

A woman in a black tank top and leggings is using a green and blue outdoor exercise machine on a grassy area. In the background, there is a lake, some trees, and a multi-story building under a blue sky with white clouds.

Let's Get Physical:

Planning for Outdoor Gyms in Sydney

Ellie Caldwell 3191372

Undergraduate Thesis
Bachelor of Planning 2010
University of New South Wales

Foreword

In attempting to find a research topic that was interesting and unique, I looked at my daily activities to see whether a contemporary idea would appear. I asked myself questions such as whether planners had a role in the implementation of my interests. I've always enjoyed exercising and maintaining a healthy lifestyle and I knew that finding a topic which I could relate to would be ideal. I've also been rather interested in the healthy planning elective I took earlier this year.

It was on a family holiday to the Gold Coast in April visiting my grandparents that I found inspiration. Whilst on a morning beach walk with my family at Kurrawa, south of Surfers Paradise, I found the foreshore boardwalk had been upgraded with new shower facilities, pathways, bubblers, playgrounds and, what was of particular interest to me, outdoor gym equipment. My sister used the equipment jokingly and my Mum said, "Why are these here?" Drawing on knowledge from my healthy planning elective, I answered her saying they promote and encourage outdoor active recreation and encourage physical activity. I also told her that an active lifestyle has been proven to reduce the risk of being obese which can lead to numerous health risks such as cardiovascular disease, type II diabetes and others. "Oh," she said, and our morning beach walk continued.

A few weeks later I saw an article in a Sydney newspaper, *The Daily Telegraph*, showing an outdoor gym in London's Hyde Park for the city's ageing population, and instantly thought of what I saw at Kurrawa. I also thought of the healthy planning elective I took this year; the content we'd been taught regarding active living and the benefits it has on mental well-being and physical human health. Questions ran through my head; who decided to install these? Who uses them? Why these types of gym equipment? What are the problems?

It was a few weeks later when I was doing the Bondi to Coogee walk for the first time, that I came across outdoor gym equipment of a different kind. They were less modern, slightly neglected and looked outdated. More questions, such as the benefits of this older form of equipment over the newer equipment, even when and why outdoor gym equipment was first introduced in Sydney, ran through my mind. My thesis topic was born.

Acknowledgements

There are numerous people I need to thank for providing indispensable help throughout the preparation of this thesis; no student should have to go through this alone!

Firstly, I'd like to introduce the Caldwell Family. Everyone should be jealous because I have the best Mum, Dad and two sisters in the world. Their unconditional love, support and understanding is invaluable to me. I thank them from the bottom of my heart. They're also very good at modelling the use of outdoor gym equipment (Title Page and Iconic Image).

My indebted thanks go to Susan Thompson a.k.a. Thesis Maestro Susan, your passion and enthusiasm for healthy planning is incredible, don't let that flame burn out! Thank you for your invaluable advice, hot tips for successful thesis completion and willingness to assist an enthusiastic healthy planning student.

A huge thank you to my proof readers Mum, Leah and Lloyd. I am eternally grateful for all the mistakes you picked up. Your contribution, great or small, is highly appreciated. Drinks are on me for a bit I think.

Guess what Lloyd, you're getting a special mention! Thank you for telling me, it will be ok+. In hindsight, it was probably a good thing you weren't in Sydney for the majority of this thesis. I would have been too distracted with you around!

To the lecturers of the UNSW BPlan degree. I sincerely appreciate and genuinely thank you for your contribution to my education. Your knowledge and zest for planning has taught me how to be a great planner.

Team Planning 2010, where do I start? From the get-go we have been too socially cohesive for our own good. I don't consider that a bad thing at all. It's a testament to our awesomeness. Let's go rediscover what it feels like to have a life again.

Oh, and thanks to Dad for driving out to Parramatta when I locked my keys in the car. At least it only happened once.



Iconic Image and Abstract

Australia is currently facing escalating health costs largely stemming from epidemics of obesity, heart disease, diabetes and cancer. These non-communicable diseases largely originate from the environments where we live, work and move about. As a society, we are becoming increasingly inactive due to diminished opportunities to be physically active in everyday life. Technological advancements, changes in work requirements and travel patterns are all implicated. Research is unequivocal that physical inactivity, coupled with unhealthy food choices, is the major source of these epidemics. Increased levels of physical activity reduce obesity rates and in turn, reduce the risk of non communicable diseases. With an existing environment that discourages opportunities for physical activity, planners are now more than ever looking for unique ways, such as the provision of outdoor gyms, to put physical activity back into our communities. This thesis documents the evolution of outdoor gyms within Sydney to provide an insight into effective planning for active communities. It examines the benefits of outdoor gyms for addressing health problems, and for providing opportunities for activity in everyday urban environments. This study aims to understand the attitudes of local government towards the implementation of outdoor gyms. In light of the benefits and opportunities, this study highlights critical planning factors that contribute to successful provision of outdoor gym facilities.

Contents

Foreword	I
Acknowledgements	II
Iconic Image and Abstract	III
Contents	IV
Figures	VI
Chapter One Introduction	1
Introduction	1
Problem Setting	2
Thesis Aims	5
Study Area	6
Research Methodology	7
Thesis Structure	8
Final Thoughts	9
Chapter Two Literature Review	10
Introduction	10
The Origins of Urban Planning	11
Now: The Sedentary Lifestyle	12
Link Between Built Environment and Health	13
Changes to the Built Environment Over Time	19
Planning for Healthy Urban Environments	22
Final Thoughts	24
Chapter Three Defining an Outdoor Gym	25
Introduction	25
History of Physical Activity	26
What is a Good Level of Exercise?	27
Benefits of Outdoor Physical Activity	28
What is an Outdoor Gym?	29
Final Thoughts	36
Chapter Four Sydney's Outdoor Gyms	37
Introduction	37

Methodology	37
Results	39
North West	43
South West	51
South East	57
North East	69
Comparison of Outdoor Gyms in Sydney	73
Final Thoughts	76
Chapter Five A Local Government Perspective	77
Introduction	77
Local Government and Physical Activity	77
Understanding Outdoor Gyms	78
Final Thoughts	86
Chapter Six Outdoor Gym Best Practice Principles	87
Introduction	87
A Vision for Sydney's Outdoor Gyms	87
Outdoor Gym Design Elements	88
Provision of Facilities	88
Outdoor Gym Exercise Equipment	90
Site selection	92
Local Characteristics	94
Final Thoughts	95
Chapter Seven Conclusion	96
Summary	96
Conclusions	97
Recommendations	98
Further Research Opportunities	99
Final Thoughts	100
References	102
Appendix A	107

Figures

All figures, tables and photographs are by the author, unless otherwise noted.

Title Page	Mikaela at Lakeside Park, Narrabeen, east elevation	
Iconic Image	Gerry, Abbey and Timi at Lakeside Park, Narrabeen	III
Chapter One		
Title Bar	RM Campbell Reserve, Bankstown	1
Figure 1.1	Study Area, 41 Local Government Areas in Sydney (Department of Planning 2008)	6
Figure 1.2	Research Methodology Model	7
Figure 1.3	Qualitative Interview Schedule	8
Chapter Two		
Title Bar	George Thornton Reserve, West Pennant Hills	10
Figure 2.1	Factors Contributing to Human Health (Lalonde 1974 in Barton <i>et al</i> 2000, p.14, adapted by Caldwell 2010)	14
Figure 2.2	Determinants of Physical Inactivity (Caldwell 2010)	17
Figure 2.3	The Hypothesized Active Community Environments Model (Doyle <i>et al</i> 2006, p.20)	17
Figure 2.4	The Sprawl-Health Relationship (Kelly-Schwartz <i>et al</i> 2004)	20
Figure 2.5	Linkages between the built environment, physical activity and public health (Frank <i>et al</i> 2003)	23
Chapter Three		
Title Bar	Wentworth Park, Glebe	25
Figure 3.1	Community Outdoor Gym	30
Figure 3.2	Simple Outdoor Gym	31
Figure 3.3	All in One Outdoor Gym	31
Figure 3.4	Static Exercise Station	32
Figure 3.5	Fitness Trail	32
Figure 3.6	Exercise Station Trails	33
Figure 3.7	Modern Outdoor Gym	33
Figure 3.8	Examples of Outdoor Gym Equipment	34

Chapter Four

Title Bar	Olds Park, Hurstville	37
Figure 4.1:	Table of Outdoor Gyms in Sydney noting their LGA and Quadrant for Analysis	40
Figure 4.2	Graphical Representation of Outdoor Gym Locations in Sydney	41
Figure 4.3	Quadrants of Sydney for Analysis (Department of Planning 2008, adapted by Caldwell 2010)	42
Figure 4.4	Number of Outdoor Gyms in each Quadrant	74

Chapter Five

Title Bar	Ham Common, Richmond	77
Figure 5.1	LGAs with Outdoor Gyms in Sydney (Department of Local Government 2010, adapted by Caldwell 2010)	78
Figure 5.2	Bankstown, Marrickville and Warringah Comparison (Bankstown Council 2010, Marrickville Council 2010, Warringah Council 2010 & Caldwell 2010)	79
Figure 5.3	Percentage of Outdoor Gyms near other Sports Facilities	82
Figure 5.4	Percentage of Outdoor Gyms near Children's Playgrounds	83
Figure 5.5	Percentage of Outdoor Gyms near Pedestrian Routes	84
Figure: 5.6	Percentage of Facilities at Outdoor Gyms within the Study Area	85

Chapter Six

Title Bar	The Crest of Bankstown, Georges Hill	87
-----------	--------------------------------------	----

Chapter Seven

Title Bar	King George Park, Rozelle	95
End Page	Mikaela at Lakeside Park, Narrabeen west elevation	101



Introduction

Reports of health epidemics, as well as initiatives to prevent non communicable diseases (such as cardiovascular disease, type II diabetes, osteoporosis and certain types of cancer) originating from sedentary lifestyles, are becoming more frequent. Simultaneously, planning principles such as access to healthy foods and encouraging active lifestyles are now supported more than ever by Federal, State and local government as well as the general public.

While no simple solution to preventing or reducing these epidemics has yet been identified, a multidisciplinary approach is necessary. Health professionals have historically been responsible for the health of populations, however urban planning is increasingly playing a major role in preventing these health concerns, as prevention is a behavioural matter. As creators of the built environment, urban planners can have a significant influence on the physical and mental health of the urban population (Corburn 2007).

For urban planners, the time to promote the advantages of a healthy community has never been better. The benefits physical activity can have on our physical and mental well-being

are widely known, giving planners the evidence to create supportive environments for health. This thesis examines the concept of outdoor gyms as a unique facility encouraging physical fitness and mental health. This thesis also documents the evolution of outdoor gyms in Sydney and provides perspective on the attitudes of local government towards their implementation.

This introductory chapter sets the scene for my discussion of healthy planning. It begins by examining the health status of our urban communities and the importance of physical activity in achieving healthy cities to reduce health epidemics. This chapter also provides details of the research methodology and chapter summaries.

Problem Setting

The health of the urban population

Studies of the relationship between physical activity and urban planning are increasingly relevant as epidemics of sedentary related illnesses are affecting urban populations around the world. A growing body of epidemiological research indicates that serious chronic illnesses (non communicable diseases) such as obesity, type II diabetes, heart disease, depression and cancers such as colorectal, breast, uterine and kidney cancer are becoming increasingly prevalent in Australian urban environments (Corburn 2007, Gebel *et al* 2005, Frank *et al* 2003, NSW DSR undated, PCAL 2007, PCAL 2010, Racioppi *et al* 2005). Risk factors of these non-communicable diseases, such as high blood pressure, high concentrations of cholesterol in the blood, inadequate intake of fruit and vegetables, overweight or obesity, physical inactivity and tobacco use, are associated with an unhealthy diet and physical inactivity (WHO 2004, p.2).

With 60% of Australian adults overweight (ABS 2006, cited in NPHT 2009b) and 19% obese (PCAL 2010, p.4), Australia has become the world's fattest nation (Stark 2008). Physical inactivity in Australia is responsible for approximately 8000 deaths per year and is the fourth most preventable cause of illness and premature death, after tobacco smoking, excessive alcohol consumption and poor nutrition. The direct costs of physical inactivity have been estimated in excess of \$1.5 billion per year (PCAL 2010).

Australia's Federal, State and local governments have recognised that non communicable illnesses stemming from sedentary lifestyles are placing a significant health and financial burden upon our populations. Consequently, specialist government agencies such as the NSW Premier's Council for Active Living (PCAL), the National Preventative Health Taskforce and COAG Healthy Communities have been established. These government agencies not only represent a multidisciplinary approach to the issue, but also demonstrate that human health is no longer a matter for health professionals alone (Racioppi *et al* 2005); it should be a consideration for a wide variety of professions, including urban planning.

Current Health of Australia

Although Australia has one of the highest life expectancies in the world, almost 84 years for females and 79 years for males (AIHW 2010), it is the non communicable diseases associated with affluence and the ageing population that are contributing to health epidemics in Australia (NPHT 2010, p.18). The Australian Institute of Health and Welfare's (AIHW) report, *Australia's Health 2010*, has found that non communicable diseases are responsible for around 80% of the burden of disease and injury in Australia (AIHW 2010, p.18). It is feared that the increase in risk factors associated with these diseases, such as obesity and physical inactivity, will reduce commendable health achievements and life expectancy may subsequently reduce (NPHT 2010, p.18).

One of the risk factors of non communicable diseases, obesity, has been steadily increasing over the past 30 years (NPHT 2009a). Obesity is regarded as a disease in itself and an important risk factor for several non communicable diseases, notably type II diabetes and cardiovascular disease.

Australia's National Preventative Health Taskforce (NPHT) *Technical Report on Obesity in Australia 2009*, found that Australia, one of the most overweight developed nations, has 60% of adults and one-in-four children overweight or obese with the overall cost of obesity to Australian society and governments totalling \$58.2 billion in 2008 alone (ABS 2006, cited in NPHT 2009b). These figures reflect serious health problems requiring urgent action. If these current trends continue, overweight and obesity will soon overtake tobacco smoking as the leading cause of chronic disease (Gebel *et al* 2005, p.11).

It is the combination of sedentary lifestyles and unhealthy food choices which are fuelling dissertations concerning obesity. Although obesity is a relatively new area targeted for prevention of non communicable diseases globally (NPHT 2009b), the PHT aims to prevent unhealthy weight gain through promoting and encouraging physical activity. As obesity is a consequence of physical inactivity (National Heart Foundation of Australia 2004), an avoidable \$1.5 billion a year is wasted on attending to physically inactive Australian adults. Further, almost nine million Australian adults do not do enough physical activity on a daily basis (Medibank Private 2007). Therefore, encouraging and promoting physical activity would reduce the risk of non communicable diseases. Essentially, the prevention of weight gain in adults, and the prevention of overweight and obesity in children are important goals for health professionals and urban planners.

Urban environments and physical activity

Characterised by sedentariness, excess food intake, reliance on cars for transport, a high level of exposure to media and marketing messages, and a consumer culture (Capon 2007, p.658), Australian suburbs are defined by urban sprawl. As a result of urban sprawl, suburbs have poor access to open space and a reduced access to healthy food options. Urban sprawl can result in reduced walkability, supporting physical inactivity (Frank *et al* 2003). This encourages car dependency over active transport options such as walking or cycling (Frumkin 2002, Frumkin *et al* 2004 Kelly-Schwartz *et al* 2004) and contributing to a decline in public health. Urban environments are therefore intrinsically linked with the health of its inhabitants and their levels of physical activity. Other planning practices which have affected the health of communities are discussed in Chapter Two.

The Healthy Planning Movement

The healthy planning movement emerged from within the Healthy Cities Project, in response to the health concerns mentioned above, along with a growing realisation that health policies are not just a matter for health professionals (Barton *et al* 2000). A core principle of the Healthy Cities Project recommends encouraging and promoting healthy exercise. It is therefore in the best interest of planners to implement physical activity opportunities for local communities.

Thesis Aims

Literature on the relationship between urban planning and physical activity indicates planning has overlooked the importance of implementing and planning for active living and recreation opportunities within communities (Corburn 2007). With problems of physical inactivity in urban populations, there needs to be more opportunities to encourage an active lifestyle. One way to do this is by installing outdoor gyms in public domain areas.

This thesis aims to document an understanding of outdoor gyms within Sydney to provide an insight into planning for active living. It focuses on defining outdoor gyms, identifying their location, types of equipment and supporting facilities to encourage use. This thesis also considers local governments perspective towards their implementation.

Research Statement

While there is strong evidence linking the built environment with overall human health, there is a lack of research pertaining to types of interventions which can improve physical activity involvement at a local level. Outdoor gyms are a public domain intervention which has been neglected in scholarly research.

The following questions have been devised to explore the research statement:

- What is an outdoor gym?
- Are there outdoor gyms in Sydney?
- If yes, where are outdoor gyms located?
- What equipment is used in the outdoor gyms?
- Why were they installed?

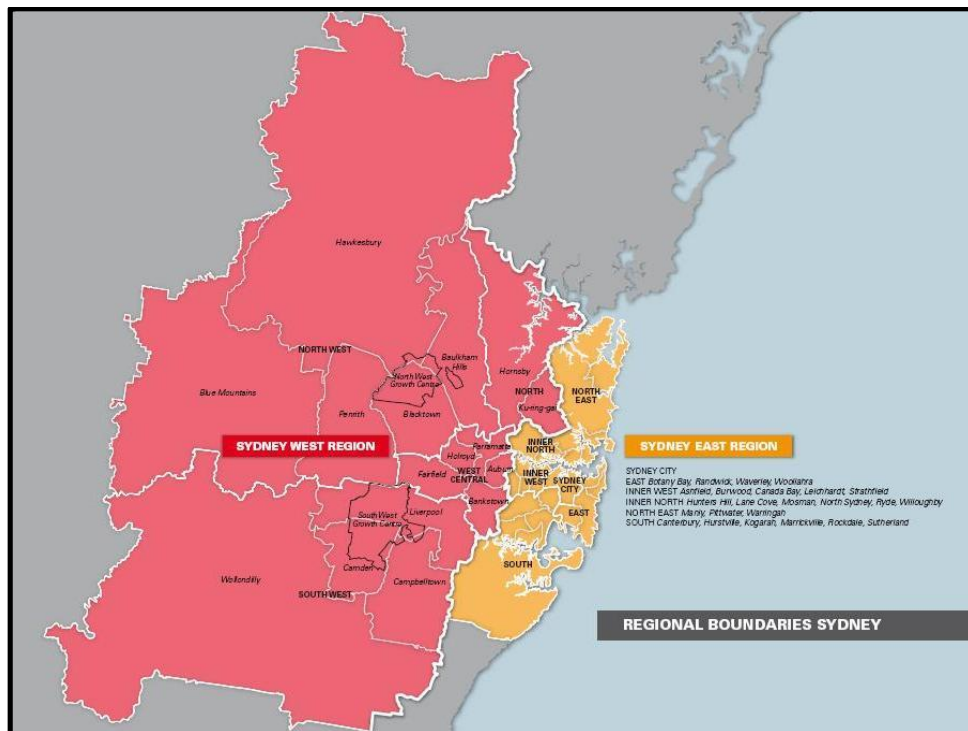
The following research aims have been formed to assist the study of the research statement:

- Define what an outdoor gym is;
- Identify where outdoor gyms are located in Sydney;
- Find out the type of outdoor gym equipment that has been erected;
- Identify how outdoor gyms in Sydney have evolved; and
- Explore local governments perspectives towards planning for outdoor gyms.

