementation of healthy urban planning principles within councils. As such the

opinions of different position descriptions of respondents were examined as well as planners in positions of delegative authority.

Table 5.5 shows the results of the importance of creating healthy cities by position description. The results reveal that out of the 52 per cent of respondents who ranked the creation of healthy cities as very important, 44 per cent of these were development assessment planners.

Seventy five per cent of the development assessment managers ranked the issue as 'very important' whilst only a third of strategic management ranked the issue as 'very important'. As well as this, one third of strategic management also ranked the issue as 'having slightly more importance than other planning issues.'

Eighty eight per cent of the strategic planners ranked the issue as 'very important', as did 52.9 per cent of development assessment planners. Development assessment planners were more likely to think that the issue had some importance, however did feel that other issues were slightly more relevant. Strategic planners however were more likely to think that the issue was very important which is contrary to the opinions of their strategic management.

Table 5.5 – Importance of Creating Healthy Cities by Position Description

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Q18: RANK IMPORTANCE OF CREATING HEALTHY CITIES * POSITION DESCRIPTION	52	98.1%	1	1.9%	53	100.0%

RANK IMPORTANCE OF CREATING HEALTHY CITIES * BY POSITION DESRIPTION Crosstabulation

			POSITION DESCRIPTION (PER CENT)					
			DA PLANNER	STRATEGIC PLANNER	UNSPECIFIED TP	STRATEGIC MANAGEMENT	DA MANAGEMENT	TOTAL
RANK IMPORTANCE OF CREATING HEALTHY CITIES	"NOT VERY IMPORTANT"	% within IMPORTANCE OF CREATING HEALTHY CITIES	.0	.0	.0	100.0	.0	100
		% within POSITION DESCRIPTION	.0	.0	.0	11.1	.0	1.9
	"SOME IMPORTANCE/OTHER PLANNING ISSUES MORE RELEVANT"	%: within IMPORTANCE OF CREATING HEALTHY CITIES	42.9	14.3	14.3	28.6	.0	100
		% within POSITION DESCRIPTION	13.0	12.5	12.5	22.2	.0	13.5
	""SLIGHTLY MORE IMPORTANT THAN OTHER PLANNING ISSUES "	% within IMPORTANCE OF CREATING HEALTHY CITIES	47.1	.0	29.4	17.6	5.9	100
		% within POSITION DESCRIPTION	34.8	.0	62.5	33.3	25	32.7
	"VERY IMPORTANT"	%: within IMPORTANCE OF CREATING HEALTHY CITIES	44.4	25.9	7.4	11.1	11.1	100.0
		% within POSITION DESCRIPTION	52.2	87.5	25.0	33.3	75	51.9
TOTAL (PERCENT)		%: IMPORTANCE OF CREATING HEALTHY CITIES	44.2	15.4	15.4	17.3	7.7	100
		% within POSITION DESCRIPTION	100	100	100	100	100	100

NB: This table has been summarised. See Appendix 3 for further details.

To further develop and understanding of the attitudes signifying the importance of the creation of healthy cities, the respondents were asked to state whether they believed planners play an important role in creating healthier, more physically active communities. The results are illustrated in Figure 5.8.

Sixty per cent of the respondents agreed that planners play an important role in creating healthy active communities whilst 22.6 per cent strongly agreed. A small proportion, (9 per cent) of the planners disagreed with the statement; however the majority of the respondents agreed that planners play a role in creating healthier communities.

Figure 5.8- Planners role in creating healthy and active environments. (Source: Author)

PLANNERS PLAY AN IMPORTANT ROLE IN CREATING HEALTHY ENVIRONMENTS

- STRONGLY AGREE
- AGREE
- DISAGREE
- STRONGLY DISAGREE
- UNDECIDED
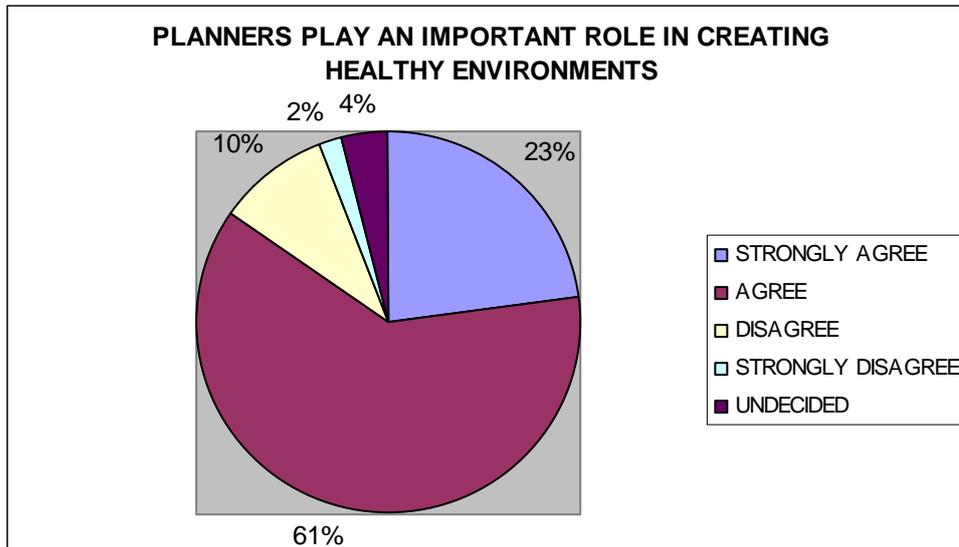
Notwithstanding the above statistical analysis it is also noteworthy that three of the respondents commented that the problem of implementing healthy planning principles is that it is difficult to practice due to the nature of the working environment and systems of local government.

"Planners implement the policies and political wills of their employer." (Anonymous respondent no. 13)

"They (*planners) s*hould! System does not work" (Anonymous respondent No.15)

Another planner noted that the onus should be on private developers and planners to promote health through the designs of the developments, rather than from a government perspective.

"Disagree that local government planners individually have a big influence. I feel private companies have a better chance of incorporating it into their designs they submit to council" (Anonymous respondent No. 42)

Healthy Planning in Councils

The objective of this thesis project is to not only understand the attitudes and knowledge of planners, but also gauge how often health is being addressed by planners at the local government level. A series of questions were asked as an indicator of the presence of healthy urban planning practices or policies within councils.

Workshops and Seminars

It is hypothesised that local government planning practices are shaped by education received both at university and within the workplace. Table 5.6 illustrates the number of seminars or educational opportunities offered within each workplace. The councils are assessed in this analysis in regard to the three broad regions as defined earlier.

Overall 63.5 per cent of the respondents indicated the absence of opportunities to attend professional development courses for healthy planning/cities through their place of employment. It is also noteworthy that 19.2 per cent of respondents noted that they did not know or were unaware of such course opportunities. In effect this means that 82.7 per cent of respondents have not been exposed to any type of educational opportunities through their place of employment as a planner.