Study Area

The study area for this thesis is the Sydney Metropolitan Region (Sydney) as illustrated in Figure 1.1.

Figure 1.1: Study Area, 41 Local Government Areas in Sydney



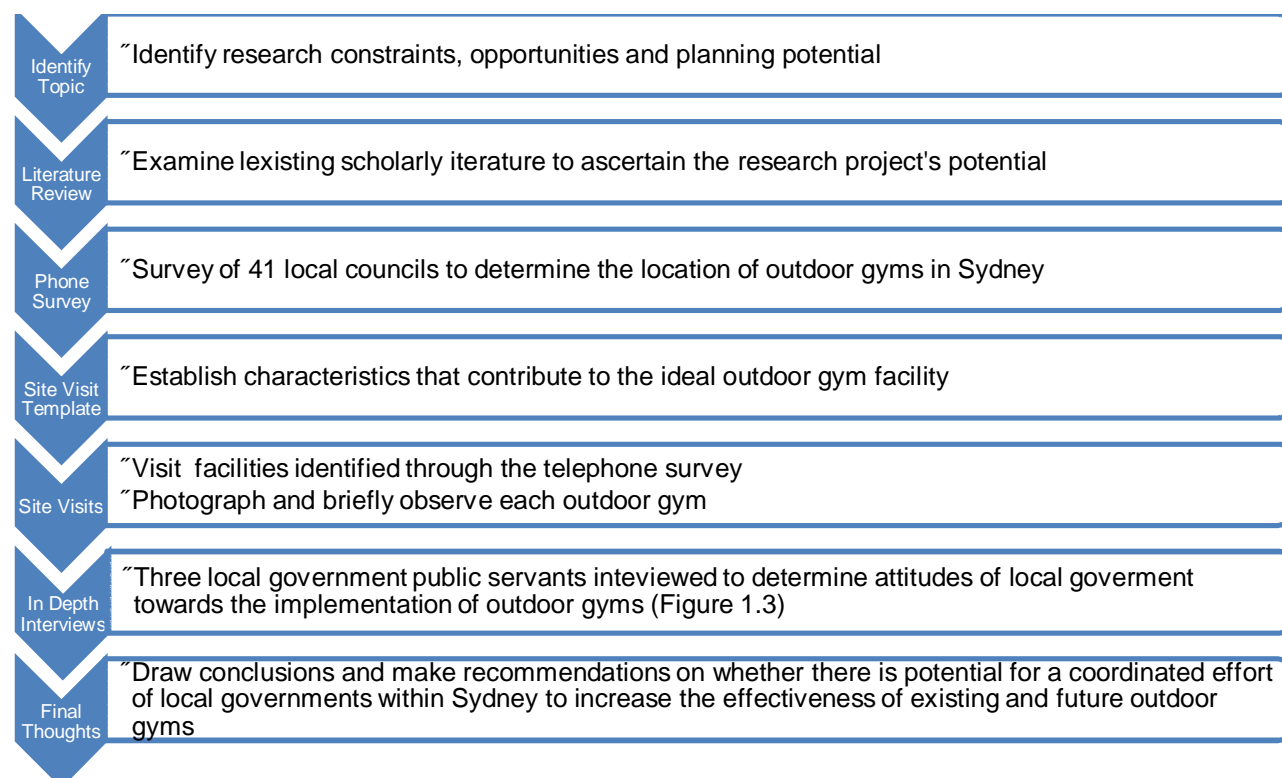
Source: Department of Planning 2008

There are 43 local government areas (LGAs) within Sydney. For the purposes of this thesis, the two LGAs situated on the Central Coast; Gosford and Wyong, will not form part of the research. This is because the *Sydney Metropolitan Strategy: City of Cities 2005* (NSW Department of Planning 2005) identifies these two councils as being subject to a separate regional strategy. Consequently, the study area covers the remaining 41 LGAs. Sydney is bound by Pittwater, Hornsby and Hawkesbury LGAs to the north, Blue Mountains LGA to the west with Sutherland, Campbelltown and Wollondilly LGAs to the south.

Research Methodology

Figure 1.2 illustrates the research methods employed to achieve the aims listed above.

Figure 1.2: Research Methodology Model



Source: Caldwell 2010

Ethics approval was granted for this research by the University of New South Wales Human Research Ethics Advisory Panel (Approval Number 105035) on 20 April 2010. The interviews were recorded using a digital recording device, and transcribed afterwards. The major themes identified were analysed and used to inform the research recommendations.

Figure 1.3: Qualitative Interview Schedule

Name	Position	LGA	Research Method	Reason for Interview
Bankstown City Council Representative	Team Leader . Assets and Open Space	Bankstown	Telephone Interview (30 minutes)	Bankstown has the most extensive inventory of outdoor gyms in Sydney.
Neil Finlay	Recreation Officer	Marrickville	Qualitative Interview (35 minutes)	Marrickville showed a keen interest to implement upgraded outdoor gyms.
Michael Regan	Mayor	Warringah	Qualitative Interview (35 minutes)	Warringah has no outdoor gyms. Their situation provides an impartial discussion for understanding a local government perspective on outdoor gyms.

Source: Caldwell 2010

Thesis Structure

This section is a short summary explaining the chapters of this thesis. They briefly describe the process of research undertaken to arrive at the findings and recommendations of this thesis.

Chapter Two reviews the scholarly literature on healthy planning, physical activity and the health problems associated with the built environment. It highlights the importance of encouraging physical activity opportunities as an important component of a healthy community. The chapter advocates that physical activity benefits the health of urban populations by increasing mental well being and physical health. It also exposes how and why planning decisions cause current health epidemics in our cities. It concludes by identifying notable healthy urban planning strategies used to increase public involvement in physical activity.

Chapter Three begins by discussing how Australians are beginning to understand the implications of a sedentary lifestyle. The chapter explores the origins of the outdoor gym and its varieties in the context of exercising outdoors. The chapter raises awareness of the benefits of outdoor physical activity. It then defines the concept of the outdoor gym and includes physical activity recommendations.

Chapter Four presents the findings of the completed empirical research ascertaining the locations of outdoor gyms in Sydney. An informative and graphic analysis of each location forms the body of this thesis. The observational site visit findings are also presented and briefly analysed.

Chapter Five aims to provide an understanding of local governments perspectives towards outdoor gyms and planning for outdoor recreation. The chapter draws from the findings in Chapter Four, in-depth interviews and the observational site visit findings to establish whether outdoor gyms are encouraged or discouraged at a local level.

In closing, this thesis outlines a series of conclusions and recommendations that relate to the findings of the thesis. It recognises the potential to act on the information that has been presented. The conclusions and recommendations have been composed in response to the information revealed in the research methodology, in light of the research statement.

Final Thoughts

A well-designed and planned outdoor gym facility has the ability to encourage physical activity in a community. The capability of such a facility to influence and enhance the quality of life of an urban population is uncharted research territory. This chapter briefly identifies the current health concerns of Australians and options for reducing such health epidemics. A theoretical perspective of the culture of healthy urban planning and its relationship to the built environment is considered in the next chapter.



Introduction

The purpose of conducting a literature review is to find out what is already known and not known about a particular topic (Babbie 2007, p.489), allowing us to draw on existing knowledge and methodologies. The literature selected for this review is multidisciplinary, with scholarly literature sourced from planning and medical journals. These include the Public Health Reports, the American Journal of Preventative Medicine and the Urban Affairs Review. Published books, government publications and existing research concerning the relationships between health, the built environment and urban planning further inform this chapter.

This chapter discusses the main themes extracted from the researched literature. These themes include the relationships between the built environment and health, the relationships between urban planning and health, and historical trends in the built environment. It first explores the historical link between health and planning, followed by reasons which are responsible for an increased culture of sedentariness in today's context. Theoretical concepts of planning and the built environment are also discussed.

The Origins of Urban Planning

The origins of planning date back to the mid 1800s where the quality of living conditions were poor (Butterworth 2000) and health epidemics stemming from industrialisation and rapid urbanisation were spreading fast throughout Europe. The poor were living in appallingly unhygienic conditions, crowding into urban slums and were susceptible to infectious diseases (Ashton 1992). Crowded, dirty, polluted, smelly, noisy and dangerous urban developments were extremely unpleasant for inhabitants, raising concerns of sanitation, health and safety (Frank *et al* 2003).

In response to these concerns, the planning profession advocated for improvements to hard infrastructure such as housing, the urban water supply and sewerage systems (Corburn 2007) as well as paved streets (Butterworth 2000, p.2). The need to put an end to the prevalence of epidemics in industrialised urban areas began the close relationship between health and planning (Barton *et al* 2000).

A separation of health and planning occurred when human health became the responsibility of the individual. Taking preventative action in the form of immunisation, prescription medicine and pharmaceutical drugs was considered an easier option over addressing the issue on a broader scale (Corburn 2007). Today, managing urban development depends on 19th century planning strategies such as land-use zoning, providing hard infrastructure and imposing minimum housing standards (Butterworth 2000, p.2).

Looking to the future, it is essential that planners and health professionals address the urban environment in today's context. As such, public health should take on a holistic approach and adopt the key aspects of the environmental and preventative health measures (Butterworth 2000, p.2) mentioned above. The key challenge for reconnecting planning and public health today is to learn from the history of each field and develop joint strategies that address the root causes of poor health, not just devise interventions aimed at specific diseases or individual behaviours (Corburn 2007, p.698).

Now: The Sedentary Lifestyle

The lifestyle we lead today is less reliant on physical activity than the way of life led over a century ago. We are less physically active by being less likely to walk or cycle and more likely to use a car, and by choosing to watch television over playing sports such as backyard cricket (Capon 2007). As people are less physically active than previous generations (Capon 2007), overweight and obesity figures are rising (ABS 2008). This is attributed to factors such as the introduction of technologies that reduce the requirement for human involvement, the workforce relying more on professional workers rather than a more physically dependent industrial workforce and private transportation encouraging car dependency.

Technology

In both the private and public built environment, technology can be responsible for encouraging a sedentary lifestyle. In our homes dishwashers, computer games, washing machines, leaf blowers, remote controls and ride-on mowers are all examples of how technology has removed incidental physical activity opportunities. Similarly, in the public domain, technology in the form of escalators, lifts and moving walkways assist tasks such as walking and are therefore more appealing than stairs (Matlawski 2006). As such, these technological inventions have reduced opportunity for physical activity, resulting in a culture which encourages sedentary living.

Industrial to Professional Workforce

At the turn of the 20th century, 60% of the Australian population lived inland and in rural areas (Capon 2007). Their main source of employment came from agriculture, farming and factory work which involved high levels of manual labour and physical exertion. Revolutionising this form of work were machines and other technological devices, namely the industrial revolution, which replaced jobs that were initially for people, subsequently decreasing manual labour. Now, over 60% of Australians live in urban areas (Capon 2007), reflecting a shift in the workforce once again. Work prospects have been replaced with a more professional workforce, in which jobs can be performed whilst stationary, at a desk (Frumkin *et al* 2004, p.91). This shift in the type of work required by the modern workforce has also contributed to the sedentary lifestyle epidemic.

Travel Patterns

Historically, the affordability of owning a private motor vehicle has resulted in less of a reliance on public transport and a reduced emphasis on public and active transport. The ease of private vehicle commuting has encouraged facilities such as regional shopping centres, employment and services to be decentralised and separated from homes. Urban development has therefore become located away from public transport networks (Capon 2007). The result is a car dependent environment that breeds lengthy and less active transport options, contributing to sedentary lifestyles.

Link between Built Environment and Health

Prior to analysing the relationship between health and the built environment, it is important to acknowledge the different factors which can contribute to a person's health.

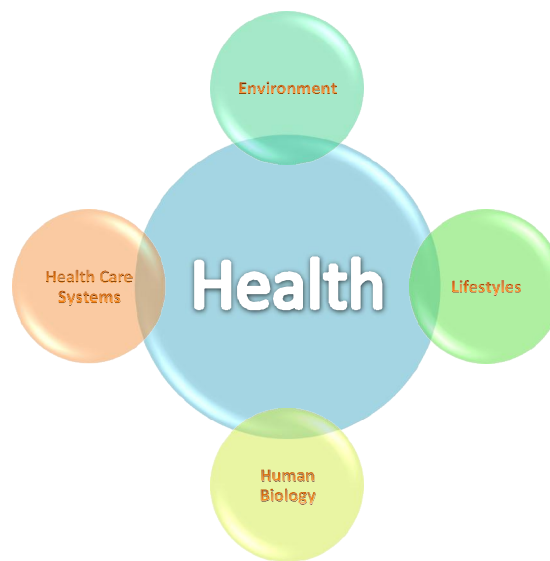
Barton *et al* defines health as 'a state of complete physical, mental and social well being and not merely the absence of disease or infirmity...' (2000, p.7). They further note that health policy is not just a matter for healthcare professionals, but is a multi-disciplinary movement where planners have a key role in promoting a healthy environment. Similarly, Racioppi *et al* distinguishes the increasing recognition within the planning and health disciplines of the importance of the urban environment and its influence on healthy lifestyle choices, especially physical activity (2005, p.302).

Health is influenced by the combined action and inter-relation of a wide range of determinants: biological factors such as age and sex, genetic factors, social and community influences, living and working conditions and general socio-economic cultural and environmental conditions (Racioppi *et al* 2005, p.302). Figure 2.1 illustrates this statement. The World Health Organisation's (WHO) Healthy Cities Project identifies physical, mental and social factors as contributing to a person's well being and overall health. Similarly, as Jenkins (2004) notes, 'professionals in fields of recreation ought to have a commitment to mental and physical health as major outcomes' (p.168). As such, the identified literature reviewed the relationship of both physical and mental health within the built environment.

Mental Health and Well-Being

The built environment provides the setting and backdrop by which we live our lives, and impacts our senses, our emotions, participation in physical activity and community life, our sense of community and general well being+ (Butterworth 2000, p.ii). In this statement, the built environment is identified as an element which we become accustomed to, and to some extent, forget about its continual influence on our health.

Figure 2.1: Factors Contributing to Human Health



Source: adapted from Lalonde 1974 in Barton *et al* 2000, p.8

An environment which has a strong sense of community and social capital is one which encourages social interaction and participation, develops local networks and is socially cohesive. The literature suggests that built environments which foster the development of social networks, social ties, social support, sense of community, community cohesion and competence, and sense of place, have a high level of mental well-being (Butterworth 2000, p.iv). Consequently, it is the urban environments that have, amongst other things, access to sizeable, quality open space and community facilities which experience a higher level of social capital and conviviality. Support networks can also be beneficial to vulnerable groups within communities by providing opportunities to create these networks and provide social and mental support (Barton *et al* 2000, p.11).

The built environment can also impact its inhabitants through other means. As Halpern (1995, p.2 in Butterworth 2000, p.5) reveals, the built environment influences mental health in the following ways: -

1. As a source of stress;
2. Impacts on people's social networks and support;
3. Through the symbolic function played by architecture and planning and the impact of social labelling; and
4. The nature of the planning process itself.

Cities should be places of laughter, loving, working, learning, selling, buying, dying, birth, debating, arguing, politicking; in short a place to fulfil our emotional, social and physical needs. Yet cities are often places where intimacy is difficult. Cities that encourage people to move out of the isolation of their homes to discover a wide range of rewarding relationships may be the best form of mental health promotion we can invent+ (Baum 1993, p.33 in Butterworth 2000, p.1). As such, providing a built environment which encourages conviviality and social interaction can influence a community's mental health.

Physical Activity and Active Lifestyles

Physical activity can be defined as any bodily movement produced by skeletal muscle resulting in a substantial increase over the resting energy expenditure (Gebel *et al* 2005, p.9). The literature strongly encourages promoting physical activity because it reduces risk factors for non communicable diseases such as coronary heart disease (cardiovascular disease), stroke, and some cancers, mental health issues, high blood pressure, obesity and falls, particularly in elderly people. (Corburn 2007, Gebel *et al* 2005, Frank *et al* 2003, NSW DSR undated, PCAL 2007, PCAL 2010, Racioppi *et al* 2005). Physical activity can also have a beneficial effect on stress levels, ameliorating mid to moderate depression and enhancing psychological wellbeing (Jenkins 2004). The NSW Department of Sport and Recreation encourage the combination of physical activity with a healthy diet to reap ultimate health outcomes (2004, p.6). Therefore, the benefits of physical activity far outweigh being physically inactive.

Physical inactivity is a worldwide issue estimated at causing 1.9 million deaths each year (Racioppi *et al* 2005, p.303). There have been studies conducted in the United States, New

Zealand, Canada and Australia which all mention public health concerns from physical inactivity (Jenkins 2004, p.167). Deaths caused by physical inactivity can be lessened through increased levels of physical activity, making non communicable diseases associated with physical inactivity highly treatable.

In New South Wales we have a society where only half of the population is doing the recommended 30 minutes of moderate-intensity physical activity on most days of the week (PCAL 2010, Racioppi *et al* 2005, p.305). Jenkins believes this is because encouraging physical activity is not easy because being sedentary is more convenient than being physically active (2004 p.167). The literature suggests determinants such as the physical environment, social environment and individual factors can be the cause of such low levels of physical activity (PCAL 2010, p.6). Jenkins also considers the availability of opportunities as determinants of physical activity (2004, p.167). Figure 2.2 illustrates this relationship.

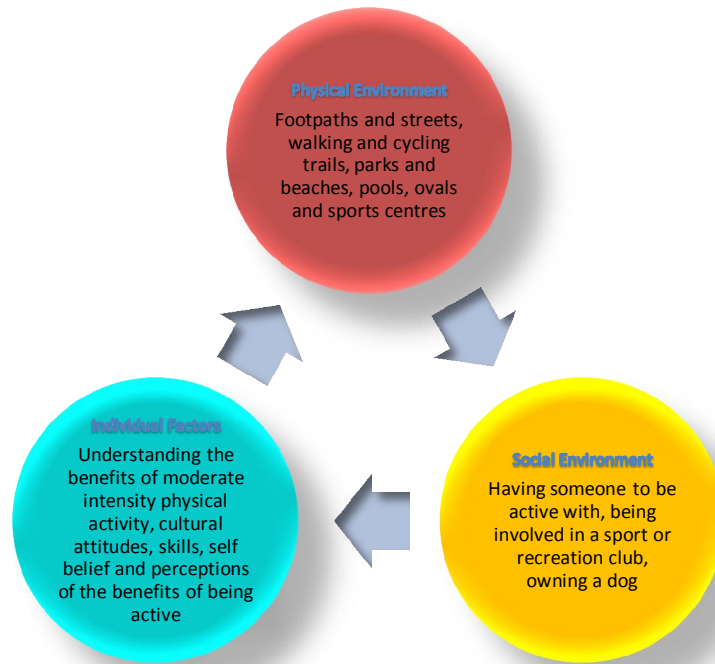
Each of the elements in Figure 2.2 can be responsible for playing a part in reduced levels of physical activity. Jenkins (2004, p.167) notes that multiple levels of influence are more likely to result in behaviour change. Therefore, on a local level, adapting the environment to encourage all these factors can play a strong role in fostering physical activity within the community.