Further, the results indicate that the number of healthy planning information seminars and educational workshops that are made available to local government town planners is poor.

Table 5.6 – Seminars Offered to Planners through the Workplace (by LGA regions) (Source: Author)

			LGA BY REGION (PER CENT)			Total
			SYDNEY EAST REGION	SYDNEY NORTH WEST REGION	SYDNEY SOUTH WEST REGION	
SEMINARS OFFERED AT WORKPLACE	INAP.	% within SEMINARS OFFERED AT WORKPLACE	50.0	50.0	.0	100.0
		% within LGA BY REGION	7.1	4.5	.0	3.8
	YES	% within SEMINARS OFFERED AT WORKPLACE	14.3	42.9	42.9	100.0
		% within LGA BY REGION	7.1	13.6	18.8	13.5
	NO	% within SEMINARS OFFERED AT WORKPLACE	30.3	42.4	27.3	100.0
		% within LGA BY REGION	71.4	63.6	56.3	63.5
	DON'T KNOW	% within SEMINARS OFFERED AT WORKPLACE	20.0	40.0	40.0	100.0
		% within LGA BY REGION	14.3	18.2	25.0	19.2
Total		% within SEMINARS OFFERED AT WORKPLACE	26.9	42.3	30.8	100.0
		% within LGA BY REGION	100.0	100.0	100.0	100.0

Consideration of Health within the Workplace

In addition to the above analysis it was considered necessary to question whether healthy planning principles were considered within the everyday practice of local government town planning. As such respondents were asked to nominate how often within their position at as a local government planner, they have considered health issues in relation to other planning considerations such as parking, traffic, etc.

The results indicate that an almost equal proportion of people nominated that they considered health within the scope of their job "weekly" (28 per cent) and "never" (26 per cent) of respondents. This reveals that there is a vast inconsistency in health consideration within planners across the Sydney region.

Figure 5.9 – Frequency of consideration of health within profession. (Source: Author)
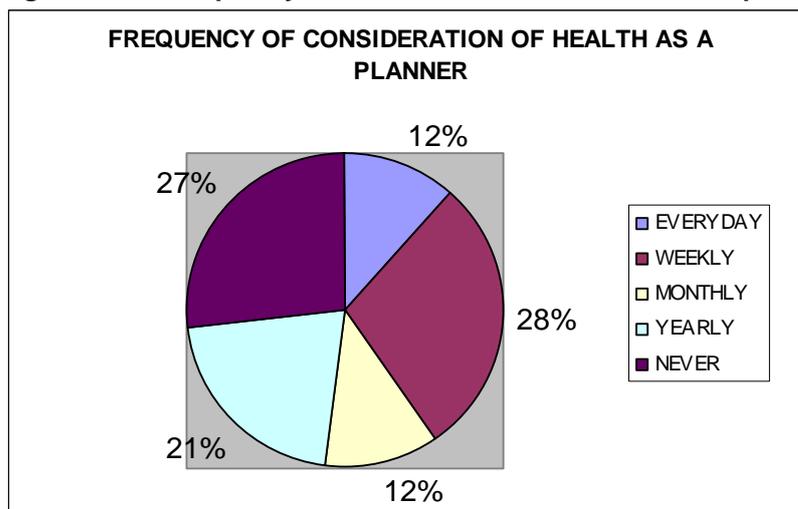
Furthermore when cross tabulating the data within each local government region, (as shown in Table 5.7), has produced mixed results. The results produce a consistent correlation in that fewer people are considering health everyday. There is however no trend to suggest that any local one local government area is considering health more frequent than another. It would be more indicative to demonstrate that the consideration of health is more likely to be result of personal attitudes rather than particular process or focus within a particular region of Sydney's local government. This indicates that health issues are not collaboratively being addressed across council areas in the Sydney region.

Table 5.7 – Crosstabulation of how often health issues are considered by LGA region. (Source: Author)

		LGA BY REGION			
		SYDNEY EAST REGION	SYDNEY NORTH WEST REGION	SYDNEY SOUTH WEST REGION	Total
Q10: HOW OFTEN HEALTH ISSUES are CONSIDERED	EVERYDAY	2	1	3	6
	WEEKLY	4	5	6	15
	MONTHLY	0	5	1	6
	YEARLY	3	6	2	11
	NEVER	5	5	4	14
Total		14	22	16	52

In order to develop an understanding of what motivates planners to consider health more frequently within the scope of their job, a bivariate regression was run to ascertain what factors influence the consideration of health within the planning profession.

It was hypothesised that planners who ranked the importance of creating healthy cities within the Sydney metropolitan region as very important, would consider such principles more frequently with the scope of their job as a town planner. A bivariate regression analysis was run and the data revealed that the statistical significance of 0.087 which is considered to be a valid relationship. The explained variance of the two variables is moderately strong at 0.240 which demonstrates that the planner's opinion on the importance of creating healthy cities resonates into the practice of their job.

Table 5.8 – Bivariate Regression Planners opinion influencing planning practices. (Source: Author)

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	HOW OFTEN HEALTH ISSUES CONSID.(a)	.	Enter

a All requested variables entered.
b Dependent Variable: Q18: RANK IMPORTANCE OF CREATING HEALTHY CITIES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.240(a)	.058	.039	.840

a Predictors: (Constant), Q10: HOW OFTEN HEALTH ISSUES CONSIDERED.

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.157	1	2.157	3.057	.087(a)
	Residual	35.285	50	.706		
	Total	37.442	51			

a Predictors: (Constant), Q10: HOW OFTEN HEALTH ISSUES CONSID.
b Dependent Variable: Q18: RANK IMPORTANCE OF CREATING HEALTHY CITIES

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.794	.291		16.450	.000
	HOW OFTEN HEALTH ISSUES CONSIDIDERED	-.145	.083	-.240	-1.748	.087

a Dependent Variable: Q18: RANK IMPORTANCE OF CREATING HEALTHY CITIES

Healthy policies within LGAs

In order to ascertain whether healthy urban planning was being practiced within local councils, respondents were asked to nominate whether their local council had any healthy planning policies.

The purpose of questioning whether planners were familiar with planning policies within their LGA was two fold. The first of which was to ascertain whether planners were familiar with documents if they existed and the second was to find out how local councils are addressing healthy urban planning through local policy. The results are shown in Figure 5.10.

Forty one (41) per cent of respondents indicated that their council did not have any policies relating to healthy urban planning. Twenty one per cent of respondents stated that their Council had healthy planning policies, and 38 per cent of respondents stated that they did not know of or were unaware. This indicates that the majority of councils either do not have policies which relate to healthy urban planning, or planning staff are unaware of these policies.

Figure 5.10 – Planners familiar with Planning Policies within their LGA. (Source: Author)

PLANNING POLICIES WITHIN LOCAL COUNCIL

21%

38%

41%

- Yes
- No
- Don't Know
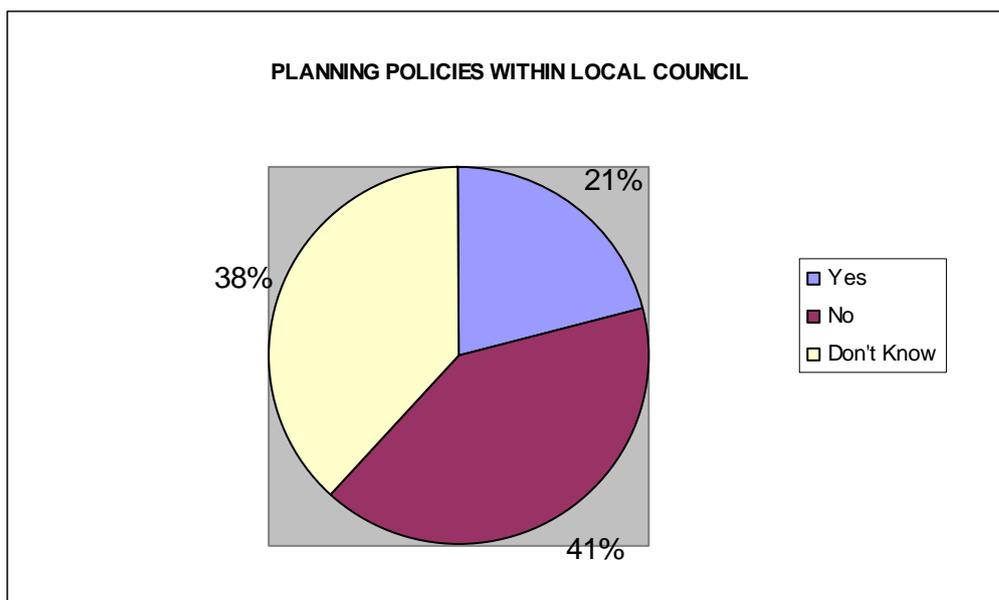
The 21 per cent of respondents who identified that their workplace had policies which related to the development of healthy cities were from the following LGAs; Burwood, Warringah, Sutherland, Hornsby and Randwick. The policy documents are illustrated in Table 5.9.

All respondents from the Randwick were aware of policies that contained healthy planning principles within their Council. However, there was no consistency amongst staff from other council areas. This indicates that a unified and collaborative approach to planning is not being

adopted by planners within the Sydney metropolitan region or within local government themselves.

The data does however reveal that planners, who did nominate policies, recognise that healthy planning principles are embedded within their policies, and that healthy planning principles do not necessarily have to exist as stand alone documents.

Table 5.9 – Healthy planning policies identified by planners. (Source: Author)

LGA	No. OF RESPONDENTS	PER CENT OF STAFF WHO RESPONDED PER LGA	DOCUMENT/POLICY NAME NOIMINATED
Burwood	1	13	Vision Document
Holroyd	0	0	None
Warringah	1	16	Locality Statement
Sutherland	2	33	Council Policy- Our Shire, Our future
			Recreation Strategy
			Community Safety/Education and Health Plan
Hornsby	3	50	DA, Merit Assessment
			Development Control Plan & LEP x 2
Blacktown	0	0	None
Randwick	3	100	DCP/LEP
			Randwick City Plan
Waverley	0	0	None
Canterbury	0	0	None

Conclusion

The results of the research have been presented both quantitatively and qualitatively to present the general attitudes and knowledge of planners in regards to healthy planning policy. The results have revealed that planners have had little exposure to the Healthy Cities Movement. However planners have acknowledged that there is a link between the built environment and health. It was also revealed that there is an absence of recognition of healthy urban planning within councils, which has produced infrequent and inconsistent consideration during planning practices to the effect that the built environment has on health. Overall the results show that the understanding and implementation of healthy planning policy is inconsistent amongst Sydney local government planners. The implications of this deficiency will be discussed further in chapter six (6).
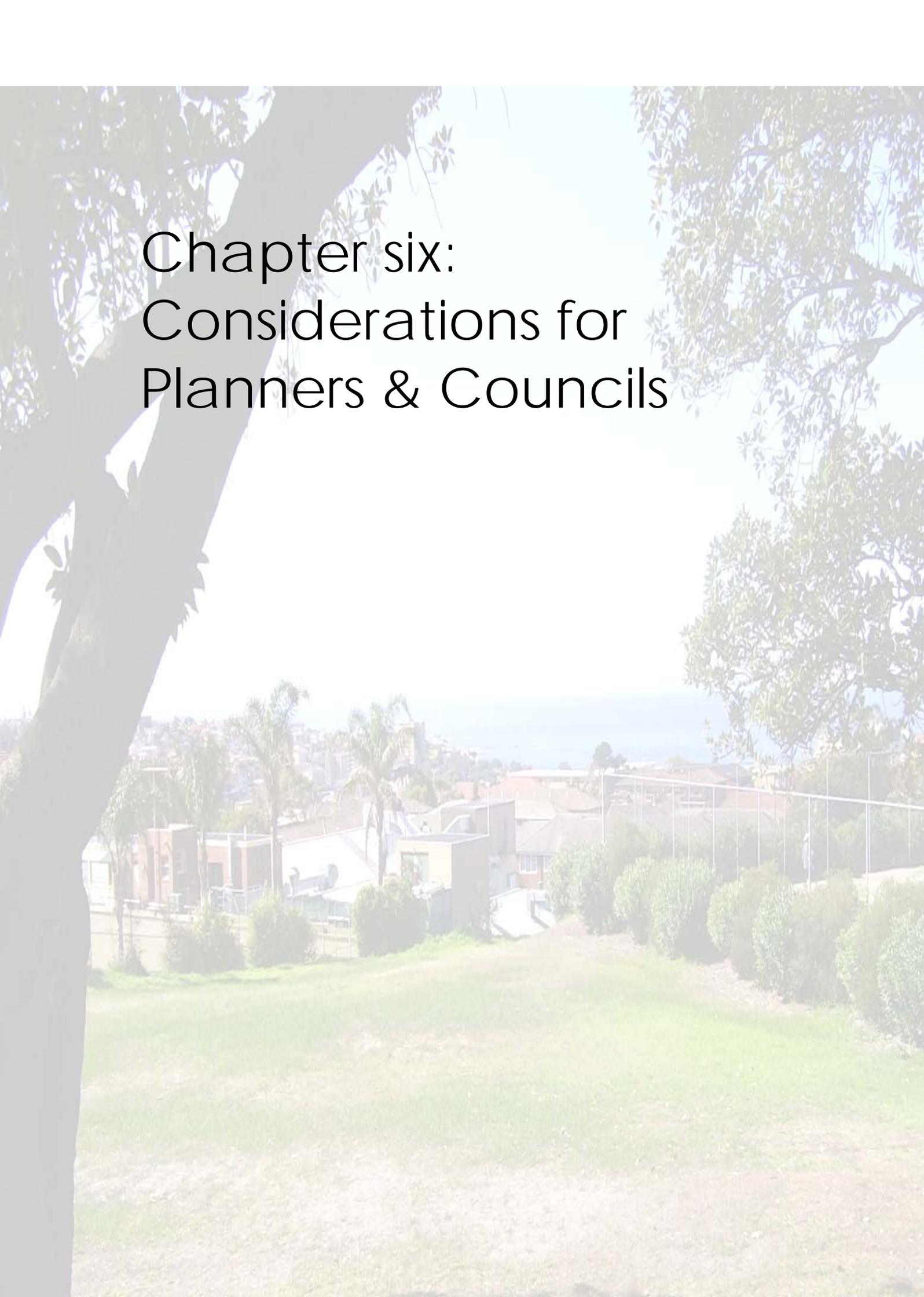
Chapter six: Considerations for Planners & Councils