As one of the simplest ways to reduce the risk of health concerns listed above, physical activity, through the provision of active environments, should be encouraged. The literature identifies active living and active cities as ways to not only promote physical health amongst individuals, but to also reduce direct and indirect health costs, environmental costs and social costs of physical inactivity (PCAL 2010, p.3). Figure 2.3 demonstrates the relationship between health and an active environment.

Active environments promote the importance of active and liveable cities which encourage walking, cycling and active behaviour. PCAL (2010) defines active living as providing opportunities for incorporating physical activity into the routines of daily life as well as for sport and recreation as active living. Frumkin *et al* defines this as *recreational exercise* where purposeful exercise is *utilitarian* (2004, p.92). Low (2003) terms an active environment as an *active city* which is a place where walking, cycling, collective transport and private vehicles are integrated together to create a more liveable and *active* city. This is similar to Jenkins

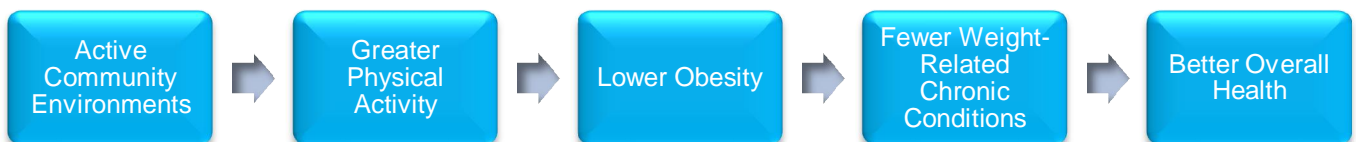
supportive environment which has settings, facilities and programs encouraging physical activity (2004, p.167). Examples of active living include; walking or cycling with children to school; walking, cycling or catching public transport to work or replacing short car trips to corner shops and parks by walking or cycling (PCAL 2010, p.3).

Figure 2.2: Determinants of Physical Inactivity



Source: Caldwell 2010

Figure 2.3: The Hypothesized Active Community Environments Model



Source: Doyle *et al* 2006, p.20

Urban Form and Urban Design

Urban form and the arrangement of land uses can influence physical activity patterns. Depending on the distance between land uses, active transportation can be practical or

impractical (Frank *et al* 2003, p.7). When the distance between land uses increase, travel time increases. Consequently possibility of active transportation use is lowered and the likelihood of private motor vehicle trips is increased.

The literature supports mixed use development because of its provision of shorter distances between activities and more opportunity for social interaction. Shorter distances between activities results in more active transportation being used and a more walkable environment. From a social perspective, mixed use development enhances community cohesion, social capital aiding mental health, and provides an urban environment which is conducive to active transport and physical activity (Gebel *et al* 2005). Similarly, it fosters less dependence on the automobile, is safer for the community and gives people more choices with respect to how they get around and spend their time (Frank *et al* 2003, p.8).

Urban design plays a significant role in whether the urban environment is conducive to physical activity. Urban design has the ability to influence how people perceive their surrounding environment. Design can make an environment perceived as %hostile or friendly, attractive or ugly, and vibrant or dull+ (Frank *et al* 2003, p.8). For example trees, bubblers, seats and active places provide a more amenable environment for physical activity to cultivate.

Transport Options

With an ever growing distance between activities, the spatial separation of human activities increases mobility and creates the need for travel (Dieleman 2004, p.309). The literature suggests active transport and public transport are cheaper, reduce congestion on our roads and encourage recreational/incidental physical activity for users (National Heart Foundation of Australia 2004). Therefore government initiatives such as the NSW Bike Plan 2010 (NSW Government 2010) are a positive way of encouraging physical activity through active transport options.

Public transport allows people to easily connect with places, while active transport encourages people to fit physical activity into their day by walking or cycling to public transport stations, stops and places. Brownson *et al* (2001) indicates that the presence of

sidewalks promoted walking (p.1998). Public transportation services that are accessible, affordable, frequent, on-time and safe will result in high patron usage (National Heart Foundation of Australia 2004). The NSW Bike Plan 2010 identifies the planning of local neighbourhoods to prioritise walking and cycling.

Changes to the Built Environment Over Time

The following section establishes how the changing nature of the built environment, land uses and settlement patterns, have influenced mental and physical human health. Literature regarding how the built environment can be controlled to reverse the negative health outcomes and the promotion of healthy lifestyles to increase the general health and welfare of inhabitants will be discussed.

Urban Sprawl

Derived from a culture of choosing to travel by private car over public transport (Frumkin *et al* 2004), urban sprawl is typified by homogenous suburbs, where even a trip to buy a newspaper requires a car. Urban sprawl is a complex pattern of separated land uses, transportation, as well as social and economic development (Frumkin 2002, p.201). Urban sprawl in Australia can be attributed to changes in housing expectations, the rise of the private motor vehicle, rising incomes and lower transportation costs (Nechyba *et al* 2004). The Australian Dream of a large lot size with a front and back yard drew people out of urbanised cities and into green field areas (Frumkin 2002, p.201) which were distant from transport nodes and activity hubs. This distance increased car dependency and subsequently encouraged urban sprawl.

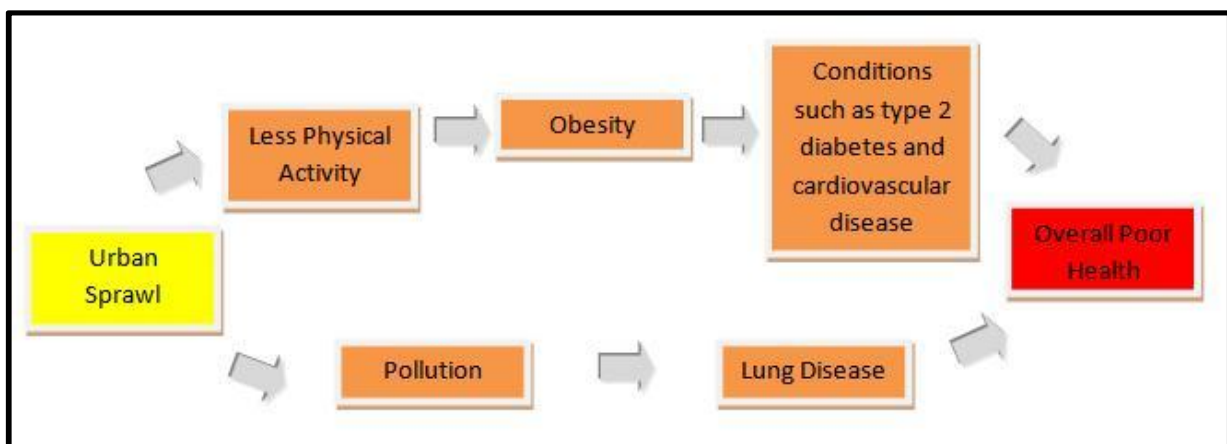
The reviewed literature identified numerous impacts of urban sprawl development. Through the loss of farmland and the growth of traffic congestion, urban sprawl impacts on the natural environment as well as human health (Galster *et al* 2001 in Sloane 2006). Ewing *et al* (2002) in Dieleman *et al* (2004), identify other consequences of urban sprawl. These are:

- 1) De-investment in urban core areas and central city decline;
- 2) Reliance on the use of private cars and therefore to growing number of vehicle miles travelled, road congestion and decline of air quality; and
- 3) The loss of open space and scenic areas in and close to metropolitan regions.

The literature strongly links physical inactivity with urban sprawl. As Frank *et al* explains, "the very conditions that made the industrial city a walkable place came to be blamed for creating the conditions in which epidemics could occur" (2003, p.2). This is because urban sprawl reduces the opportunity to walk or cycle between activities, decreasing chances for social interaction and social capital. The *Healthy Spaces and Places 2009* (Planning Institute of Australia 2009) document prepared in collaboration with the National Heart Foundation and the Planning Institute of Australia reflects this stating "Our sedentary, car dependent lifestyles are significant contributing factors to the prevalence of preventable health issues" (Planning Institute of Australia 2009, p.4). Figure 2.4 illustrates this statement.

In their assessment of the sprawl-health relationship, Kelly-Schwartz *et al* (2004) considers pollution and reduced physical activity as primary determinants of poor health in urban sprawl developments. Urban sprawl is generally considered not conducive to a good quality of life in urban areas (Dieleman *et al* 2004, p.308). Therefore, sprawl has negative physical and mental health consequences (Frumkin 2002, Frumkin *et al* 2004, Sloane 2006, Barton 2005).

Figure 2.4: The Sprawl-Health Relationship



Source: Kelly-Schwartz *et al* 2004

Car Dependency

The literature notes the private motor vehicle as the main reason for urban sprawl. Nechyba *et al* writes, "it is difficult to imagine large increases in suburbanisation without this rise of the automobile, even if other causes have contributed to the sprawling of cities in the presence of the automobile" (2004, p.182). Frumkin also attributes sprawl to cars stating, "As automobile

ownership became more widespread starting in the 1920s, suburban growth continued, a trend that accelerated greatly during the second half of the 20th century+(2002, p.201).

The reviewed literature suggests car dependency increased when public transport was no longer close to residences and active transport distances became too long. New found independence and extraordinary personal mobility was found by car users (Frumkin 2002, p.201). This enabled households to consider wider geographic areas in which to reside, work and recreate (Nechyba *et al* 2004, p.184). Urban sprawl therefore increased along with car dependency. The resulting environment has reduced opportunities for physical activity and created an environment that is not conducive to active living.

Urban sprawl has encouraged car dependency as much as car dependency has encouraged urban sprawl. Both inhibit public and active transportation options, which reduce occurrences of obesity and non communicable diseases. The literature also notes how car dependency increases air pollution (Frumkin 2002, Low 2003), contributing to lung cancer, respiratory diseases (Kelly-Schwartz *et al* 2004) and can contribute to mental health through road rage (Frumkin *et al* 2004).

Safety (Fear of Crime)

The fear of crime and crime itself has negative implications on human health. The literature suggests crime impacts both the physical and mental health of humans. People will be less likely to walk in neighbourhoods that are walkable but unsafe (Doyle *et al* 2006, p.29). Similarly, higher levels of stress can arise from the fear of crime than any direct experience of crime (Butterworth 2000, p.16).

As discussed earlier, design can make an environment be perceived as hostile or friendly, attractive or ugly, and vibrant or dull+(Frank *et al* 2003, p.8). As such, crime can be reduced through appropriate design and location of walkable, public and private spaces. This can include implementing elements such as lighting and increasing public surveillance. Designing environments which discourage instances of crime is known as Crime Prevention through Environmental Design (CPTED).

Planning for Healthy Urban Environments

During the 1970s public discontent with the inability of existing health services to respond to newly emerging health requirements and expectations grew (Barton *et al* 2000). Consequently, interest escalated in the relationship between health and cities. It was becoming apparent that the health of the urban population was once again not just a matter for the health sector alone (Racioppi *et al* 2005). The modern collaboration between health and planning is primarily because of the automobile and obesity, with sustainable food systems and mental health as secondary reasons (Sloane 2006, p.14).

The problems that were found in England 150 years ago were being rediscovered in cities; although this time they were on a much bigger scale and with much greater consequences (Ashton 1992). In response to this interest, the World Health Organisation (WHO) presented the *Global Strategy for Health for All by the Year 2000* in 1979 (WHO 1981). It wasn't until 1986 when WHO established the Healthy Cities Project that city health was properly reconsidered on a global scale. The Healthy Cities Project, focusing on health promotion (Barton 2005), was launched to develop sound approaches to city health (Ashton 1992, p.8) and to provide a local basis for implementing the principles of the WHO strategy for health for all (Barton *et al* 2000, p.29).

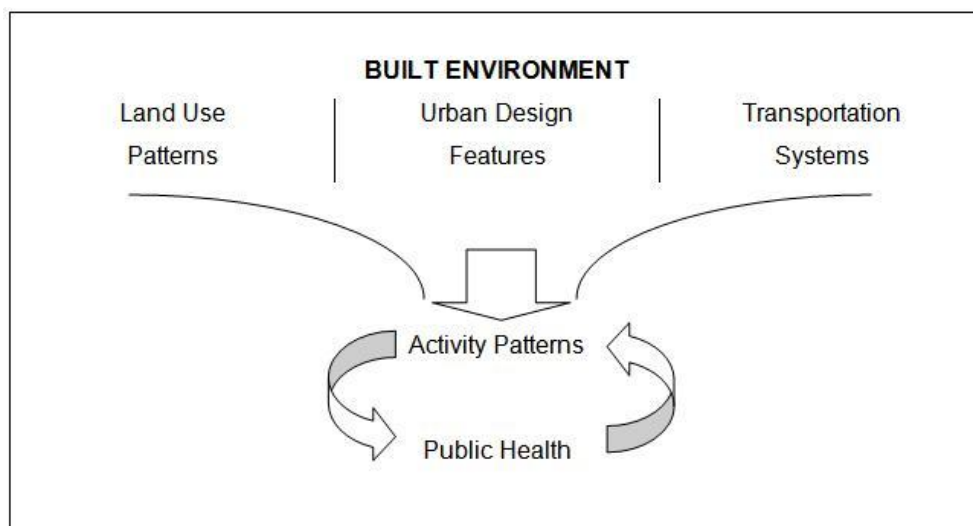
As part of the Healthy Cities Project, healthy urban planning involves planning practices that promote health and wellbeing and has much in common with the principles of sustainable development (Barton *et al* 2000, p.22). Defined as planning for people, healthy urban planning puts the needs of people and communities at the heart of the planning process and encourages decision making based on human health and well being (Barton *et al* 2000, in National Heart Foundation of Australia 2004, p.4). Healthy urban planning provides environments that shape the community's lifestyle by encouraging increased levels of physical activity and lower levels of sedentary behaviour. This is achieved by providing healthy choices and encouraging healthy living.

Urban planners are seen as having a specific responsibility in the context of health prevention. Their role is to coordinate a process of change to the physical habitat in which we live, as that habitat affects the health and well-being of its population (Barton 2005). The

social goals of health justify, and provide purpose to, the existence of healthy urban planning (Barton *et al* 2000, p.10).

Another initiative helping to filter the concepts of the healthy cities movement to local communities is the United Nations (UN) *Local Agenda 21 (LA21)* (UNDESA 1992), established in 1992. This initiative is the UNs program of action for sustainable development which acknowledges the relationship between development and the environment (Barton *et al* 2000, p.27). LA21 therefore reflects the underlying principles of the healthy cities project in that it identifies the quality of the environment and the nature of development as major determinants of health. This relationship is illustrated in Figure 2.5.

Figure 2.5: Linkages between the built environment, physical activity and public health



Source: Frank *et al* 2003

In analysing Figure 2.5, we see that the built environment, predominantly land use patterns, urban design features and transportation systems, are influential factors on activity patterns of communities and consequently their physical health and mental well being.

Final Thoughts

The planning profession has gone full circle in its practices. We started out considering sanitation, health and safety concerns in development which have over time resulted in urban sprawl, car dependency and sedentary lifestyles. Now, population health is once again topical due to high levels of obesity associated with urban sedentariness. Planners can learn from previous errors by implementing healthy urban planning principles to combat modern health epidemics.

This literature review has outlined a number of initiatives that can be employed by governments to plan for healthy levels of physical activity regionally and in local communities. It has also identified the Healthy Cities Project as a legitimate planning practice and also justified the topic of this thesis.



Introduction

Being outdoors in the open-air environment is something that most Australians enjoy. Renowned for being the sunburnt country, Australia is rich with an endless coastline of beaches, national parks, expansive waterways, rainforests and the outback. The outdoors is readily accessible and is closely aligned with the nation's identity. An environment such as Australia's encourages an active lifestyle. It is therefore difficult to understand why Australians are one of the fattest nations in the world (Stark 2008). As identified in the previous chapter, reasons include a high level of fast food consumption, larger food portions and physical inactivity.

It has been established that physical activity can help reduce the obesity levels in urban populations (Barton 2005). As Racioppi *et al* notes, the creation of healthier environments that support physically active lifestyles is a key component in improving public health, and there is a growing body of evidence to support effective action (2005, p.312). Those responsible for the built environment need to take a role in creating healthy environments which support an active lifestyle. The concept of the outdoor gym is one such opportunity.

The above discussion raises questions pertaining to physical activity and the environment in which it can occur. Does the Australian population have the resources necessary to actively engage with the outdoor environment particularly at a local level? If so, do local environments support active lifestyles? What facilities are available to the local community to foster physical activity? This chapter is driven by these questions, primarily to define and explore the concept of the outdoor gym. It provides an overview of ideal outdoor gym locations, types of equipment used, the material used for the equipment and summarises the different types of outdoor gyms which can be implemented.

History of Physical Activity

A change in how to approach physical activity occurred over a century ago. Georges Hebert was aware of alarming obesity rates and the muscular weakness of humans (Urban Freeflow 2008). Through his travels as a French naval officer Hebert became aware of the benefits of athletic skill. This became the driver for his career as a physical educator. Hebert's work was a major contributor to how we participate in physical activity today. Hebert created his own method of physical training, *la methode naturelle* (the Natural Method), with the philosophy, *being strong to be useful* (Hebert 1941). His method focused on ten essential skills: walking, running, jumping, quadrupedal movement, climbing, balancing, throwing, lifting, defending and swimming. He created outdoor training facilities that were like modern day obstacle courses to challenge these skills (Hebert 1941). All of the ten essential skills would be carried out while progressing through an outdoor environment. The course would range from a few hundred metres to several kilometres (Urban Freeflow 2008) and last 20 to 60 minutes (Hebert 1941).

Parcours

French for *route* or *course* the *parcours* was primarily invented by Swiss architect Erwin Weckemann in 1968 (Time Magazine 1972). While Hebert's obstacle-course form of physical training was standard French military practice, the *parcours* was the first publicly accessible fitness trail (Urban Freeflow 2008). First installed in Zurich, Switzerland, the *parcours* is a 1.6 kilometre (1 mile) jogging circuit with 20 designated stops for exercising. About 200 metres apart, plaques instruct the participants to do exercises such as sit ups, push ups and leg hops a repeated number of times. At some of the stops, appropriate equipment such as chin-up

bars, are installed. Interestingly, in an attempt to decrease insurance payoffs and increase the health of Swiss citizens, a Swiss life insurance company, Vita, financed the installation of the courses (Time Magazine 1972). Due to this partnership, the parcours is now formally known by the name Vita Parcours. By 1972, there were 180 Vita Parcours in Switzerland, 200 in West Germany and 13 in Austria (Time Magazine 1972).

The Vita Parcours increased in popularity during the 1970s and early 1980s, with thousands being installed throughout the United States as well as Europe (Brooks 2007). Brooks blames the indoor gym craze with its glamorous bells and whistles and a league of helpful staff and personal trainers for the reduced interest in the parcours (2007).

What is a Good Level of Exercise?

Actively or passively, we are all participants in some kind of outdoor recreation (Van Doren *et al* 1979). But how much physical activity is enough to maintain a good level of health and reduce the risk of developing non communicable diseases? The Centre for Epidemiology and Research have found only half the NSW population is meeting the recommended level of at least 30 minutes of physical activity on most days of the week (2008 in PCAL 2010). There are various physical activity recommendations provided to the public.