The previous chapter presented the results of the primary research collected from the qualitative and quantitative data that was obtained for the purposes of this thesis. The survey conducted posed questions which aided in addressing the research objectives of this project. An analysis of the results from the survey will be discussed in an effort to understand planner's attitudes towards health and how this data can contribute to the development of healthy planning in Sydney.

To reiterate, the objectives of this study are as follows:

- Develop an understanding of what knowledge base an individual planner has in relation to Sydney's health issues and healthy urban planning principles.

- Develop an understanding of the extent that health is considered within the scope of their position as a town planner in the Sydney metropolitan region.

- Make recommendations as to how healthy urban planning practices can be improved at the local level of government.

Planners Knowledge

Healthy Cities
The results of the survey revealed that planners had little knowledge of the Healthy Cities Movement. Although there are planning seminars and information circulating among planning and other associated professions, the ideas and concepts of healthy urban planning are not diffusing effectively through to local government planners. There is no mechanism within the NSW planning system to actively plan for healthy cities at the local government level. Evidently, a majority of planners do not recognise the importance of planning for healthy cities, and have little knowledge of its place within the maintenance and construction of the built environment. Any benefits that have manifested in terms of healthy cities planning have been in relation to other built form aspects, and occur in an ad hoc manner. Legibility, for example, and the promotion of walking distance to services within communities, has been for the purposes of

efficient transportation.   Although this has important implications for the creation of healthy urban planning, they have been implemented on behalf of another sustainability criterion.

Planners did however recognise that there is a link between health and the built environment. The respondents identified components of the built environment that they believed influenced the health of inhabitants. Most respondents associated their answers with poor public transportation and quality of open spaces, which is a recurring theme and issue of contention in general planning initiatives and policies today as Sydney's fringe continues to expand.

It is noteworthy that 6.4 per cent of the planners stated that poor planning practices were a component of the built environment that influences health. This indicates that some planners recognise the role of planning within the context of creating health cities and therefore provides the basis for developing planner's awareness of healthy urban planning.

<u>Health Behaviours</u>

The majority of planners are aware of how the built environment can influence health. However, from the comments received it can be inferred that planners in general believe that, regardless of how conducive the environment is to facilitate healthy choices, it is the individual whom will ultimately decide, regardless of planner's efforts. Some planners feel that unhealthy lifestyles and attitudes, the influence of the media and advertising are factors which significantly contribute to the declining health of populations, more so than the form, quality and organisation of the built environment.

> "Notwithstanding *(influences of the built environment on health),* the influence of lifestyle and attitudes to health is greater than the built environment factors."
> (Anonymous respondent No.11, 2006)

> "Media control/advertising influence upon society eg. car *(advertising)* and fast food advertising influence children". (Anonymous respondent No.22, 2006)

> "Less time working, more time playing". (Anonymous respondent No. 16, 2006)

A fundamental principle of healthy urban planning is the premise that behaviours can be changed through the way that people interact with the environment. Furthermore, building

environments that are amenable to healthy choices provide opportunities for behaviour and lifestyle adjustments to be made. The large body of healthy urban planning literature reiterates these points, and these comments are a testament to the lack of information provided to planners within local government on the impacts the built environment can have on health and behavioural choices.

Defeatist attitudes were also present amongst some of the planners with one comment noting that Sydney has been settled and developed over time in a fashion that is not sympathetic to active types of transportation such as cycling and walking. This demonstrates that recognition needs to occur that other options can be provided for physical activity, which are conducive within an existing urban fabric. It is here where local governments can provide facilities and services which promote the health and well-being of their residents, despite fundamental failures in road layout and legibility for the promotion of activity. What is most prevalent is the recognition of the healthy cities movement in Sydney's urban fringe, where there is opportunity to provide a built form which is conducive of activity which promotes health, at the master planning level of development.

The results have shown that the majority of planners acknowledged that there was a link between the built environment and health, despite having little exposure to the healthy cities movement. The research has indicated that planners have the basic knowledge of how their role as a planner in regulating the built environment can produce healthy outcomes for our cities. There does seem to be some difference in opinion and scepticism as to whether healthy urban planning is practical within the context of a sprawling city, competing with individual's choices and human behaviour.

It can be concluded that planners are not unified in their beliefs and shared knowledge of healthy urban planning principles. This is both the result of personal beliefs, lack of exposure to the topic either through personal education or workplace education. The need for further exposure and education of healthy planning principles is therefore identified through the research.

Planners Role

Perceived importance

Planners were asked whether they felt that their profession played an important role in creating healthier communities. The results indicated that more than 61 per cent of planners agreed with the statement. However a qualitative assessment of some comments made throughout the questionnaire elude to the fact that whilst a consensus exists to the importance of the planners role within the creation of healthy cities, implementation of such a planning approach is sometimes difficult in the context of local government workplaces.

The nature of local government politics and council agenda can influence planning outcomes. One of the respondents noted that planners should play important role in creating healthier, more active environments, but the local government system does not allow planners to implement such principles.

> "They (*planners) s*hould! System does not work"
> (Anonymous respondent No.15, 2006)

Despite planners viewing their role as important in the creation of healthy cities, in the context of NSW local council agenda, other issues such as sustainability and BASIX, standardised local environmental plans and public transportation issues, in conjunction with local political issues, can overshadow planners practicing healthy urban planning. This among others appears to be one of the challenges of healthy urban planning in the local government system which will be discussed further.

Health Awareness

In order to be a perceptive healthy urban planner there needs to be an awareness of the issues that affect a given community for which one plans. As defined earlier within this thesis,

> "Healthy urban planning is about planning for people. It puts the needs of people. It puts the needs of people and communities at the heart if the urban planning process……….." (National Heart Foundation 2004: 4).

Planners were asked to identify the main health issues that felt were affecting Sydney residents today. The most frequent responses received by planners were obesity, air quality and asthma. Research conducted as a part of this project has indicated that mental health is just an important issue as diseases caused by physical inactivity (Johnson (ed) 2004:91). Whilst mental health was identified, only 5.8 per cent of planners identified it as an issue, which is an indication that planners are unaware of the increasing commonplace nature of mental health issues within a contemporary context.

Healthy urban planning principles focus not only physical, but mental health also. This trend therefore needs to be recognised by planning professionals, and the implications this has for planning. In order to effectively plan to promote better health and healthier lifestyles, planners must be 'in touch' with the problems and needs of communities, and as such should be informed regarding the health issues that are most prevalent within the communities that they are planning for.

As identified by the Healthy Cities Movement, achieving healthy cities and adopting healthy urban planning principles requires a collaborative approach from professionals associated with both the built environment as well as those within the health profession (Barton et al., 2000:25). Therefore, information regarding health for planners is necessary in order to develop healthy urban planning policies that are specifically designed to meet the needs of that community to ensure that health is properly being addressed.

<u>Position Description</u>

The research conducted to date reveals that there appears to be an absence of NSW government incentives to encourage councils to produce healthy urban planning policies. As a result, the creation of such policy is subject to the priorities and motivations of individuals within each local government organisation. Successful planning policy requires the support and endorsement of crucial stakeholders within an organisation.

The roles and responsibilities of planners within each council differ according to position description, responsibilities, and hierarchy. In developing policy, strategic development is involved with other sections of councils in developing active transportation facilities and programs, creating development control plans for new release areas, community consultation

processes and developing the basis for merit assessment at the regulatory level of planning. Therefore, strategic policy development provides an avenue within local government where planning for healthy cities can be addressed. The introduction of healthy urban planning on large scale projects is heavily weighted to strategic planning. Notwithstanding the above, development assessment within the context of health urban planing is by no means discounted.

It is for this reason that planners in positions of senior management were analysed as the key driver in the development of new policy and the leadership in an organisation. Respondents were asked to rank the importance of creating healthy cities and active environments.

The results showed that strategic management shared differing opinions, with some respondents nominating the issue as important, to not important, whilst the majority (75 per cent) of development assessment managers ranked the issue as very important. The only respondent who nominated that the issue had no importance was a strategic manager. By comparison, strategic management showed less support for developing healthy cities.

There were no qualitative responses to this question, therefore attempting to draw conclusions to these results is difficult and presents a gap in the research, which is an area for further study. It would be interesting to understand;

- – the pressures and challenges from strategic management in the development of healthy urban policies,
- – whether opinions differed relative to the geographical characteristics or constraints of the LGA,
- – whether alternative planning pressures take precedence over the importance of health, and
- – whether government incentives would aid as motivation for local councils to develop healthy urban policy.

It can be inferred that at the strategic level, barriers to the acceptance of healthy urban planning principles are in relation to competing interests. Without government incentive, there is little motivation for local governments to take it upon themselves to adopt health urban planning policies. The pressures of development assessment managers and more associated

with implementation of policy, and are therefore less likely to be motivated toward the healthy planning movement.

There appears to be a lack of leadership with regard to the development of healthy urban planning policy. Whilst there is recognition of the relevance of addressing health, it is clear that planners in strategic management positions in Sydney councils do not see the importance of developing healthy planning initiatives.

Notwithstanding the above, across the board planners generally agreed that there is benefit in creating healthy cities and active environments. The majority (52 per cent) of the planners agreed that the creation of healthy cities was an important issue for Sydney today, which indicates that there is a body of support for the healthy planning initiative.

Ultimately, the creation of healthy cities and active environments requires the motivation of people whom implement and create policy to influence the outcomes of the built environment. Certainly planners within more senior roles are better equipped to effect change within any local government area. Further, whilst there is general support by planners whom were interviewed within local government, there is little incentive for local governments to undertake such drastic policy change without direction from state and federal governments. Essentially, it is at this larger macro scale where the ability to affect change within policy formation lies. As problems associated with health worsen within our society, Federal and State government initiatives will increase in relation to healthy planning to reduce the fiscal and social burden which an unhealthy citizenry creates.

However, this is not to say that local governments cannot be proactive in their approach to healthy design of dwellings and urban form. Even small changes at a micro level can create steps towards achieving a health city. Recognition of the importance of health lies with planners. Through education it is hoped that healthy urban planning principles are adopted and placed into practice within planning circles today.

Practicing Healthy Urban Planning in Councils

<u>Policies</u>

The majority of planners (41 per cent) were unaware of any healthy planning policies which existed within their council. Some planners (21 per cent) were familiar with policies which encompassed health planning principles. This represents a portion of the respondents who have some knowledge regarding the ways in which healthy urban planning can be implemented.

In particular, two of the councils surveyed did in fact have policies that related to the development of healthy cities. However employees were not aware of these policies. It is expected that both strategic and development assessment planners would have exposure to the relevant development control plans of council, either through the development or the enforcement of the policy.

Nelson's Ridge is a masterplanned development within the Holroyd Council area that has marketed itself as providing an environment that has incorporated the main elements of healthy urban planning. The site has been referenced by Johnson (ed) (2006) as being designed as a healthy community with 40 percent of the site (40 hectares) reserved for parks, gardens and recreation areas, which incorporate walking and cycling tracks throughout the community (Moore 2006, pers. comm. 17 Oct). The masterplanned community has its own development control plan and is subject to assessment by the consent authority, Holroyd Council. Similarly staff at Blacktown Council were also unaware of health planning policies within their Council, namely crime prevention through environmental design controls within Blacktown Development Control Plan 2006. This document has been cited by best practice guidelines and other literature referenced as a part of this thesis.

The role of local government and councils as regulators of the built environment is to manage the development of areas through strategic planning, policy development and planning controls; either through Local Environmental Plans or Development Control Plans (Department of Local Government et al., 2001). However, these documents are only effective when recognised by employees and the intent of the policy is understood to ensure that development is regulated and implemented in conjunction with the purpose of such documents.

Councils are more likely to be effective in creating healthier urban environments when planners work collaboratively in enforcing a policy and giving consideration to health. Notwithstanding this, on a larger scale, councils can be more effective when a 'whole of council' approach is applied recognising that achieving healthy communities requires the contribution of numerous sections of the organisation, and not only those involved with influencing and regulating the built environment (Department of Local Government et al., 2001).

How Often Health is Considered

The research found that planners had an inconsistent approach to considering health in the everyday practice of their job. The results showed that the percentage of people who considered health weekly (28 per cent) was almost equal to the proportion of planners who never considered health (27 per cent) within their job as a planner. This demonstrates that there is no consistency in the approach of planners across the board. The analysis of the results also demonstrated that there is no consistency amongst the regions of local government, indicating that local government policies are either not being implemented, as indicated above, or individual planners do not see the value in addressing health in light of other pressures or tasks associated with their job.