Thirty minutes of physical activity on most days of the week will produce enough physical activity to reduce the risk of non communicable diseases and promote and maintain health (PCAL 2010). However, this recommendation does not encourage vigorous intensity or muscular strength activity. These two elements are imperative to not only reducing health risks, but to increasing an individual's physical independence and strength development.

A study by Haskell (2007) recommends all healthy adults aged 18. 65 years need moderate-intensity aerobic physical activity for a minimum of 30 min on five days each week or vigorous-intensity aerobic activity for a minimum of 20 min on three days each week (Haskell 2007, p.1083). This can be achieved by going for a walk, a run, going to an outdoor gym or a combination of the three. Haskell further notes adults will also benefit from activities that maintain or increase muscular strength and endurance for a minimum of two days each week (Haskell 2007, p.1084). The outdoor gym is an ideal solution to achieving this physical

activity goal. The combination of both intense aerobic physical activity and muscular strength activities above minimum recommended amounts will provide participants additional health benefits, resulting in higher levels of physical fitness (Haskell 2007, p.1084).

Benefits of Outdoor Physical Activity

As advancements in technology continue, more of our time is spent being sedentary with 90% of our time spent indoors (Ramsay 2010). Participation in outdoor activities is not the only solution for social and environmental epidemics. A growing body of research on the benefits of outdoor activity points towards multiple benefits for people, social interaction and connection with nature (Petherick 2010). It is important to note that exercise, indoors and outdoors can be beneficial regardless of whether done in backyards, on the streets, in neighbourhoods, in parks or at community facilities (Jenkins 2004, p.167).

Literature on outdoor activity strongly advocates the benefits of outdoor exercise. Harmon (2008) identifies some of these benefits: -

- Physical benefits include decreased blood pressure, weight reduction and increased balance;
- Cognitive benefits include creativity development and reduced ADHD symptoms in children;
- Emotional benefits include depression and stress reduction; and
- Behavioural outcomes include increased environmentally responsible behaviours.

Further, Ramsay (2010) identifies numerous personal benefits to participating in outdoor fitness: -

- People who train outdoor experience higher levels of post exercise endorphins;
- Fresh air is refreshing and invigorating, improves sense of well being, increases alertness and decreases anxiety;
- Exposure to sunlight helps boost serotonin levels which helps maintain calmness;
- Increase in Vitamin D levels which help promote the absorption of calcium; and
- Outdoor training allows exercise routines to be performed which are not possible in gyms, providing variety.

The Outdoors Council of Australia (OCA) considers the personal benefits gained by engaging in outdoor activity are connecting with self, others and the surrounding environment (Petherick 2010). Consistent with the literature, OCA deem wider benefits of outdoor activity to include enhanced physical/mental health of participants. They further identify outdoor activity to provide value to communities, opportunities for skills development and relationship building, environmental stewardship and significance to the economy (Petherick 2010, p.7).

The literature notes that to achieve such benefits, the provision of appropriate facilities and natural resources is required (Petherick 2010) Long term planning for outdoor activity, coupled with innovation and dedication will ensure the health and well being of people can be enhanced, and thus increase their quality of life (Jenkins 2004, p.168). Such innovation includes the revival of the parcours to an outdoor gym.

What is an Outdoor Gym?

Before defining an outdoor gym, the word *gym* needs to be understood. *Gym* is a shortened form of the word *gymnasium*. The Macquarie Dictionary (Bernard 1989) defines *gymnasium* as 'a building or room equipped for gymnastics and sport.' Dictionary.com (2010) defines *gymnasium* as 'a facility intended for indoor sports or exercise.' Hence, a gym is a place where physical activity takes place, usually indoors. There are gym businesses such as *Fitness First* *Definition Health Clubs* and female only gyms such as *Fernwood* *Curves*. These businesses sell gym memberships to patrons who want to use gym equipment to maintain a healthy level of fitness. Another gym concept is that of a private or home gym. Private gym equipment providers sell gym equipment to the general public as a profitable business.

Through understanding the other forms of a *gym* we can better understand the concept of an outdoor gym. An outdoor gym is made up of components which resemble gym equipment, generally within the public domain. It is made up of components which resemble gym equipment similar to that found in an indoor gym. Similar to sports fields, children's play equipment, pathways, cycleways, landscaping and community facilities, outdoor gyms are typically provided as a facility within a local park. In a qualitative interview, a Bankstown Council rep. (2010) defined an outdoor gym in a more modern sense considering them as

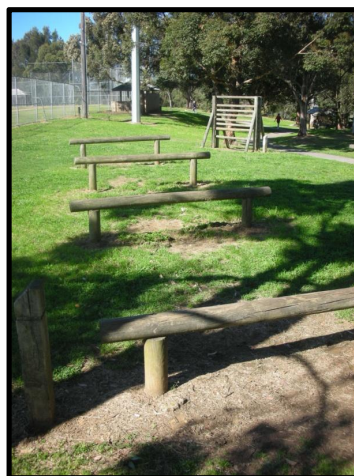
pieces of equipment that replicate equipment you would find in an indoor gym, so moving parts and weights and things that actually involve body movement+

Outdoor gym equipment can be grouped together, usually in a cluster of four to six elements. An alternative to this is locating singular pieces of equipment along a path, strategically distanced apart (usually 100 metres) forming a fitness trail where the user has to pass from one equipment type to another. This idea resembles Weckemann's Vita Parcours. Similarly, clusters of outdoor gym equipment can be strategically separated to form a more complex outdoor gym. Another option is to place the equipment near items of interest such as a lake, forest or garden. This encourages a strong link with the natural environment, increasing emotional and behavioural benefits of outdoor activity. The following seven outdoor gym types have been compiled based on the above definition as well as through my empirical research.

Community

A community outdoor gym (Figure 3.1) is identified as a gym which is assembled through the help of the local community. Observations identified associations such as Rotary, Lions Club and local businesses to provide the materials and labour in order to construct an outdoor gym facility for the local community. Equipment is usually simple in nature, but the facility is still recognisable as an outdoor gym. Instructional signage provided is minimal.

Figure 3.1: Community Outdoor Gym (Rofe Park, Hornsby Heights)



Source: Caldwell 2010

Simple

A simple outdoor gym (Figure 3.2) can be identified as having equipment with no moving parts, being simple in design and providing a more strength based workout than cardiovascular. Metal or wood can be used as the materials. Instructions on how to use the equipment are minimal, but enough to understand how to get the most out of the facility.

Figure 3.2: Simple Outdoor Gym (Raby Sports Complex, Raby)



Source: Caldwell 2010

All-In-One

An all-in-one outdoor gym (Figure 3.3) is a facility where each piece of equipment is joined to another. Resembling children's play equipment in style, this form of outdoor gym maintains its diversity and attraction by providing all necessary strength equipment in the one spot. Equipment instructions can range, however are usually simple in nature.

Figure 3.3: All in One Outdoor Gym (Eschol Park Sports Complex, Eagle Vale)



Source: Caldwell 2010

Static Exercise Station

A static exercise station (Figure 3.4) outdoor gym is similar to an all-in-one, however the equipment is separated. This outdoor gym is characterised by a series of exercise elements grouped together. At each element, users are coached by signs describing and illustrating how to use the equipment safely and effectively.

Figure 3.4: Static Exercise Station (George Thornton Reserve, West Pennant Hills)

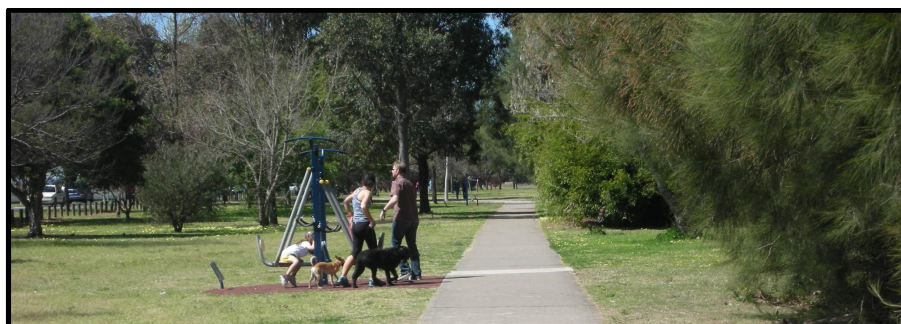


Source: Caldwell 2010

Fitness Trail

A fitness trail (Figure 3.5) is typically a pathway with distanced intervals between equipment. It is a smaller version of the station trails outdoor gym however still demands a cardiovascular and muscle strength work out, much like Weckemann's Vita Parcours.

Figure 3.5: Fitness Trail (Ham Common, Richmond)



Source: Caldwell 2010

Exercise Station Trail

Exercise station trails (Figure 3.6) are a number of small version exercise stations spaced out over a fitness trail. Distances between the exercise stations can vary. Each station has a purpose, for example the first may be to stretch and warm muscles, the second for abdominal exercises, the third for upper body strength and the fourth for lower body strength. Instructional plates are similar to that of an exercise station.

Figure 3.6: Exercise Station Trails (Wentworth Park, Glebe)



Source: Caldwell 2010

Modern

The modern outdoor gym (Figure 3.7) has incorporated moving parts into the equipment. This provides the opportunity for equipment found in an inside gym to now be found outdoors. The modern outdoor gym also increases heart rates and correct muscular strength. Instructional signage is descriptive and illustrated.

Figure 3.7: Modern Outdoor Gym (Crest of Bankstown, Georges Hill)









Source: Caldwell 2010


Similar to the equipment found at an indoor gym, outdoor gym equipment offers a range of exercise opportunities. These can include muscular strength building, a cardiovascular workout or a combination of the two.





The types of equipment that can be installed as part of an outdoor gym range from stationary to moving, simple to more advanced and complex forms. Figure 3.8 is a succinct list of equipment types which can be used in an outdoor gym.

There are numerous businesses providing outdoor gym equipment in Australia. From my research, some of the more prominent businesses are Forpark Australia, FitnessTrails, AusCourse 2000, Saysu Outdoor Fitness Equipment and Move Fitness Systems.

Figure 3.8: Examples of Outdoor Gym Equipment

Static Equipment	Mechanical Equipment
<p>Ab Cruncher</p> 	<p>Ab-Hip Swinger</p> 
<p>Chin up</p> 	<p>Cross Trainer</p> 
<p>Leg Stretches</p> 	<p>Cycle Seat</p> 

Static Equipment	Mechanical Equipment
<p data-bbox="185 389 323 421">Push Ups</p> 	<p data-bbox="836 389 975 421">Ezy Rider</p> 
<p data-bbox="185 701 301 732">Step Up</p> 	<p data-bbox="836 701 1051 732">Shoulder Press</p> 
<p data-bbox="185 992 323 1023">Body Curl</p> 	<p data-bbox="836 992 956 1072">Rowing Machine</p> 
<p data-bbox="185 1294 344 1326">Bench Curl</p> 	<p data-bbox="836 1294 975 1326">Quad Roll</p> 
<p data-bbox="185 1507 333 1538">Bench Dip</p> 	<p data-bbox="836 1563 1038 1594">Butterfly Press</p> 

Static Equipment	Mechanical Equipment
<p data-bbox="188 392 306 425">Leg Hop</p> 	<p data-bbox="837 392 976 425">Leg Press</p> 
<p data-bbox="188 701 319 734">Vault Bar</p> 	<p data-bbox="837 701 948 734">Stepper</p> 

Source: Caldwell 2010

With their design based on the physique of an adult, outdoor gyms are predominantly designed for adults. Most facilities recommend use by people over the age of 18; however children are drawn to outdoor gyms, possibly considering them as a playground. Children tend to use the equipment much like they would use a playground. There are numerous benefits associated with having outdoor gyms in the public eye, particularly for children. Making children accustomed to their presence promotes the idea of outdoor exercise from a young age (Bankstown Council rep. 2010). I believe this changes the concept of an outdoor gym from a novelty to a unique way promote physically activity.

Final Thoughts

As is evident from this chapter, an outdoor gym takes many forms. Each encourages various intensities and diversity of physical activity. Through identifying the origin of the outdoor gym we can appreciate how these facilities have evolved. The discussion has illuminated how outdoor gyms promote positive health benefits including reduced obesity levels. Through understanding the physical and mental health benefits being active can have, motivating ourselves to exercise can be easier. The next chapter of this thesis provides an inventory of outdoor gym locations in Sydney. A comparison of the different sites is also presented.



Introduction

This chapter presents the identified outdoor gym sites within the study area. The methodology is explained in detail to understand how the results were obtained. It then focuses on the varying character, site location and supporting facilities of all identified outdoor gyms across Sydney. The identified outdoor gyms are then compared and contrasted to understand the varying forms across the study area.

Methodology

The following explains the methodology employed to achieve the aims of this thesis.

Study Area

As illustrated in Figure 1.1, the study area (Sydney) is bound by Pittwater, Hornsby and Hawkesbury LGAs to the north, Blue Mountains LGA to the west with Sutherland, Campbelltown and Wollondilly LGAs to the south.

Telephone Survey to Identify Outdoor Gym Locations within Sydney

It was understood that local councils would have information regarding locations of outdoor gyms in their LGA. First, the 41 local councils in Sydney were contacted by way of a telephone call to ask whether they knew of any outdoor gym locations in their LGA. Then, it was requested to talk to someone in the Parks or Recreation division of each council. At local council, incoming phone calls are generally answered by Customer Service staff. They choose to either answer your question or forward you onto the relevant contact. As such, some customer service staff knew of particular locations, and sometimes provided me with outdoor gym locations instead of Parks or Recreation staff. More often than not, a member of either the Parks or Recreation division of local councils was contacted. When put through to the relevant contact, the question of whether there was outdoor gym equipment in their LGA was asked. The relevant contact would either say no and the conversation would end, or yes and they'd list the locations. The result of the telephone survey was the identification of 60 outdoor gym locations within Sydney.

Prepare a Site Visit and Observations Template

As part of conducting this research, a two page *Site Visit and Observations Template* (Appendix A) was prepared to provide succinct quantitative description of each identified outdoor gym location. Observations regarding design, supporting facilities, users and site attributes of each site were recorded. The observation template aimed to highlight various attributes and characteristics present at each location.

Site Visit Each Identified Outdoor Gym in Sydney

Each of the 60 outdoor gym locations was visited. They were photographed and observations were documented using the observations template. This process was conducted over two weekends to maintain consistency in identifying the extent of users, the feel and character of each facility. The Sydney West region, identified in Figure 1.1 was completed in the first weekend, with the Sydney East region completed the following weekend.

Compilation of Information

Once the information on locations of outdoor gyms was collected it was entered into a Microsoft Excel database, which enabled the data to be effectively analysed and evaluated. No other analysis software was used.

Analysis of Information

The information was then compared and contrasted to determine any major trends between the quality of each facility and the factors that contribute to their degree of success. The intention of the analysis was to determine the extent of success Sydney has had in providing outdoor gyms.

Results

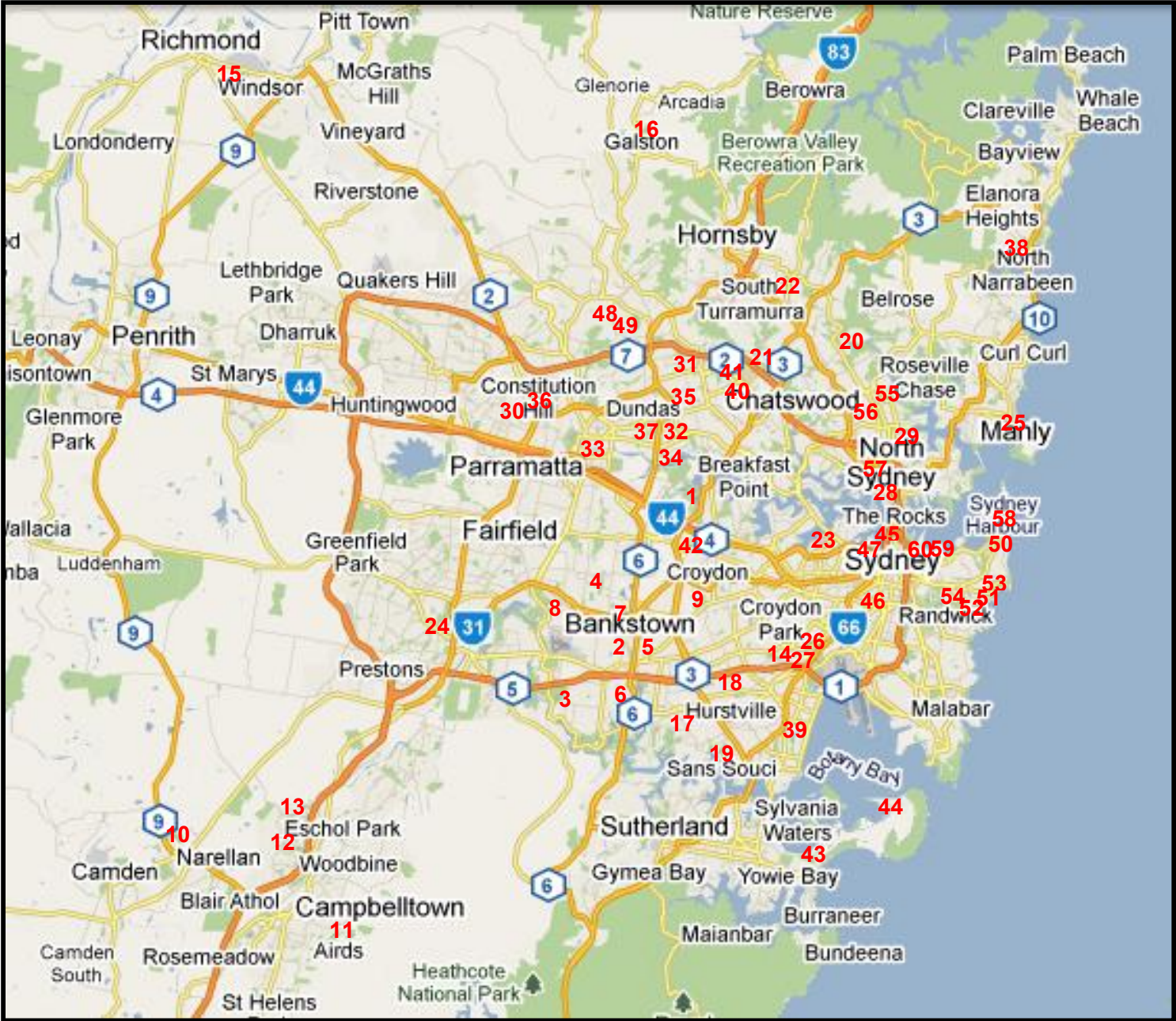
The undertaken research resulted in a collection of completed observation templates as well as a photographic snapshot of each facility. Both techniques examined and observed the 60 identified outdoor gym locations in the telephone survey. The research identified 27 LGAs having outdoor gym facilities. Widely spread across Sydney, the outdoor gyms were identified in LGAs such as Sutherland, Waverley, Camden, Hawkesbury and Pittwater. Figure 4.1 reveals each outdoor gym location identified in Sydney. Figure 4.2 illustrates their location geographically. Figure 4.1 alphabetically orders the facilities by LGA and numbers them. The number then corresponds with a location on Figure 4.2. . All photographs in the results presentation were taken by the researcher (Caldwell 2010).