A qualitative response extracted from the survey made comment that planners' jobs are at times limited to carrying out the duties as prescribed by their job description and within the boundaries of the planning policies stipulated by their employers.

> *"Planners implement the policies and political wills of their employer."*
> (Anonymous respondent no. 13)

Again this reinforces the importance of developing healthy urban planning policy as a way of adopting a consistent approach to health assessment and health orientated development.

Exposure to Planning Documents

As mentioned earlier, the results from the survey indicated that planners were unfamiliar with documents that have been produced by the local government, and health agencies to aid in the implementation of healthy urban planning and the development of healthy planning policy. The

documents have been produced to aid councils to realise the opportunities within their jurisdiction to produce environments conducive to health.

The four documents selected in the questionnaire were the most prominent guidelines and resources for local councils and planners at the time of research. Research conducted as a part of this thesis has shown that compared to Victoria, the availability of research and resources from government organisations and other associated stakeholders in NSW does not meet a similar benchmark.

In light of this, the lack of knowledge within the field of healthy urban planning demonstrated by Sydney planners in this study can be partially related to an underexposure to the topic as well as insufficient availability of NSW specific reference material. This reflects the need for New South Wales to meet the benchmark of healthy planning program development in Australia. There are signs, however, of NSW moving forward with the development of two organisations - the Premiers Council for Active Living and the NSW Health Taskforce, actively promoting healthy urban design and planning as a part of the Healthy Cities Movement.

In order for Sydney planners and councils to be more informed, it is important that councils and planning management develop a relationship with such departments in order for documents and information to be disseminated. This communication will ensure that planners have the resources available in order to educate staff, and to assist in the formulation and implementation of health urban planning principles and policy, within each Council.

<u>Education and Information</u>

As discussed within chapter three (3) of this thesis and as demonstrated in Figure 3.3, changes in individual and professional awareness and the opinions of key stakeholders and leaders can create a change in social norms. As a result, this can influence regulatory and policy changes that are aimed towards improving environments that promote good health (Gebel et al., 2005:18).

The results revealed that planners have a lack of knowledge of the Healthy Cities Movement. This lack of exposure can be attributed to poor dissemination of information from regulatory bodies and lack of opportunities for planners to attend seminars on healthy urban planning.

63.5 per cent of respondents indicated that no opportunities had been made from employees to further their knowledge of healthy urban practice.

It has been found throughout the responses of this survey that the nature of local government responsibilities and political pressures associated with time schedules, development application processing times etc, causes constraints and pressures for staff. One particular respondent noted that they were presented an opportunity to attend a seminar and did not go due to 40 impending development applications (Anonymous respondent 15, 2006). Therefore, the ability for employees to further their education and become involved in opportunities such as seminars needs to be fostered by local government organisations. Professional development is essential for planners, in order for planning practices to be innovative and relevant to the issues that face cities, rather than continuing to implement the existing and sometimes outdated planning practices.

This is an indication of a lack of commitment to healthy urban planning within our LGAs. Councils need to take the initiative to realise the cumulative effects that healthy urban planning has on our communities and begin to take the steps to address such issues through decision making processes.

Conclusion

Sydney planners are aware of the influences and impact of the built environment on health. However there is an inconsistent understanding of the intricate and significant strategies and tools in the design, layout and siting of the built environment and its influence on behaviours, lifestyles and overall health,(both physical and mental) through healthy urban design.

In order for healthy urban practices to be realised and implemented within local government, further information and education into the benefits of healthy urban planning are required for planners. Furthermore planners and councils need to develop a better understanding of the real health issues affecting communities that are being planned. Ultimately the benefits of health urban planning can only be realised if adequate training and a unified and consistent approach within local governments is adopted.

More specifically collaboration is required within the tiers of management and between sectors of the built environment and health. Overall, planners acknowledge the relationship between planning and health and its importance and relevance to our current urban landscape. However its implementation is yet to be fully realised. Initiatives need to be put in place, such as education and further research into the implementation of healthy urban practices and policy within local government, in order to improve the health of the residents of Sydney.

Chapter seven:
Conclusion

The purpose of this thesis has been to examine the role of planners within the context of improving and promoting health through the built environment and healthy urban design. More specifically the thesis examined the attitudes and knowledge of planners regarding health and healthy urban planning issues, both personally and within the context of their place of employment. The research adopted the rationale that the attitudes and awareness of professionals who can influence the built environment can change behaviours and social norms by creating environments which support the health and well being of inhabitants, through healthy urban planning (Gebel et al., 2005). The development of cities and suburbs is largely dependent on the regulators and policy makers at the local level of government; therefore the research was aimed at Sydney metropolitan local government planners within nine councils. The findings and implications of the research will be summarised within this chapter, along with recommendations for the future of healthy urban planning within Sydney.

The Findings - the Future for Sydney Planners and Health

The Healthy Cities Movement was established to improve the health and well being of city dwellers. The movement recognised that health is a fundamental right of all and that the protection and maintenance of health involves a collaborative effort from individuals, communities, institutions, organisations and stakeholders that influence health to join together to make cities healthier places to live (Barton 2000: 25).

It is recognised that there a number of factors that influence a persons health, including environment, lifestyles, human biology and health care systems. The link between the built environment and health is realised by analysing the evolution of the built environment over time and the influences that development trends have had on physical and mental health. Understanding the negative effects the built environment has had on health in the past, has provided knowledge for the development of strategies to reverse these 'unhealthy' effects and create environments that support the health of inhabitants through healthy urban planning.

Healthy urban planning is the term used to describe the ways in which health can be addressed through the thoughtful consideration of the built environment and its impact on the people who live there. The principles of healthy urban planning strive to address health objectives and recognise the health implications of the built environment and focuses on the how people

interact with their environments. Healthy planning outcomes can be achieved through planning policy, design and regulation of the built environment.

Effective planning policy and integration of health in the urban planning processes can assist in alleviating preventable diseases and increase general well being through promoting physical activity by incorporating considerate land use and design principles. The implementation of healthy urban planning strategies requires participation from those who have the power to influence and regulate the built environment in an effort to improve the health of the cities population.

The town planning profession plays an important role in decision making and controlling orderly development of cities and therefore is the main driving force of healthy urban planning. Therefore the attitudes of planning professionals toward these ideals, together with professionals armed with the tools and means to positively alter unhealthy behaviours are crucial in producing healthy environments. The implementation of healthy urban planning practice and policies is not a legislative requirement, rather an alternative planning approach. Although the Sydney Metropolitan Strategy (2004) notes that the desire to create healthy and active environments, at this point in time is the personal prerogative of local governments, and private developers to deliver healthy urban planning outcomes.

Sydney's local government planners acknowledge that there is a link between the built environment and health, however there is not a consistent understanding of the intricate ways in which the built environment can influence health, both physically and mentally. The results of this study resolved that planners have had little exposure to the Healthy Cities Movement, and that health is considered inconsistently throughout the profession in the Sydney region as a result of a lack of healthy urban planning policies within councils.

The research has demonstrated that the current barriers to healthy urban planning in Sydney are; an inconsistent understanding of the benefits and principles of healthy urban planning; and the problems associated with addressing healthy planning principles in a city which is littered with a myriad of other planning problems and issues.

In order for healthy urban practices to be realised there needs to be a focus on local government for implementation. As a starting point, planners who work within these

organisations need to be further informed of the benefits of healthy urban planning and the methods available to influence health outcomes for urban populations.

A significant part of successful urban planning is having an understanding of the health issues effecting communities in order for these conditions and unhealthy behaviours to be mitigated through the management of the built environment. Ultimately the benefits of implementing healthy urban planning principles can only be realised if adequate training is provided and a unified and consistent approach within the planning profession and local governments is adopted across the board. More specifically collaboration is required within the tiers of management and between sectors of the built environment and health.

The research has found that overall planners acknowledge and understand the relationship between planning and health and its importance and relevance to our current urban landscape. However education for planners and further research is required into the implementation of healthy urban practices and policy within local government to ensure that the environments that we are creating are not going to inhibit the health of inhabitants today and for future generations to come.

Recommendations

Overall planners recognise that there is a link between the built environment and health and have indicated a general support for healthy urban planning practice in Sydney. However the research has identified some areas to be addressed in order to develop the implementation of healthy urban planning:

–   Planners and local governments need to further their knowledge on the benefits of healthy urban planning practices and realise the opportunities that planning professionals are able to create in the built environments which support health and well being of communities.

–   Planners should develop interdisciplinary relationships between other stakeholders associated with the built environment and health. Collaborative approaches are required to ensure that all components of the built environment are addressed.

– Councils need to develop a holistic approach. Where healthy urban planning policies are in place, staff need to be informed of their existence and be implementing them, to ensure the 'whole council' approach is being adopted.

– It is recognised that there are many pressures and issues associated with planning practice and regulation with local government planning. Therefore the role of disseminating and controlling health related information should be delegated to a planning officer within the organisation. It is acknowledged that workplace pressures can inhibit chances for professional development, therefore, the appointment of a healthy planning officer, much like a 'heritage planner' will ensure that health related issues are consistently addressed within local governments.

– Organisations associated with the development of healthy cities and healthy urban planning should ensure that publications and information regarding major health and planning events in NSW are made available to both private and government sector planners to develop their understanding of the role of the planner and the strategies that can be used to ensure healthy urban development is practiced in NSW.

Further Research

The majority of respondents from this survey were general planning practitioners who indicated that there were some barriers to the implementation of healthy urban policy in the local government sector of planning. There lies an opportunity for these barriers to be explored by targeting planning management within local government areas in Sydney and undertake a similar study to the one undertaken in this thesis. Further studies should explore among management professionals the constraints and opportunities for the development of healthy urban planning in Sydney and whether government incentives would aid as motivation for local councils to develop and enforce healthy planning policy.

Conclusion

> We ought to plan the ideal of our city with an eye to four considerations. The first, as being the most indispensable, is health. (Aristotle ca.350.B.C in Frank et al. 2003:1)

The benefits of creating healthy cities have cumulative effects not only the health and longevity of populations, but on the economy, the natural environment, sustainability and health care facilities which ultimately creates enjoyable places to live.

The examination the relationship between the built environment and health has highlighted the opportunities that the built environment has to influence the behaviours, health, and general well being of populations. Healthy urban planning is a revisited direction for planning and development that aims to address health issues at the development stage by examining interactions with the built environment and investigating the implications these interactions have on health.

Given that planning fundamentally revolves around the quality of the environment, there exists an obvious need for planners to appreciate and adopt healthy urban planning principles that compliment the environment within which our populations reside and provide the best opportunity for optimum health and well being. The development of healthy urban planning principles aims to provide environments that are conducive to healthy lifestyles, influence healthier behaviours and in general promote good health in the long term for users and future generations.

This thesis has comprehensively examined the theory of healthy urban planning as a means of addressing the health problems that plague our populations today and has clarified the value of addressing health within the planning profession and the role of local governments in contributing to improving health of city dwellers.

More specifically, this thesis has examined the attitudes, knowledge as well as vital managerial and human factors that effect the implementation of health urban planning practice within a local government setting. In addition recommendations have been provided as to how healthy urban planning policies and practices can be improved. Importantly, this thesis has

demonstrated the need for the leadership from both local government and state government authorities to further professional development and education and provide resources for planners to proactively address health and give consideration to health implications of planning practices.

It is clear that Sydney's planners have an understanding of the built environment's influence on health. To date, planners are yet to be provided with an efficient policy framework assessed on the same level of priority as contemporary or traditional planning issues. This study has outlined the critical path for our leaders and legislators to pursue in order for planners to fulfill their role as the main drivers of healthy urban planning.

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Appendices

Appendix 1 – Questionnaire " Planners Attitudes to Planning and Health" 2006. Formulated by
Beth Matlawski

Appendix 2 – Human Ethics Research Board Approval dated 25 September 2006.

Appendix 3 – Statistical Data from Survey's.

Healthy Cities –

Planners Attitudes to Planning & Health

Prepared by Beth Matlawski (beth.matlawski@student.unsw.edu.au)

> **Health:** Health is a state of complete physical, mental and social well-being and not merely the absence of diseases or infirmity. (WHO:2006)

SURVEY QUESTIONS….

1. Are you under the age of 18 years ?

   ☐ If no, Go to Question 2.

   ☐ If yes, You are unable to participate in this questionnaire.

2. Local Government Area of Employment:

   _____

3. Position Description/Occupation at Council.

   _____

4. Years of Experience working in the Planning Profession ?
   ☐ 1-5 years
   ☐ 5-10 years
   ☐ 10 -15 years
   ☐ 15 +

5. What do you see as the major health issues facing the Sydney Metropolitan Region today ? You may list more than one response.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

(a) From the health issues nominated above, in your opinion, do you see any reason for why these health issues exist ?

_____
_____
_____
_____
_____
_____
_____
_____

6. Do you think that there is a link between the built environment and health?

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐ Strongly Disagree ☐Undecided

7. What components/factors of the built environment do you think influence the health of it's inhabitants?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

8. Planners play an important role in creating healthier, more physically active communities? Please tick a category which best describes your reaction to this statement.

☐ Strongly Agree   ☐ Agree   ☐ Disagree   ☐Strongly Disagree ☐Undecided

9. Please tick the planning tools/strategies listed below that you believe could be used to influence a healthy and more physically active community. You can select more than one option.