Figure 4.1: Table of Outdoor Gyms in Sydney noting their LGA and Quadrant for Analysis

No.	Location	Suburb	LGA	Quadrant
1	Bicentennial Park	Sydney Olympic Park	Auburn	North West
2	Bankstown Memorial Park	Bankstown	Bankstown	South West
3	Kelso Park South	Panania	Bankstown	South West
4	Maluga Passive Park	Birrong	Bankstown	South West
5	Mount Lewis Park	Mount Lewis	Bankstown	South West
6	Playford Park	Padstow	Bankstown	South West
7	RM Campbell Reserve	Bankstown	Bankstown	South West
8	The Crest of Bankstown	Georges Hill	Bankstown	South West
9	Henley Park	Enfield	Burwood	South East
10	Harrington Lake	Harrington Park	Camden	South West
11	Cook Reserve	Ruse	Campbelltown	South West
12	Eschol Park Sports Park	Eschol Park	Campbelltown	South West
13	Raby Park	Raby	Campbelltown	South West
14	Cooks River Reserve	Canterbury to Hurlstone Park	Canterbury	South East
15	Ham Common	Richmond	Hawkesbury	North West
16	Rofe Park	Hornsby Heights	Hornsby	North West
17	Olds Park	Peakhurst	Hurstville	South East
18	Smith Park	Kingsgrove	Hurstville	South East
19	Stuart Street Park	Blakehurst	Kogarah	South East
20	Koola Park	Killara	Ku-Ring-Gai	North West
21	Lofberg Oval	West Pymble	Ku-Ring-Gai	North West
22	Turrumurra Memorial Park	Turrumurra	Ku-Ring-Gai	North West
23	King George Park	Rozelle	Leichhardt	South East
24	Woodward Park	Liverpool	Liverpool	South West
25	Manly Lagoon Reserve	Manly	Manly	North East
26	Jarvie Park	Marrickville	Marrickville	South East
27	Steel Reserve	Sth Marrickville	Marrickville	South East
28	North Sydney Civic Park	North Sydney	North Sydney	North East
29	Tunks Park	Northbridge	North Sydney	North East
30	Arthur Philip Park	Northmead	Parramatta	North West
31	Boronia Park	Epping	Parramatta	North West
32	Cowells Lane Reserve	Ermington	Parramatta	North West
33	Doyle Park	Parramatta	Parramatta	North West
34	George Kendall Riverside Park	Ermington	Parramatta	North West
35	James Hoskin Reserve	Carlingford	Parramatta	North West
36	Third Settlement Reserve	Winston Hills	Parramatta	North West
37	Upjohn Park	Dundas	Parramatta	North West
38	Lakeside Park	North Narrabeen	Pittwater	North East
39	Cook Park	Dolls Point to Kyeemah	Rockdale	South East
40	ELS Hall Park	Marsfield	Ryde	North East
41	Waterloo Park	Marsfield	Ryde	North East
42	Airey Park	Homebush	Strathfield	South East
43	Don Lucas Reserve	Cronulla	Sutherland	South East
44	Marton Park	Kurnell	Sutherland	South East
45	Observatory Hill	Millers Point	Sydney	South East
46	South Sydney Rotary Park	Alexandria	Sydney	South East
47	Wentworth Park	Glebe	Sydney	South East
48	Castlewood Reserve	Castle Hill	The Hills	North West
49	George Thornton Reserve	W Pennant Hills	The Hills	North West
50	Dudley Page Reserve	Dover Heights	Waverley	South East
51	Gaerloch Reserve	Tamarama	Waverley	South East
52	Marks Park	Tamarama	Waverley	South East
53	North Bondi Beach	North Bondi	Waverley	South East
54	Waverley Park	Bondi	Waverley	South East
55	Castle Cove Oval	Castle Cove	Willoughby	North East
56	Chatswood Oval	Chatswood	Willoughby	North East
57	Gore Hill Oval	St Leonards	Willoughby	North East
58	Christson Park	Vaucluse	Woollahra	South East
59	Rushcutters Bay Park	Darling Point	Woollahra	South East
60	Yarranabbe Park	Darling Point	Woollahra	South East

Source: Caldwell 2010

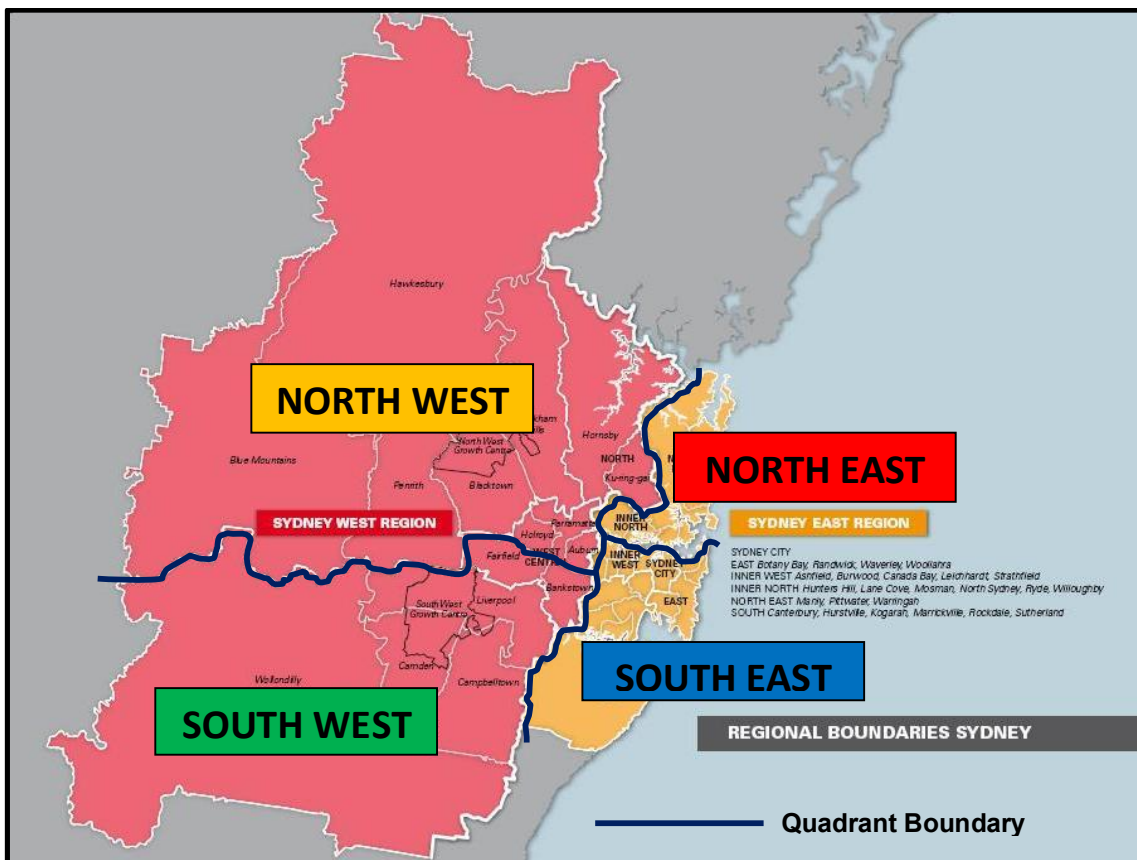
Figure 4.2: Graphical Representation of Outdoor Gym Locations in Sydney



Source: MapData Sciences 2010, adapted by Caldwell 2010

To appropriately identify outdoor gym trends, which may relate to the various areas of Sydney, four quadrants (Figure 4.3) similar to that found in the *Sydney Metropolitan Strategy: City of Cities 2005* (SMS) were established. The West Central region of the SMS was separated geographically east-west, so as to provide a more visible even divide between the North West and South West quadrants.

Figure 4.3: Quadrants of Sydney for Analysis



Source: Department of Planning 2008 (adapted by Caldwell 2010)

The following is a presentation of the results of the observations template. Site photographs, facilities and brief comments are provided for each of the 60 identified outdoor gyms in Sydney. These summaries are divided into the four colour-coded quadrants. Their number corresponds with the allocated number from Figure 4.1.

NORTH WEST QUADRANT

1 *Bicentennial Park, Sydney Olympic Park, Auburn*

This outdoor gym has been made by AusSafe Fitness Events. Typified by wood and metal elements, this outdoor gym is a static exercise station promoting muscular strength. Its location adjacent to the shared pathway suggests it can be used whilst traversing the park. The site is supported by facilities such as nearby umbrella shading (shown below being used for private barbeques), bench seating and signage. Within the large park toilets, a children's playground, ample parking and substantial quality open space are provided.



15 *Ham Common, Richmond, Hawkesbury*

This outdoor gym has been manufactured by Forpark Australia. Typified by strategically distanced mechanical metal elements, this outdoor gym is a fitness trail promoting both cardiovascular exercise and muscular strength. Elements sit approximately 150 to 200 metres apart, encouraging the user to walk or jog from one element to the next. It is ideally located for passive surveillance, being adjacent to a main road and other sporting facilities nearby. The site has ample parking, public toilets, a visitors centre and public transport options.



16 *Rofe Park, Hornsby Heights, Hornsby*

Rofe Park's outdoor gym is unique in its construction as its components and labour were donated by local businesses. Typified by its static equipment and community input, this facility is a community outdoor gym reflecting elements of an obstacle course promoting cardiovascular fitness. The site is located adjacent to a regional park including other sports facilities, a dog park, accessible toilets, minimal instructional signage and children's play equipment.

20 *Koola Park, Killara, Ku-Ring-Gai*

This outdoor gym has been manufactured by Fitness Trails Australia. Typified by separated static elements grouped together, this facility is a static exercise station promoting muscular strength. The site is in a high passive surveillance area, located adjacent to sports ovals and is across the road from a high school. The site is supported by facilities such as partial vegetation shading, ample parking, instructional signage and sufficient quality open space.



21 *Lofberg Oval, Bicentennial Park, West Pymble, Ku-Ring-Gai*

This site is part of Bicentennial Park which is a regional sporting facility providing numerous sporting opportunities. This site was still under construction when observed. This outdoor gym has been constructed by Fitness Trails Australia.



Typified by separated static elements grouped together, this facility proposes to be a static exercise station promoting muscular strength. The site is located adjacent to cricket nets, with a sports oval and club house nearby. The site is sufficiently shaded by high vegetation cover, substantial quality open space and parking.



22 *Turrumurra Memorial Park, Turrumurra, Ku-Ring-Gai*

Constructed by Fitness Trails Australia to encourage muscular strength, this outdoor gym is a static exercise station typified by separated static elements grouped together. The site is located adjacent to a football oval and across the road from residential land uses. The site is supported by facilities such as nearby toilets, high vegetation cover, sufficient parking, quality open space and ample passive surveillance.



30 *Arthur Phillip Park, Northmead, Parramatta*

This outdoor gym has been manufactured by Move Fitness Equipment. Typified by strategically distanced static metal elements, this outdoor gym is a fitness trail promoting both cardiovascular exercise and muscular strength. Three elements sit approximately 400 to 600 metres apart, encouraging the user to walk or jog from one element to the next. It is ideally located for passive surveillance, being adjacent to a main road and surrounding an oval. The site has sufficient parking, public toilets, is close to public transport options, has children's play equipment and a sports clubhouse.

31 *Boronia Park, Epping, Parramatta*

This outdoor gym has been manufactured by Forpark Australia, providing four separated mechanical elements. Typified by these specifications, this facility is a fitness trail, promoting cardiovascular fitness and muscular strength. The site is located near the urban hub of Epping. The outdoor gym sits along a pathway which traverses the park, with approximately 20 to 30 metres between the gym elements. The site is supported with sufficient high vegetation cover, children's play equipment, barbeque facilities, parking, public transport and aesthetically pleasing landscaping.



32 *Cowells Lane Reserve, Ermington, Parramatta*

Manufactured by Forpark Australia to promote cardiovascular fitness and muscular strength, this outdoor gym has four separated mechanical elements. The outdoor gym sits along a 500m pathway which circumnavigates the park. Typified by these specifications, this facility is a fitness trail, with the elements distanced approximately 100 metres apart. The site provides children's play equipment, barbeque facilities, parking, instructional signage and partial sun shade.



33 *Doyle Park, Ermington, Parramatta*

This outdoor gym has been constructed by Fitness Trails Australia. Typified by separated static elements grouped together, this facility is a static exercise station. The site is located adjacent to a sports oval and is across the road from residential land uses, providing passive surveillance. The site is also nearby to a club house with cricket nets. The site is partially shaded by vegetation cover, is adjacent to a large sports field with a remembrance garden nearby.



34 *George Kendall Riverside Reserve, Ermington, Parramatta*

This outdoor gym has been manufactured by Forpark Australia to promote cardiovascular fitness and muscular strength. Typified by four mechanical metal components, this facility is a modern outdoor gym. Elements include a shoulder press and a cross trainer. The site is located far from public view, however the park is used regularly by local sports groups and the community. The facilities which support this outdoor gym include seating, quality and substantial open space, bubblers and lighting.



35 *James Hoskin Reseve, Carlingford, Parramatta*

This outdoor gym has been constructed by Forpark Australia. Typified by its metal three mechanical elements, this facility is a modern outdoor gym promoting muscular strength as well as cardiovascular fitness. Although these elements are separated, they are supported by pathways to consider them part of a fitness trail. The location of this site reduces its chance of being used as it is located behind children's play equipment and down a hill. The site does however have sufficient passive surveillance from surrounding residential uses and high vegetation shade cover.



36 *Third Settlement Reserve, Winston Hills, Parramatta*

This outdoor gym has been constructed by Fitness Trails Australia and funded by the Australian Government's Economic Stimulus Package project to encourage muscle strengthening. Characterised by separated static elements grouped together, this facility is a static exercise station. The site is located adjacent to a large barbeque pergola and grassed area with a scout hall and community hall nearby. The site is supported with parking, seating, barbeque facilities and public toilets.

37 *Upjohn Park, Dundas, Parramatta*

Upjohn Park's outdoor gym has an unknown manufacturer however a sign at the site notes it has been funded by the NSW Department of Sport and Recreation. Typifying a simple outdoor gym through its simple static design and structure, this facility promotes muscular strength. Due to the site's location adjacent to a pathway, this facility could also act as a fitness trail. The site is located within large park with graffiti and damage to the facility, discouraging possible users. Nearby facilities supporting this outdoor gym include public toilets, quality substantial open space, parking and bins.



48 *Castlewood Reserve, Castle Hill, The Hills*

This outdoor gym has been constructed by Fitness Trails Australia. Typified by separated static elements grouped together, this facility is a static exercise station. The site is located adjacent to a sports oval with a club house nearby. Residential land uses provide sufficient passive surveillance to the site. The facility is sufficiently shaded by high vegetation cover, is near substantial quality open space, children's play equipment and parking.

49 *George Thornton Reserve, West Pennant Hills, The Hills*

George Thornton Reserve's outdoor gym has been constructed by Fitness Trails Australia. Typified by separated static elements grouped together, this facility is a static exercise station. The site is located adjacent to a large sports oval with a club house and community centre nearby. Residential land uses provide sufficient passive surveillance to the site. The facility is supplemented with seating, other sports, substantial quality open space, children's play equipment and ample parking.



SOUTH WEST QUADRANT

2 Bankstown Memorial Oval, Bankstown, Bankstown

Bankstown Memorial Oval's outdoor gym is provided by Forpark Australia. With six mechanical elements located together, this outdoor gym is modern in type, promoting cardiovascular and muscular exercise. The novelty of outdoor gym equipment, which imitates indoor elements, is new and as such acts as an intrigue to the local community. The provided mechanical equipment encourages physical activity due to its uniqueness. The site is located adjacent to children's playground, giving adults the opportunity to exercise whilst undertaking a supervisory role. The site is in a high passive surveillance area, providing sufficient parking and is located adjacent to a sports oval.



3 Kelso Park South, Panania, Bankstown



Six mechanical elements, such as a cross trainer, shoulder press and butterfly press, manufactured by Forpark Australia, promote cardiovascular and muscular strength. Located together, they typify a modern outdoor gym facility. Kelso Park acts as a regional park providing numerous sporting facilities and physical activity opportunities for the community.

Its location adjacent to the shared pathway network encourages its use as a destination within the park. The site looks out over a sporting oval and is visible from the park entrance. Facilities which support this outdoor gym include, bins, seating and a nearby sheltered table.

4 Maluga Passive Park, Birrong, Bankstown

With six mechanical elements adjacent to a children's playground, Maluga Passive Park provides the ideal location for a family outing to the park for exercise. The site symbolises a modern outdoor gym facility promoting muscular strength and cardiovascular fitness. Signage advising the user how to effectively use



the equipment is provided as well as instructional signage, nearby shelter and bins. The

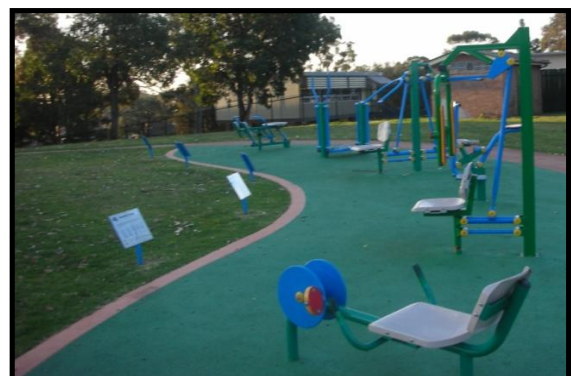


equipment, by Forpark Australia is located on a path which directs the public to the centrepiece of the park. Other than this, no directional signage advises of the facility, resulting in a lack of passive surveillance.

5 Mount Lewis Park, Mount Lewis, Bankstown



This outdoor gym, provided by Forpark Australia, has six mechanical elements including a rowing machine and cycle seat. The installed equipment promotes both cardiovascular activity and muscular strength. Behind a school, adjacent to a children's play equipment, this park's location is away from passive surveillance due to it being located on a hill top. The site is satisfactorily serviced with facilities such as partial vegetation shading, instructional signage, bubblers and a pathway. This site provides the opportunity for parents to exercise whilst supervising their children on nearby play equipment.



6 Playford Park, Padstow, Bankstown

Playford Park's outdoor gym is manufactured by Forpark Australia. Promoting both cardiovascular and muscular exercise, the six mechanical elements typify a modern outdoor gym facility. The site is located nearby to a large sports oval and children's playground. The site is also located along the park pathway, encouraging the user to make the park a destination. The site has sufficient seating, shade, parking, bins and public transport options, however does not provide adequate passive surveillance to deter undesirables.



7 RM Campbell Reserve, Bankstown, Bankstown



This outdoor gym has six mechanical elements manufactured by Forpark Australia which promote both muscular strength and cardiovascular exercise. The equipment's siting typifies that of a modern outdoor gym facility. It is located away from the children's play equipment and not on a pathway. However, its location is within a satisfactory passive surveillance distance from

adjacent units and nearby road. The site has sufficient parking, shade and instructional signage to support the facility.



8 *The Crest of Bankstown, Georges Hill, Bankstown*

This park is an interregional facility providing numerous other sporting opportunities. With eight elements located adjacent to children's play equipment, the site symbolises a modern outdoor gym facility. The equipment was manufactured by Forpark Australia to encourage a muscular strengthening and cardiovascular exercise regime. The site is located central within the park and looks over sporting fields. The site is serviced by a nearby table and shelter as well as toilets and parking.