☐ Attractive and safe public places
☐ Cycle Paths
☐ Walking Paths
☐ Good Public Transport
☐ Require all developments to include local facilities
☐ Promote Mixed Use developments
☐ Wide, dual use footpaths
☐ Open Spaces
☐ Walkable neighbourhoods
☐ Recreational Facilities
☐ Sporting Facilities
☐ Parks
☐ Promotion of Healthy Lifestyles
☐ Community Consultation
☐ Safe Road Crossings
☐ Narrow traffic calmed roads/connected streets
☐ Medical facilities
☐ Other (please specify) -

_____
_____
_____
_____

10. In your position at Council as a planner, how often have you considered health issues within the scope of your job in relation to other considerations such as parking, traffic, etc?

☐ Everyday

☐ Weekly

☐ Monthly

☐ Yearly

☐ Never

11. Are you familiar with the Healthy Cities Movement ?

☐ Have had no exposure to this topic

☐ Have heard some commentary on the subject

☐ Am familiar with some media commentary and/or literature on the subject

☐ Have extensive knowledge of the above topic.

12. Have you been to any seminars/workshops which have contained information or segments relating to the subject area of Healthy Cities/Planning for Health?

☐ Yes (Please specify name of seminar)

_____
_____
_____

☐ No

13. Have any workshops/seminars been made available through your place of Employment?

☐ Yes

☐ No

☐ Don't know

14. If a seminar was made available to attend to through work did you go ?

☐ Yes (Go to question 16)

☐ No (Go to question 15)

15. Why did you not attend the workshop/seminar?

☐ Did not interest me

☐ Had other work priorities

☐ Did not seem important to my job

☐ Other (please specify)

_____

_____

_____

_____

_____

16. Have you heard of or are you familiar with any of the planning documents listed below:

Please tick the appropriate option either A, B, C for each document.

DOCUMENT	Option A Am familiar with the document and have read	Option B Have heard of the document but not read	Option C Have not heard of the document
Healthy By Design, a planners guide to environments for active living – National Heart Foundation			
Creating Active Communities – Physical Activity Guidelines for Local Councils NSW Department of Local Government			
Healthy Environments - Chris Johnson			
Leading the Way- Councils Creating Healthier Communities -Victoria Health			

16. Does your place of employment have any planning policies related to the development of healthy cities?
   ☐ Yes
   ☐ No
   ☐ Don't Know

17. If you answered yes to question 16, please comment/specify what this/these policies are.

_____
_____
_____
_____
_____

18. How would you rank the importance of creating healthy cities and active environments in Sydney on a scale of 1 to 5?

☐1	☐2	☐ 3	☐4	☐ 5
Not Very Important		Has some importance but other planning issues are more relevant.		Very Important

You have now completed the Questionnaire.
Thankyou for your time.

Copy of Table 5.4 – Importance of Creating Healthy Cities by LGA Region

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
RANK IMPORTANCE OF CREATING HEALTHY CITIES * LGA BY REGION	52	98.1%	1	1.9%	53	100.0%

RANK IMPORTANCE OF CREATING HEALTHY CITIES * LGA BY REGION Crosstabulation

			LGA BY REGION			
			SYDNEY EAST REGION	SYDNEY NORTH WEST REGION	SYDNEY SOUTH WEST REGION	Total
RANK IMPORTANCE OF CREATING HEALTHY CITIES	"NOT VERY IMPORTANT"	Count	1	0	0	1
		% within IMPORTANCE OF CREATING HEALTHY CITIES	100.0%	.0%	.0%	100.0%
		% within LGA BY REGION	7.1%	.0%	.0%	1.9%
	"SOME IMPORTANCE/OTHER PLANNING ISS. MORE RELEVANT"	Count	3	3	1	7
		% within IMPORTANCE OF CREATING HEALTHY CITIES	42.9%	42.9%	14.3%	100.0%
		% within LGA BY REGION	21.4%	13.6%	6.3%	13.5%
	"SLIGHTLY MORE IMPORTANT THAN OTHER PLANNING ISSUES"	Count	3	4	10	17
		% within IMPORTANCE OF CREATING HEALTHY CITIES	17.6%	23.5%	58.8%	100.0%
		% within LGA BY REGION	21.4%	18.2%	62.5%	32.7%

	"VERY IMPORTANT"	Count	7	15	5	27
		% within IMPORTANCE OF CREATING HEALTHY CITIES	25.9%	55.6%	18.5%	100.0%
		% within LGA BY REGION	50.0%	68.2%	31.3%	51.9%
Total		Count	14	22	16	52
		% within IMPORTANCE OF CREATING HEALTHY CITIES	26.9%	42.3%	30.8%	100.0%
		% within LGA BY REGION	100.0%	100.0%	100.0%	100.0%

			POSITION DESCRIPTION					
			DA PLANNER	STRATEGIC PLANNER	UNSPECIFIED TP	STRATEGIC MANAGEMENT	DA MANAGEMENT	TOTAL
RANK IMPORTANCE OF CREATING HEALTHY CITIES	"NOT VERY IMPORTANT"	Count	0	0	0	1	0	1
		% within IMPORTANCE OF CREATING HEALTHY CITIES	.0%	.0%	.0%	100.0%	.0%	100%
		% within POSITION DESCRIPTION	.0%	.0%	.0%	11.1%	.0%	1.9%
	"SOME IMPORTANCE/OTHER PLANNING ISS. MORE RELEVANT"	Count	3	1	1	2	0	7
		%: within IMPORTANCE OF CREATING HEALTHY CITIES	42.9%	14.3%	14.3%	28.6%	.0%	100%
		% within POSITION DESCRIPTION	13.0%	12.5%	12.5%	22.2%	.0%	13.5%
	""SLIGHTLY MORE IMPORTANT THAN OTHER PLANNING ISSUES "	Count	8	0	5	3	1	17
		% within IMPORTANCE OF CREATING HEALTHY CITIES	47.1%	.0%	29.4%	17.6%	5.9%	100%
		% within POSITION DESCRIPTION	34.8%	.0%	62.5%	33.3%	25%	32.7%
	"VERY IMPORTANT"	Count	12	7	2	3	3	27
		%: within IMPORTANCE OF CREATING HEALTHY CITIES	44.4%	25.9%	7.4%	11.1%	11.1%	100.0%
		% within POSITION DESCRIPTION	52.2%	87.5%	25.0%	33.3%	75%	51.9%
Total		Count	23	8	8	9	4	52
		%: IMPORTANCE OF CREATING HEALTHY CITIES	44.2%	15.4%	15.4%	17.3%	7.7%	100%
		% within POSITION DESCRIPTION	100.0%	100.0%	100%	100%	100%	100%

Table 5.5 – Importance of Creating Healthy Cities by Position Description