10 *Harrington Lake, Harrington Park, Camden*

Harrington Lake's outdoor gym is constructed by TimberForm Fitness Events. The site is an all-in-one outdoor gym, typified by its materials being static and conjoined. While the site's main aim is to promote muscular strength, it site could also be considered to promote cardiovascular exercise due to its location along an active pedestrian pathway. Facilities supporting the site include instructional signage, children's play equipment and a barbeque pergola.



11 Cook Reserve, Ruse, Campbelltown

The Cook Reserve facility has been manufactured by AusCourse 2000. Typifying a simple outdoor gym through its simple static design and structure, this facility promotes muscular strength. The site is located adjacent to children's play equipment however, with graffiti and damage to the facility, the site does not encourage users. Nearby facilities encouraging its use include parking, public transport options, table shelters and substantial open space.



12 Eschol Park Sports Park, Eschol Park, Campbelltown

Eschol Park Sports Park's outdoor gym is constructed by PlaySpace Fitness Equipment. The site is an all-in-one outdoor gym, typified by its materials being static and conjoined. While the site's main aim is to promote muscular strength, the site could also be considered to promote cardiovascular exercise due to its location along a shared pathway which traverses the park. Facilities supporting the site include instructional signage, children's play equipment parking and toilets.



13 *Raby Park, Raby, Campbelltown*



Raby Park outdoor gym is manufactured by AusCourse 2000. Typifying a simple outdoor gym through its simple static design and structure, this facility promotes muscular strength. Due to the distance between elements and its location

adjacent to a pathway, this facility could also act as a fitness trail. The site is located adjacent to children's play equipment and a car park. Graffiti and damage to the facility discourages users. Nearby supporting facilities include parking, table shelters and substantial open space.



24 *Woodward Park, Liverpool, Liverpool*

At the time of observation, this outdoor gym was largely invisible to the public eye due to security surrounding the damaged Liverpool City Council (LCC). Constructed by PlaySpace Fitness Equipment to promote muscular strength, this outdoor gym is a static exercise station typified by separated static elements grouped together. The site is located behind the carpark at LCC and near a large community hall and netball courts. The site is serviced with ample parking, instructional signage and public transport options.



SOUTH EAST QUADRANT

9 *Henley Park, Enfield, Burwood*

This outdoor gym has been manufactured by PlayQuip and funded by the NSW Department of Sport and Recreation. Typified by strategically distanced static and mechanical metal elements, this outdoor gym is a fitness trail promoting both cardiovascular exercise and muscular strength. It is ideally located for passive surveillance, with local roads, residences and others sporting facilities nearby. The site is located close to the urban hub of Burwood, with ample parking, public toilets and public transport options.



14 *Cooks River Reserve, Canterbury to Hurlstone Park, Canterbury*

This outdoor gym is manufactured by FitnessTrails Australia. Typified by strategically distanced static exercise stations, this outdoor gym is an exercise station trail promoting both cardiovascular exercise and muscular strength. The exercise stations are located approximately 500 to 750 metres apart and include stretching and muscular exercises. The site is located adjacent to the Cook River which provides a picturesque backdrop to the facility. The site spans just under two kilometres, with facilities such as sun shade, seating, purpose-built dog park, instructional signage and a shared pathway.



17 *Olds Park, Peakhurst, Hurstville*

This outdoor gym has been manufactured by Saysu Outdoor Fitness Equipment. Typified by strategically distanced mechanical metal elements, this outdoor gym is a fitness trail promoting both cardiovascular exercise and muscular strength. Four elements sit approximately 400 to 750m apart, encouraging the user to walk or jog from one element to the next. It is ideally located for passive surveillance, being adjacent to a main road and other sporting facilities nearby. The site has sufficient parking, public toilets, is close to public transport options and sits adjacent to a bowls club and library.

**18** *Smith Park, Kingsgrove, Hurstville*

This outdoor gym has been constructed by Saysu Outdoor Fitness Equipment to promote muscular strength. Typified by its singular conjoined materials, this facility is an all-in-one outdoor gym, with some mechanical elements. The site is located behind a community hall and children's play equipment, away from public view. There are also netball courts within the park. The site is supported with nearby parking seating, bins and instructional signage.



19 *Stuart Street Park, Blakehurst, Kogarah*

The outdoor gym at Stuart Street Park has been installed by Fitness Trails Australia. Typified by separated static elements grouped together, this facility is a static exercise station promoting muscular strength. The site is located within a park which provides other sporting opportunities such as basketball, cricket and soccer nets, barbeque pergolas and children's play equipment. Due to the site's location adjacent to a pathway, this facility could also act as part of a fitness trail. The site has facilities such as partial vegetation sun shade, seating, instructional signage and a shared pathway.



23 *King George Park, Rozelle, Leichhardt*

This outdoor gym has been constructed by Fitness Trails Australia and funded by the NSW Department of Sport and Recreation. Typified by separated static elements grouped together, this facility is a static exercise station. While the site's main aim is to promote muscular strength, the site could also be considered to promote cardiovascular exercise due to its location along the Iron Cove shared pathway. The site is located adjacent to Iron Cove, and nearby to quality and substantial open space. The site is supported with parking, seating, bubblers and bins.



26 *Jarvie Park, Marrickville, Marrickville*

Jarvie Park's outdoor gym has an unknown manufacturer. Typifying a simple outdoor gym through its simple static design and structure, this facility promotes muscular strength. The site is located within a youth park with other facilities including basketball court, art installations, hall and children's play equipment. However, with graffiti and damage to the facility, the site does not encourage users. Nearby facilities encouraging its use include parking, public transport options and substantial open space.

27 *Steel Park, South Marrickville, Marrickville*

This outdoor gym has been constructed by Fitness Trails Australia. Typified by separated static elements grouped together, this facility is a static exercise station. While the site's main aim is to promote muscular strength, the site could also be

considered to promote cardiovascular exercise due to its location next to a shared pathway. This path connects this site with the facilities provided at Cook River Reserve, Canterbury. The site is located adjacent to a sports oval with a club house nearby. The site is sufficiently shaded by high vegetation cover, is near substantial quality open space and parking.



39 *Cook Park, Dolls Point to Kyeemah, Rockdale*

Cook Park's outdoor gym facilities are produced by Fitness Trails Australia. Typified by strategically distanced static exercise stations, this outdoor gym is an exercise station trail promoting both cardiovascular exercise and muscular strength. The exercise stations are located approximately 1.2 to 1.5 kilometres apart and provide stretching and muscular exercises. The site is has The Grand Parade, Brighton-Le-Sands to the east and Botany Bay on the west, providing a juxtaposition to the site of traffic and aesthetic views. The site spans just under six kilometres, with facilities such as sun shade, seating, purpose-built dog park, instructional signage and a shared pathway.

42 *Airey Park, Homebush, Strathfield*

Constructed by Fitness Trails Australia to encourage muscular strength, this outdoor gym is a static exercise station typified by separated static elements grouped together. The site is located adjacent to a cricket pitch and across the road from residential land uses. Although the site has visual damage, it is supported by facilities such as a sports clubhouse, high vegetation cover, sufficient parking, quality open space and ample passive surveillance.



43 *Don Lucas Reserve, Cronulla, Sutherland*

This outdoor gym has an unknown manufacturer. Typified by numerous separated static elements grouped together, this facility is a static exercise station promoting muscular strength. The site is located adjacent to Cronulla Beach and is within a large reserve. The site is supported with facilities such as parking, seating, bins and substantial quality open space. Nearby houses and the carpark provide sufficient passive surveillance.

44 *Marlon Park, Kurnell, Sutherland*

Marlon Park's outdoor gym facilities are produced by Forpark Australia. Typified by strategically distanced static and mechanical exercise stations, this outdoor gym is an exercise station trail promoting both cardiovascular exercise and muscular strength. The elements are located around a sports oval, approximately 150 to 200 metres apart, suggesting the user walk or jog

between stations. The site is near to the Caltex Oil Refinery and is subject to airport noise. The site is supported with facilities such as vegetation sun shade, instructional signage and a shared pathway.



45 *Observatory Hill, Millers Point, Sydney*

Observatory Hill's outdoor gym is constructed by Ausafe Fitness Events to promote muscular strength. The facility is an all-in-one outdoor gym, typified by its three very close stations being static and conjoined. The site is located between the Sydney Harbour Bridge freeway and the Observatory with north western harbour views. Facilities supporting the site include instructional signage, stairs, seating and aesthetic landscaping.

46 *South Sydney Rotary Park, Alexandria, Sydney*

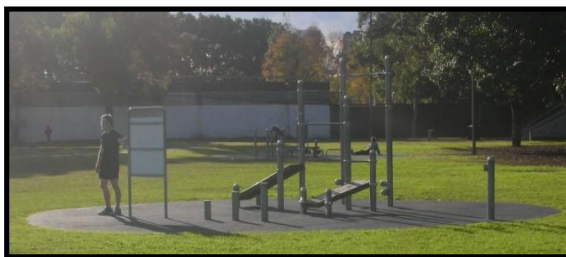
This outdoor gym has been manufactured by PlayMaster. Typifying a simple outdoor gym through its simple static design and structure, this facility promotes muscular strength. The site is surrounded by residential land uses, providing ample passive surveillance. However, it is covered with graffiti and there is damage to the facility, discouraging users. Nearby facilities include parking,



public transport options and partial vegetation shade cover.

47 *Wentworth Park, Glebe, Sydney*

This outdoor gym has been constructed by Ausafe Fitness Events to promote muscular strength and cardiovascular fitness. The facility is an all-in-one outdoor gym, typified by its four stations being static and conjoined. Due to the distance between stations, this facility could also act as a fitness trail. The site is located between Ultimo and Blackwattle Bay Fish Markets, with ample passive surveillance. Facilities supporting the site include instructional signage, children's play equipment, parking and public transport options.

50 *Dudley Page Reserve, Dover Heights, Waverley*

This outdoor gym has been manufactured by Fitness Trails Australia to promote muscular strength. This outdoor gym is a static exercise station characterised by separated static elements grouped together. The site is located on the crest of a hill, with sweeping views to the city.



Due to its location on a hill and behind an electricity substation, the site has minimal passive surveillance. The facility is supported with ample parking, substantial quality open space, a dog park and public transport options.

51 *Gaerloch Reserve, Tamarama, Waverley*

This outdoor gym was constructed by Fitness Trails Australia to promote cardiovascular fitness and muscular strength. Characterised by the location of two static exercise elements along the Coogee to Bondi Walk, this outdoor gym is part of a fitness trail with Marks Park (below).



The site's location adjacent to Tamarama, provides a picturesque backdrop to the outdoor gym equipment. The facility is supported by an active pedestrian route, Bondi Beach, parking, and substantial open space.

52 *Marks Park, Tamarama (Mackenzies Point), Waverley*

This outdoor gym was constructed by Fitness Trails Australia. Characterised by separated static exercise elements grouped together along the Coogee to Bondi Walk, this outdoor gym is part of a fitness trail with Gaerloch Reserve (above) promoting cardiovascular fitness and muscular strength. The site's location adjacent to the water provides a picturesque backdrop to the outdoor gym equipment. The facility is supported by an active pedestrian route, quality and substantial open space, the urban hub of Bondi, parking and partial shade cover.



53 *North Bondi, Bondi Beach, Waverley*

Constructed by an unknown manufacturer to promote muscular strength, this outdoor gym is a static exercise station typified by separated static elements grouped together. The site is located adjacent to Bondi Beach and North Bondi Surf Club and has sufficient passive surveillance during the day. The site ideally located, supported by ample parking, instructional signage, multiple public transport options, quality and substantial open space and is near to the urban hub of Bondi Beach.

54 *Waverley Park, Bondi, Waverley*

This outdoor gym has been constructed by Fitness Trails Australia to promote muscular strength. Typified by separated static elements grouped together, this facility is a static exercise station. The site is located adjacent to a sports oval with a club house nearby and

residential land uses across the road to provide passive surveillance. The site is near substantial quality open space, is provided with bins, has access to public transport options and sufficient parking.



58 *Christison Park, Vacluse, Woollahra*

This outdoor gym has been manufactured by FitnessTrails Australia. Typified by strategically distanced static exercise stations, this outdoor gym is an exercise station trail promoting both cardiovascular exercise and muscular strength. The exercise stations are located approximately 100 to 150 metres apart and include stretching and muscular exercises. The site takes in city glimpses providing a picturesque backdrop to the facility. The site spans just under 500 metres, with supporting facilities such as seating, sports oval, nearby toilets instructional signage and a shared pathway.

59 *Rushcutters Bay Park, Darling Point, Woollahra*

This outdoor gym has been constructed by Fitness Trails Australia. This facility is a static exercise station typified by separated static elements grouped together. While the site's main aim is to promote muscular strength, it site could also be considered to promote cardiovascular exercise due to its location along an active pedestrian pathway. The site is located adjacent to Rushcutters Bay and residential land uses overlook the site, providing satisfactory passive surveillance. The outdoor gym is partially sheltered by tree cover, is near to the urban hub of Edgecliff, has access to public transport options, seating and bins.



60 *Yarranabbe Park, Darling Point, Woollahra*

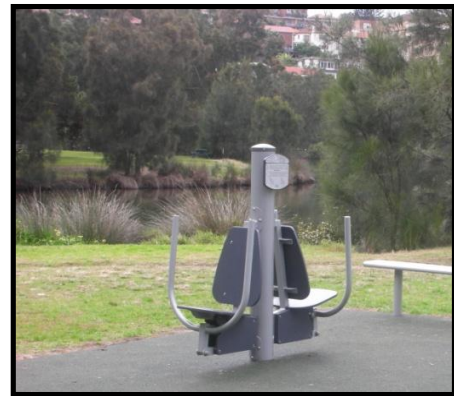
This outdoor gym has been constructed by Fitness Trails Australia. This facility is a static exercise station typified by separated static elements grouped together. While the site's main aim is to promote muscular strength, it site could also be considered to promote cardiovascular exercise due to its location along an active pedestrian pathway. This site takes in harbour views and residential land uses overlook the site, providing satisfactory passive surveillance. This facility is near to the urban hub of Edgecliff, has dog park facilities and is accessible to public transport options.



NORTH EAST QUADRANT

25 *Manly Lagoon Reserve, Manly, Manly*

This outdoor gym has been constructed by Move Fitness Systems, to promote cardiovascular fitness and muscular strength. Characterised by static and mechanical elements, this facility is a modern outdoor gym. The site is located adjacent to Manly Lagoon and Pittwater Road, providing a juxtaposition of road traffic and tranquillity. The site is serviced with facilities such as pedestrian access to the urban hub of Manly, public transport, a dog park and seating.



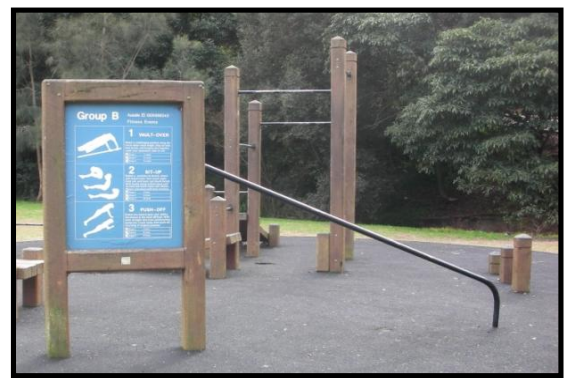
28 *North Sydney Civic Park, North Sydney, North Sydney*

Constructed by an unknown manufacturer, this outdoor gym is a static exercise station typified by separated static elements grouped together. The facility promotes muscular strength. The site is located within the North Sydney civic complex, which has council chambers and an open public theatre within the park. The site is accessible with public transport option, bubblers toilets, public library and lighting.



29 *Tunks Park, Northbridge, North Sydney*

This outdoor gym has been constructed by Ausafe Fitness Events to encourage muscular strength. The site is an all-in-one outdoor gym, typified by its materials being static and adjoining. The site is located within a regional sports facility which provides numerous ovals and sporting fields, a boat ramp and acts as a dog park. Facilities supporting the site include instructional signage, substantial quality open space, parking and toilets.



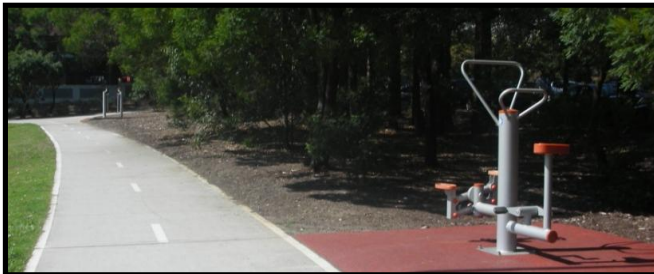
38 *Lakeside Park, North Narrabeen, Pittwater*

This outdoor gym has been manufactured by Forpark Australia and funded by the NSW Department of Sport and Recreation. Incorporating both static and mechanical elements, this facility is a modern outdoor gym promoting both cardiovascular fitness and muscular strength. It is located adjacent to Pittwater Road, Lakeside Park and Narrabeen Lake, which strategically places it for sufficient passive surveillance. The site is supported by facilities such as partial vegetation shade cover, parking, an active pedestrian route and is nearby to the urban hub of Narrabeen.



40 *ELS Hall Park, Marsfield, Ryde*

Manufactured by HealthTrails to promote cardiovascular fitness and muscular strength, this outdoor gym has ten separated mechanical elements. The outdoor gym sits along a one kilometre pathway with the elements distanced approximately 100 to 150 metres apart. The fitness trail sits within a section of the park. Typified by these specifications, this facility is a fitness trail. The site is located adjacent to ELS Hall and a cricket pitch. The site provides children's play equipment, barbeque facilities, parking, instructional signage and sun and rain shelter.

41 *Waterloo Park, Marsfield, Ryde*

This outdoor gym has been manufactured by Saisu Outdoor Fitness Equipment. Typified by strategically distanced static metal elements, this outdoor gym is a fitness trail promoting both cardiovascular exercise and muscular strength. Three elements sit approximately 200 to 400 metres apart, encouraging the user to walk or jog from one element to the next. It is ideally located for passive surveillance, being adjacent to a main road and surrounding an oval. The site has ample parking, public toilets, public transport options, children's play equipment, cafes and lighting.

55 *Castle Cove Oval, Castle Cove, Willoughby*

Castle Cove Oval's outdoor gym has been constructed by Fitness Trails Australia to promote muscular strength. Typified by separated static elements grouped together, this facility is a static exercise station. The site is located adjacent to a large sports oval hidden from public surveillance.. The facility is supported partial vegetation shade cover, other sports facilities, substantial quality open space, and ample parking.

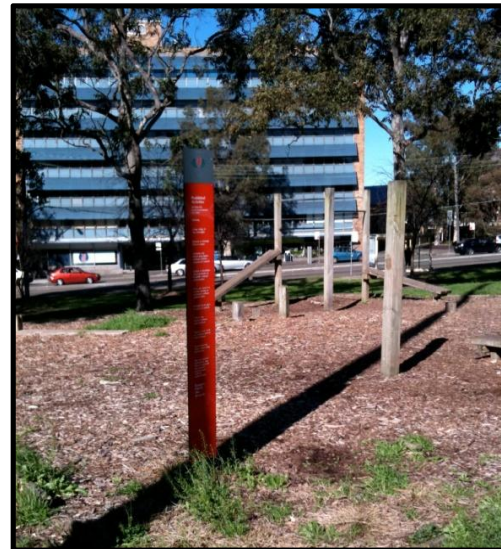
56 *Chatswood Oval, Chatswood, Willoughby*

This outdoor gym has been constructed by Move Fitness Systems to promote muscular strength. Typified by its singular conjoined materials, this facility is an all-in-one outdoor gym. The site is located behind a large wall of landscaping, away from public view. The outdoor gym looks onto a cricket oval. The site is supported with nearby parking, the urban hub of Chatswood, other sporting facilities, a skate park, bins and instructional signage.



57 *Gore Hill Oval, St Leonards, Willoughby*

This outdoor gym has been constructed by Fitness Trails Australia to promote muscular strength. Typified by separated static elements grouped together, this facility is a static exercise station. The site is located adjacent to a sports oval the Gore Hill Freeway nearby. The site is clearly neglected with weeds and damaged elements. The outdoor gym is sheltered by tree cover, is near to the urban hub of St Leonards and has access to public transport options.



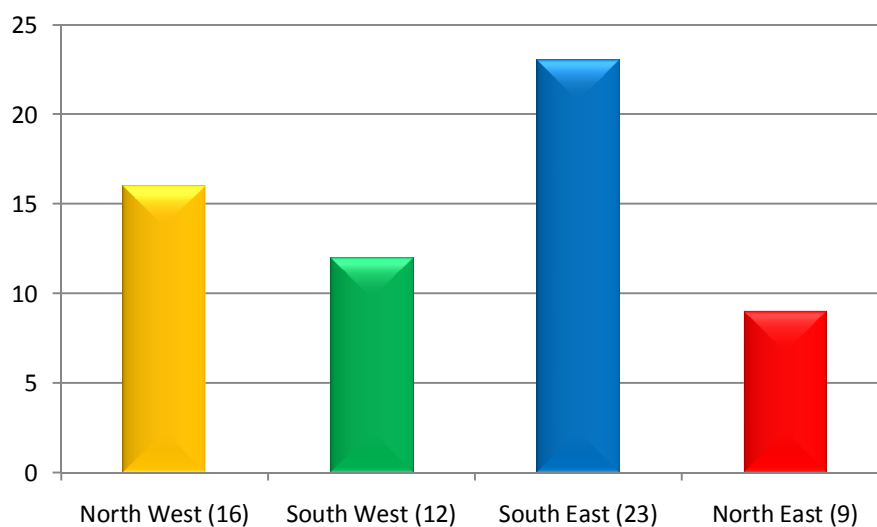
Comparison of Outdoor Gyms in Sydney

The presentation contained in the previous pages describes all identified outdoor gyms across the study area. It is evident from these summaries that outdoor gyms generally share similar characteristics, irrespective of which quadrant they are located. It should be noted that observation templates in their completed entirety will not form part of this thesis, however an example observations template can be found at Appendix A. Findings of the observations templates are analysed in the following section of this chapter and Chapter Five. The following section discusses and compares each quadrant's observational template results. Similarly, Chapter Five analyses the observations template findings to determine an understanding of local government's perspectives toward implementing outdoor gyms.

The implementation of outdoor gyms is the responsibility of local councils. As such there is a wide variety of types of outdoor gyms found within each quadrant resulting in no distinct quadrant themes. This is due to the fact that each council can implement what kind of equipment they want, where they want, resulting in a piecemeal approach to outdoor gyms Sydney-wide. This is discussed further in Chapter Five. The discussion of the observations template results therefore only provides a generalisation of outdoor gyms across the study area. As a result, any local policy should consider the character, trends and demands of each LGA separately. Having said this,.

The empirical research identified 60 outdoor gyms within Sydney. Figure 4.4 illustrates the distribution of these facilities within the study area.

Figure 4.4: Number of Outdoor Gyms in each Quadrant



Source: Caldwell 2010

The south east quadrant has the most outdoor gyms within Sydney. This could be attributed to the density of the population in this quadrant. It is recognised that a different method of separating the study area would produce different results. With 27 out of the 41 LGAs having at least one of the 60 outdoor gyms within their LGA, two thirds (65.85%) of local councils within the study area provide outdoor gym facilities to their community. These results are discussed further in Chapter Five.

North west quadrant outdoor gyms tend to be static exercise stations with eight out of the 16 identified outdoor gyms being this type. The other eight include types such as simple (1), community (1), fitness trails (4) and modern outdoor gyms (2). Parramatta LGA houses eight of the 16. With seven of these facilities being installed within the last three years, Parramatta provides a great example of promoting and providing outdoor gyms. Providing both static and mechanical options for users, locating them in highly visible areas, as well as appropriately maintaining these facilities, the use of their facilities is warmly encouraged. Hawkesbury LGAs outdoor gym is a fitness trail with modern mechanical elements. The uniqueness of this type of facility within the LGA increases its patronage. In contrast, The Hills LGA provides two outdoor gyms which are both static exercise stations. Although these facilities appeared to be well maintained when observed, their locations are behind sports ovals and out of public view. This can have a detrimental impact on the level of usage the site experiences.

The south west quadrant has 12 identified outdoor gyms. Seven of these facilities are modern outdoor gyms, all of which are located within the Bankstown LGA. The other five facilities are located in Camden, Campbelltown and Liverpool with types such as simple (2), all-in-one (2) and static exercise stations (1). All of Bankstown LGA's facilities have mechanical elements, with all of these facilities having been installed within the past four years. Bankstown sets the benchmark and is considered a leader by manufacturers for installing modern outdoor gyms in metropolitan areas across Australia (Bankstown Council rep. 2010). Six of their seven outdoor gyms are located adjacent to children's play equipment, so as to provide a place for parents and guardians to be active whilst playing supervisory role. In comparison, facilities in Campbelltown LGA (Cook Reserve, Ruse and Raby Park, Raby) are considered to be tokenistic. Their unkempt nature, visible graffiti and simplistic, basic equipment are outdated and should be upgraded.

South east quadrant outdoor gyms tend to be static exercise stations with 10 of the 23 identified facilities being this type. Other types include all-in-one (2), simple (2) and exercise station trails (5). The other four outdoor gyms are located within Hurstville (2), Burwood (1) and Sutherland (1) LGAs. These outdoor gyms are mechanical in nature with three being fitness trails. This quadrant is the most densely populated and provides the most variety in comparison to the other three quadrants. With 11 of the 23 facilities installed over 8 years

ago, facilities within this quadrant are generally run down and in need of maintenance, or upgrading. There are five exercise station trails within this quadrant, the highest of all quadrants. This suggests people within this quadrant combine walking and or jogging with outdoor gym equipment.

The north east quadrant has nine identified outdoor gyms. Four of the nine facilities are static exercise stations, all of which are either located in North Sydney or Willoughby LGAs. Generally, these outdoor gyms are sufficient in quality. Ryde LGA is considered the best example from the north east quadrant with its two outdoor gyms providing unique mechanical equipment in the form of a fitness trail. These two facilities are located in areas with passive surveillance, increasing the chance of high patronage. Manly and Pittwater LGAs have modern outdoor gyms located adjacent to water bodies and along active pedestrian routes, drawing on their local area's natural environments to encourage users. Willoughby provides a variety of equipment, from the unkempt facilities at Gore Hill Oval, St Leonards to the modern all-in-one element at Chatswood Oval, Chatswood. This suggests a piecemeal approach to encouraging physical activity within their LGA.

Final Thoughts

In summary, the 60 identified outdoor gyms in Sydney vary with some similarities visible within each quadrant. In separating the study area into four quadrants, results show no general similarities or themes between them. Although generally, the north west and south west quadrants have more modern outdoor gyms than the south east and north east quadrants. This is due to Bankstown and Parramatta LGAs having seven and eight outdoor gyms within their LGAs respectively. It should be noted that these facilities skew their respective quadrant's results due to their geographic location. Having the densest population, the south east quadrant naturally has the highest number of outdoor gyms, however they are generally old and in need of replacing. The north east quadrant's facilities generally provide varied outdoor gym types and use their natural environment to encourage users.

The next chapter uses this contrast and comparison in conjunction with the results of the observations template, photographic study and qualitative interviews to discuss the attitudes of local government towards the implementation of outdoor gyms.



Introduction

This chapter discusses why local government is responsible for outdoor gym implementation. The chapter then analyses the empirical research results of this thesis to gain an understanding of local governments' perspectives. It looks at reasons why councils are or are not choosing to install outdoor gyms. The types of facilities provided at existing outdoor gyms will also be analysed. The discussion is enhanced by the findings of three qualitative interviews, which were conducted with local government representatives from the study area. The qualitative interviews provide a deeper understanding of the current perspectives of local government towards implementing outdoor gyms.

Local Government and Physical Activity

This thesis has recognised the importance of promoting exercise and activity to increase the health of individuals within a community (Doyle *et al* 2006, p. 27). But who is responsible for ensuring this occurs? In NSW, local governments are intrinsically involved in providing a range of facilities and services to encourage participation in physical activity (Department of

Three LGAs were selectively chosen for interviewing based on their current outdoor gym situation as described in Figure 1.4. These LGAs were Bankstown, Marrickville and Warringah. The following table (Figure 5.2) provides a succinct comparison of the interviewed LGAs.

Figure 5.2: Bankstown, Marrickville and Warringah Comparison

LGA	Quadrant	Area	Population (2009)	Parks/Reserves	Outdoor Gyms
Bankstown	SW	77 km ²	186,000	293	7
Marrickville	SE	17 km ²	79,000	106	2
Warringah	NE	152km ²	140,000	160	0

Source: Bankstown Council 2010, Marrickville Council 2010, Warringah Council 2010, Caldwell 2010

Reasons for Installation of Outdoor Gyms

A qualitative interview with Bankstown Council (Bankstown Council rep. 2010) revealed the idea to install outdoor gym equipment came from a parks and leisure conference, *“I brought it back to council and tried to encourage them to take it up...”* (Bankstown Council rep. 2010). The respondent said a trial was commissioned by council and located at The Crest of Bankstown Sports Complex, Georges Hill. Due to its success, more outdoor gyms were approved as part of council’s capital works program. *“Based on the enormous success and community acceptance and popularity of equipment, we then proposed to install one set per ward, there’s ... four council wards within Bankstown”* (Bankstown Council rep. 2010). When asked if there was any resistance to their implementation, the respondent noted, *“Our council is really supportive of outdoor stuff... because we don’t have beaches and lots of other things. So parks are really important+”*(Bankstown Council rep. 2010).

Warringah LGA is a council with beaches that has no outdoor gyms. In a qualitative interview with Councillor Michael Regan (Mayor), he considers Warringah does not currently have a demand for outdoor gyms, *“We’ve got other recreational facilities. You can go kayaking on the lagoon, you can go surfing, you can go bushwalking we have it all here, we’re blessed, it’s great”* (Regan 2010). Cllr Regan considers part of the reason for no outdoor gyms in Warringah is because of the beach culture, abundant natural beauty and existing recreational

facilities within the LGA (Regan 2010). As such, both Cllr Regan and the Bankstown respondent, consider the beach a place which can remove the need for outdoor gyms.

However, it is interesting to note that in other LGAs within Sydney, there are outdoor gyms located within beach areas. Of the six councils with patrolled beaches in the study area, four (Pittwater, Manly, Waverley and Sutherland) provide outdoor gyms to their community. There are nine outdoor gyms located within these four LGAs. Six (25, 43, 51, 52, 53, 38 on Figure 4.1) are located either adjacent to a lake or near a beach. When asked what his perspective was towards outdoor gyms, Cllr Regan noted, *“I think it’s got merit, I’d want to hear my community put in a demand for it, at the moment we’ve got a demand for community gardens, bike tracks. The demand here [for outdoor gyms] would be for the lower income earners and for people who live in units/high density areas”* (Regan 2010).

Cllr Regan also mentioned there are other gym facilities within the LGA and cited that as a possible reason why outdoor gyms hadn’t been considered previously, *“Perhaps they’re [the community are] unaware or they don’t want it, in terms of because they’ve got a gym membership, or using their local surf club or they’ve got a gym at they’re work. A lot of workplaces do have their own staff gym facilities...”* (Regan 2010). Other reasons for no outdoor gyms in Warringah include budget constraints and never having considered them before (Regan 2010).

Marrickville Council’s respondent, Neil Finlay (Recreation Officer), has had an increase in the interest of outdoor gyms from residents within the LGA recently, *“We’ve had inquiries from people which sell the equipment and from seniors groups, that has been the biggest because there’s been information in the newspapers (Campion et al 2010)”* (Finlay 2010). This has resulted in his interest to possibly upgrade and/or install new outdoor gyms. He was unaware as to when or why the two outdoor gyms within his LGA were installed. This is because the parks and recreation team at Marrickville are currently responsible for these facilities. However, they will be Mr. Findlay’s team’s responsibility after a Council restructure (Finlay 2010).

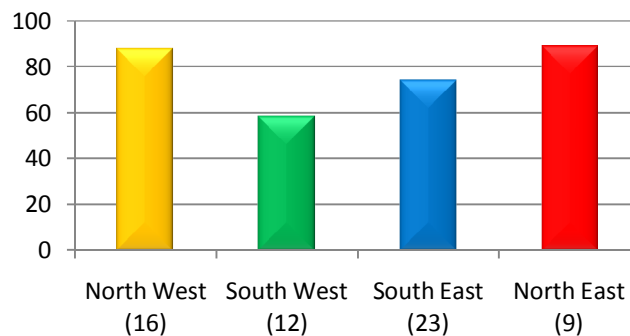
Mr Finlay considers outdoor gyms a very positive addition to the public domain, *“...I would love to see as many exercise and recreation focused equipment and infrastructure as possible. The biggest challenge is the cost associated and selling it to the council and community support. An intense consultation process and cost are the barriers. Having said that, I’d love to see lots and lots of facilities”* (Finlay 2010).

When asked why he wanted to see more outdoor gym facilities within Marrickville, he said, *“I think it goes back to the benefits of community recreation. From a community health perspective, if your community members are healthy, active and participating, then that creates a wider benefit to the community. I think also visually, for people coming into Marrickville as well, it immediately identifies Marrickville as an active community”* (Finlay 2010). Considering outdoor gyms as more than just an installation, Mr Finlay identifies the social and well-being benefits outdoor gyms can have on a community. This reason for considering the installation of outdoor gym equipment illustrates a positive attitude from Marrickville.

Looking to the future, Bankstown Council is to install more outdoor gyms, *“...were hoping to do a program of installing another one per ward per year. So you know, as we do that, we’d bring all the communities closer to one [an outdoor gym]. So if we had one per ward you’d have one within a couple of kilometres of you, if we can get one, two, three, four, five per ward... it should be five or six hundred metres to your nearest gym. So that’s the goal”* (Bankstown Council rep. 2010). This response provides a clear understanding of how important outdoor gyms are to Bankstown Council in encouraging their community to be physically active.

Where Are Outdoor Gyms Installed?

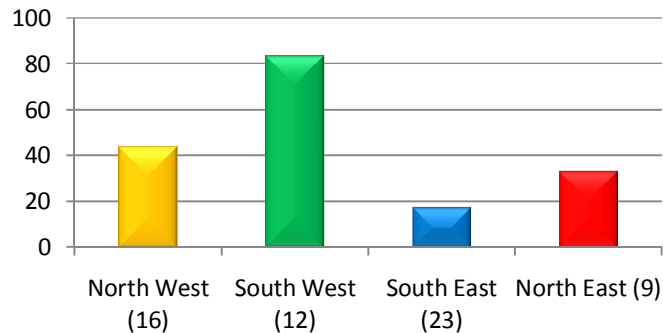
The observations template identified numerous attributes pertaining to the location of outdoor gyms in the study area. With 78% of all identified outdoor gyms near other sporting facilities such as ovals, netball and basketball courts and baseball fields, this location communicates a strong fitness association between existing sports facilities and outdoor gyms to the community. Figure 5.3 provides a percentage of how many outdoor gyms are located near other sports facilities.

Figure 5.3: Percentage of Outdoor Gyms near other Sports Facilities

Source: Caldwell 2010

Figure 5.3 illustrates the north west and the north east quadrants provide more outdoor gyms nearer to other sports facilities (87.5% and 88.8% respectively). While the south west and south east provide other sports facilities near outdoor gyms 58.3% and 73.9% of the time. Outdoor gyms within the south west quadrant, particularly those in the Bankstown LGA, are generally located closer to children's play equipment, which may contribute to the reason for a lower percentage. Outdoor gyms in the north west and north east quadrants tend to be located in sports parks and therefore are nearby to other sporting facilities. Locating outdoor gyms with other sporting facilities signifies the importance of outdoor gyms to local government in promoting physical activity within the community.

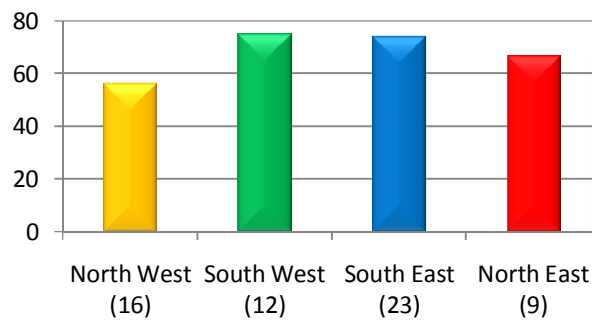
It is interesting to note that 42% of outdoor gyms are located nearby to a children's play equipment. In particular Bankstown Council has installed 6 out of 7 of their outdoor gyms nearby to children's play equipment for particular reasons. The Bankstown respondent said, *"What that does is encourages whole families to go to the park and while kids use play equipment, parents and/or carers and grandparents use the gym equipment. So instead of them being passive and observing at the park, they're participating. And because they're adjacent to each other they've still got that supervisory role"* (Bankstown Council rep. 2010). Figure 5.4 provides a percentage of how many outdoor gyms are located near children's play equipment.

Figure 5.4: Percentage of Outdoor Gyms near Children's Playgrounds

Source: Caldwell 2010

Reflecting the Bankstown respondents' information, the south west quadrant has the highest percentage of outdoor gyms located near children's play equipment (83.3%). This can be attributed to Bankstown having 58% of outdoor gyms within the south west quadrant. The other quadrants don't regard this consideration as significant when determining where to locate outdoor gyms. Parks within the south east quadrant are generally not promoted as parks for children, such as Observatory Hill, Millers Point, Christison Park, Vauclose or South Sydney Rotary Park, Alexandria. This can be a reason for such a low percentage of outdoor gyms near children's play equipment in the south east quadrant. An added element to locating outdoor gyms near children's play equipment was raised by the Bankstown respondent, *"So families are exercising together. So Nan and Pop and grandkids all on different pieces of equipment and it's so, it's you know, really good for the family, and it's really good that they're all outdoors together"* (Bankstown Council rep. 2010). Identifying this benefit to the community provides an additional understanding to local governments' perspectives on outdoor gyms.

Another observation of outdoor gym locations was that 68% were adjacent to pedestrian routes. Their location along pedestrian routes places them in the public eye. The Bankstown respondent noted outdoor gyms in Bankstown are *"...located in high profile locations so they're not very isolated"* (Bankstown Council rep. 2010). This provides us with the understanding that local government are aware of the benefits public surveillance to sites can have on their use. Figure 5.5 provides a percentage of how many outdoor gyms are located near a pedestrian route.

Figure 5.5: Percentage of Outdoor Gyms near Pedestrian Routes

Source: Caldwell 2010

Figure 5.5 illustrates, that councils within all quadrants consider locating outdoor gyms along pedestrian routes an important factor. The south west and south east quadrants have the most outdoor gyms along pedestrian routes (75% and 73.9% respectively). Ku-Ring-Gai LGA outdoor gyms aren't located along a pathway, rather they are located adjacent to sports ovals. Similarly, two of Parramatta LGA's outdoor gyms are adjacent to sports ovals with two hidden from public view. These could be reasons as to why the north west quadrant doesn't have as many outdoor gyms along pedestrian routes.

Facilities Supporting the Use of Outdoor Gyms

Choosing which facilities to observe and record at each site was compiled from my own experiences, other similar observational templates and initial empirical research undertakings. Particular facilities are necessary to engage the local community in outdoor physical activity (Kahn *et al* 2002). As the respondent from Bankstown noted, *"I think you need supporting infrastructure. So they [outdoor gyms] need to be in high profile sites where there's ... walking a path, opportunities for rest stations... shade, seats and rest areas. You might want drinking fountains or bubblers..."* (Bankstown Council rep. 2010). Bankstown LGA considers providing supporting facilities important to the success of an outdoor gym.

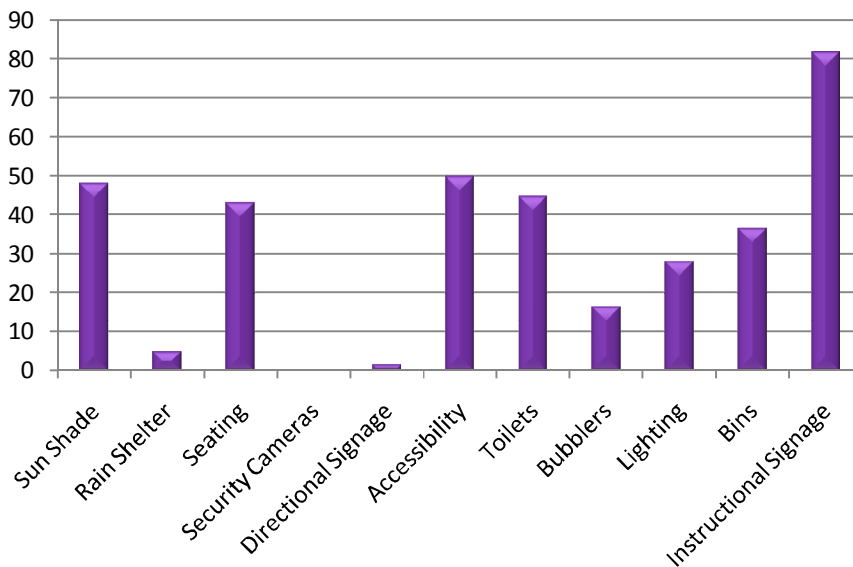
The Bankstown respondent also noted that a park with sufficient facilities can increase physical activity within a community, *"...The more amenity there is there, the longer people will stay there rather than just going [for a walk or run] around the block. So they can go there with their kids, the dogs, ride a bike, whatever, and there's opportunity to sit and rest and use*

toilets and things like that, it's more likely that they're going to turn a 15 minute visit to the park into an hour and a half visit. So the more you include in a park the more likely they are to engage with the facilities" (Bankstown Council rep. 2010).

Mr Finlay and Clr Regan were not as responsive to the benefits of providing sufficient facilities at an outdoor gym. Mr Finlay noted the importance of identifying their location as well as instructional signage (Finlay 2010). Clr Regan said, "...the only thing that I can think of that would be worthwhile, a shade sail" (Regan 2010). These responses can be attributed to each council's involvement with outdoor gyms. While Bankstown Council is experienced in what facilities best support an outdoor gym, Warringah and Marrickville aren't as aware due to minimal or no outdoor gyms in their LGA.

Figure 5.6 illustrates the range and percentage of facilities provided at outdoor gyms within the study area. An analysis of the importance local government places on particular supporting facilities follows.

Figure: 5.6: Percentage of Facilities at Outdoor Gyms within the Study Area



Source: Caldwell 2010

Figure 5.6 demonstrates instructional signage as the most frequently provided facility (81.7%). This can be because most outdoor gyms come equipped with instructional signage when initially installed. Sun shade (48.3%), seating (43.3%), accessibility (50%), toilets (45%) and bins (36.7%) are at outdoor gyms more frequently than bubblers (16.7%) and lighting (28.3%). This may be due to outdoor gyms generally located in parks with such facilities already existing prior to their installation.

The provision of rain shelter (5%), security cameras (0%) and directional signage (1.7%) is not considered as important to local government when installing an outdoor gym. This could be because common sense would consider exercising outdoors in the rain is not common. Further, two thirds (66.7%) of outdoor gyms are located in areas with sufficient passive surveillance. As such, installing security cameras may be considered as unnecessary. Local government can therefore be understood as acting in a cost effective manner through locating outdoor gyms in areas where core facilities already exist.

Final Thoughts

Overall, understanding local governments perspectives on outdoor gyms has resulted in the knowledge that their implementation involves the consideration of numerous issues.

This chapter has provided different perspectives pertaining to local governments consideration of implementing outdoor gyms. It has contemplated the views, challenges and constraints local governments face when considering installing outdoor gym. It was concluded that unique natural environments such as beaches or lakes within LGAs have not deterred the implementation of outdoor gyms, rather they have been encouraged. Generally, facilities provided to support the use of outdoor gyms have been acceptable, however there has been no consistency or genuine consideration regarding supporting facilities. The observations template identified a large proportion of outdoor gyms were located adjacent to pedestrian routes and other sports facilities. Through the findings of the qualitative interviews and observations template, this chapter concluded that generally, local government views the implementation of outdoor gyms as a positive initiative, which can increase physical activity levels in their community. However, there are barriers to their implementation such as budget costs and senior management approval.



Introduction

During site visits to the 60 outdoor gyms identified within Sydney, observations were recorded, resulting in a thorough database of the attributes of each site. Through personal observations and lack of guidance from government policy, the following chapter aims to compile a succinct guideline for implementing a successful outdoor gym. This chapter therefore looks at the components of a high quality and well designed facility. It draws on information discussed in previous chapters, as well as observational data to develop best practice principles for a successful outdoor gym facility. The result is the development of a series of performance-based objectives and design features for an ideal outdoor gym. All photographs in the following chapter were taken by the researcher (Caldwell 2010)

A Vision for Sydney's Outdoor Gyms

In realising the importance of the health, cultural and social benefits within a community, a vision relating to the network of outdoor gym facilities within Sydney needs to be established. The vision should prioritise and make clear the factors to be considered and addressed when implementing outdoor gym facilities. The vision relates to outdoor gym facilities with a focus

on encouraging continuity when contemplating their design.

Sydney will provide diverse outdoor gyms that reflect physical and mental health benefits as well as cultural and social opportunities, through using a coordinated approach to their design. Sydney's outdoor gyms will be uniquely designed through interpreting local community identities and will be accessible to all.

Outdoor Gym Design Elements

To achieve the vision, the following section considers the design elements required to achieve high quality design outcomes for Sydney's outdoor gyms. Design characteristics that require appropriate consideration when creating conducive environments include provision of facilities, type of gym equipment and site selection. Each identified characteristic has a series of objectives which function as outcomes. The objectives are supported by recommendations which help to achieve the outcomes.

Provision of Facilities

The facilities of an outdoor gym refer to the required physical attributes and elements that are necessary in designing an outdoor gym. The identified recommendations have been compiled using attributes required in a conventional public open space, as well as the specialised features that would enhance the experience of an outdoor gym.

Objectives

Sufficient provision of facilities for the equitable enjoyment of an outdoor gym by:

- Providing features that encourage a wide range of active and passive participation; and
- Encouraging aesthetically pleasing design.

Facility Design Features

To ensure the facility objectives are met, a list of required design features has been compiled through personal observation, research and experience.

Sun shade: Shade from the sun can be provided by vegetation as well as structural features. For the benefit of users shade is an important facility for an outdoor gym. Providing users with seating in shaded areas allows a place to cool off and reduce risk of excessive sun exposure. (Lakeside Park, Narrabeen).



Rain Shelter: While indoor gyms are sheltered from the rain, exercising outdoors in the rain is uncommon. Shelter from the rain relies more on the provision of water proof structural features rather than sun shade and therefore vegetation as rain shelter does not suffice. The use of innovative shelter designs has not been widely applied to outdoor gyms, however should be looked at in the future. (ELS Hall Park, Marsfield).



Security Cameras: The installation of closed circuit television cameras is becoming increasingly popular in Sydney and other cities around the world. If these devices are visible it may provide a disincentive for people to commit criminal acts. They also contribute to an increase in the perception of safety.

Seating: The social and spectator element of being outdoors relies on the provision of sufficient seating. Seating can contribute to active and passive enjoyment of the facility. Seating can be designed as an integrated feature of the outdoor gym, for exercise purposes, or can be in the form of benches or tables. Seating should be located to maximise potential views as well as encourage social interaction. (Observatory Hill, Millers Point).



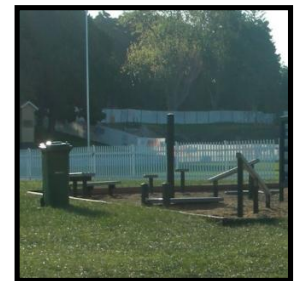
Facilities for People with a Disability: Generally, people with disabilities are not likely to use outdoor gym equipment. They may however want to be a part of the local identity and passively participate. Facilities that enable them to do so, such as features designed in accordance with the *Disability Discrimination Act 1992* should be installed for equitable enjoyment of public space.

Toilets: Toilets that are safe and visible are a necessity in public domain areas. These should also be designed to provide access for people with a disability. (Rofe Park, Hornsby Heights).



Bubblers: For a facility which demands a high level of physical activity, bubblers are a necessary characteristic for an outdoor gym facility. It should be noted that bubblers are a regular target for vandalism and as such their design should be in a way that discourages undesirables.

Rubbish bins: Providing durable and accessible bins makes it easier to maintain the cleanliness of the outdoor gym. Not having bins could result in traces of waste, significantly reducing the physical appearance of the outdoor gym. (Waverley Park, Bondi).



Lighting: As people regularly exercise at nightfall, lighting can encourage safety and surveillance at night especially in winter months. Lighting can also discourage antisocial activities as well as enable use of the facilities at night.

Signage: Places of public interest, particularly multi-purpose parks, provide directional signage to identify the different facilities located in a park. This signage then leads the user to the outdoor gym facility where instructional signage is provided on how to use the equipment safely and effectively. (Henley Park, Enfield).



Outdoor Gym Exercise Equipment

An essential consideration for the success of an outdoor gym are the factors relating to its ability to provide a healthy exercise regime. If an outdoor gym has not been designed with careful consideration of this factor it can be a magnet for undesirables making it unsafe and redundant. The major considerations that relate to providing the right exercise equipment for a community are the types of equipment installed, their siting, the quality of chosen materials and structural integrity. The degree of exercise success relies on the relationship between

these factors. Below is a series of objectives and design criteria with regard to providing outdoor gym equipment.

Objectives

Ensure high use of outdoor gyms through careful consideration of outdoor gym equipment elements such as:

- Installing high quality equipment design that incorporates a variety of static and mechanical equipment choices, promoting a diverse exercise regime and range of skill level; and
- Ensuring high quality construction and durability of material choice.

Outdoor Gym Exercise Equipment Design Features

Below is a list of required design features compiled through personal observation, research and experience to ensure the objectives listed above are met.

Equipment Design: An outdoor gym is to be designed in a way that encourages a range of advanced and beginner skill levels. Outdoor gym equipment designs vary from static equipment (no moveable parts, strategically placed benches/bars used to perform particular muscular exercises) to mechanical equipment (moveable parts emulating indoor gym equipment). Mechanical equipment increases heart rate and provides a cardiovascular workout and is therefore more popular. Static equipment provides an opportunity for muscle stretching and strengthening, which increases metabolism. Providing diverse outdoor gym equipment encourages a greater level of community inclusion. (Boronia Park, Epping).



Siting: How outdoor gym equipment is set out and assembled reflects what kind of facility it is aiming to be. In defining the outdoor gym, Chapter 3 identified seven types of outdoor gyms. Each of these types has strategically located gym equipment so as to provide a particular outdoor gym type. By providing unique and interesting facilities, an outdoor gym increases its use and popularity.

Pathways: Providing an outdoor gym along a pathway not only increases visual awareness amongst the community, it can make the facility part of a fitness trail. Whether the elements are strategically separated along the pathway or grouped together, an outdoor gym along a pathway becomes an attraction for walkers or joggers. (Cowells Lane Reserve, Ermington).



Construction and Maintenance: A poorly constructed and maintained outdoor gym can considerably reduce its appeal and safety. Poor construction can result in parts falling loose or breaking. Poorly constructed facilities can be avoided by using hard wearing materials, quality workmanship and regular maintenance. Such practices constitute good construction and maintenance principles. Equipment should be cleaned regularly to ensure hygiene.

Level Surface: A level surface is integral to the success of an outdoor gym. This is achieved by providing ground surfaces such as Astroturf, soft fall, wood chips, wood shavings, grass or sand. Providing a level surface will be reliant on the construction technique of the installed outdoor gym equipment.

Site Selection

Site selection is a vital consideration for the success of an outdoor gym. While the concept of an outdoor gym is not new and the benefits of exercising outdoors are widespread, there is not an identified best practice example of an ideally located outdoor gym in Sydney. Below is a series of objectives and design criteria to appropriately locate an outdoor gym facility.

Objectives

Encourage the use of an outdoor gym by carefully considering its site selection through:

- Locating outdoor gyms within reasonable proximity to active urban hubs and public transport options;
- Locating outdoor gyms on active pedestrian routes and within public view; and
- Locating outdoor gyms near other sports facilities.

Site Selection Design Features

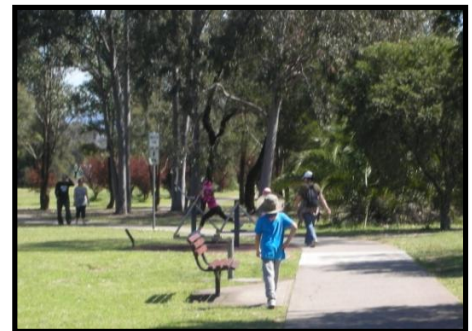
Below is a list of required design features compiled through personal observation, research and experience to ensure the above site selection objectives are met.

Passive surveillance: An outdoor gym should consider passive surveillance in its design. This can discourage the instance and perception of crime. Passive surveillance can be achieved by selecting a site that is clearly visibility from roads, shopping centres, housing, or other active recreational land uses. People are more likely to feel safe at an outdoor gym if they can be seen by and interact with others. (Harrington Lake, Harrington Park).



Parking: A site should be located to enable sufficient parking for both active and passive outdoor gym users. Whether the site is within a regional location or a more local location will also depend on the level of parking provided.

Located on active pedestrian routes: Locating an outdoor gym on an active pedestrian route increases the opportunity for participation, surveillance. It also contributes to the lively character of the facility. It also provides the opportunity for the outdoor gym to become part of a fitness trail. (Ham Common, Hawkesbury).



Public Transport: To encourage the use of public transport, outdoor gyms should be located in close proximity to numerous public transport routes and options.

Other recreational facilities: The idea of locating several recreational facilities in one local or regional sporting complex is encouraged as this creates a lively variety of activities and social interaction opportunities. The sporting complex becomes a destination, where users become multi-facility users, increasing the likelihood of their use of the outdoor gym equipment.

Local Characteristics

The character of an outdoor gym is created by appropriately implementing the best practice principles outlined above. This final consideration enables a facility to be embraced by the local community and appreciated by visitors. Below are objectives that encourage a positive community character for an outdoor gym facility.

Objective

Create a unique local community outdoor gym facility by:

- Encouraging local design attributes;
- Providing an opportunity for local culture to develop;
- Ensuring sufficient maintenance and cleaning;
- Promoting crime prevention through environmental design;

Required design features

To ensure the unique feel and character objectives are met, a list of required design features has been compiled through personal observation, research and experience.

Encouraging locally reflective design attributes: An outdoor gym that is locally designed promotes ownership and pride in the facility. Community consultation is essential in achieving locally reflective design, which can contribute to the development of culture and social cohesion. Providing opportunity for culture development is an effective way of creating community identity and pride. Public facilities, particularly outdoor gyms, manifest local identity in their design and uniqueness. Opportunities to incorporate public art at the facility is not discouraged.

Ensuring sufficient maintenance and cleaning: The general feel and atmosphere of an outdoor gym relies on the extent of a maintenance schedule. If a facility is littered with rubbish this may contribute to it projecting a poor image to the community. Maintenance is the responsibility of the local council and should be conducted as regularly as required. A contact number should also be available for the users of the facility to alert the local council in the event that immediate maintenance is required.

Final Thoughts

The performance criteria and objectives have been devised in response to the observational data relating to users, site attributes and exercise functions of an outdoor gym facility. These aspects have been drawn together to create the ideal outdoor gym. It is important to consider these objectives for the creation of successful outdoor gyms. A successful facility is influenced by its construction, management and supporting facilities. An outdoor gym which considers the vision as well as the objective criteria has the ability to increase physical activity levels within a community.



Summary

Planning the built environment can result in a number of multifaceted consequences, hindering active living. For instance, an active lifestyle is affected by urban planning practices such as distances between land uses, access to public transport options and opportunities to engage in physical activity. Despite these important elements, planning practice has been more inclined to neglect active living principles. This thesis has endeavoured to raise awareness of this issue to urban planners.

The time to promote an active lifestyle has never been better. For example, the increase of non communicable disease in urban environments such as obesity and type II diabetes has resulted in an increased interest in the relationship between human health and the urban environment. Escalating public awareness of the direct and indirect costs relating to leading an unhealthy lifestyle, has also contributed to the topical nature of encouraging physical activity. An outdoor gym provides an opportunity for encouraging active lifestyles. Providing convivial and supportive environments for physical activity can increase physical activity levels within a community.

This thesis has aimed to research the outdoor gym as an intervention to increase physical activity involvement at a local level. In response to these aims, this thesis defined an outdoor gym, identified locations of outdoor gyms within Sydney and explored local governments perspectives towards their implementation.

The thesis aims were reached by completing the methodology. This involved a telephone survey to identify locations of outdoor gyms, a site visit to each identified outdoor gym followed by the completion of an observations template, and finally qualitative interviews were also conducted with local government public servants.

Conclusions

The findings of the literature review concluded the consideration active living opportunities had generally been ignored by urban planners. This finding was explored by considering the initiatives which promote physical activity within an urban environment. A telephone survey was conducted with the 41 LGAs in Sydney under the *Sydney Metropolitan Strategy: A City of Cities*. Undertaking the survey identified 60 outdoor gyms within the study area. Locations ranged from Richmond in the north west, Kurnell in the south east, North Narrabeen in the north east and Harrington Park in the south west. These findings were then used to undertake a site visit of each location to collect information pertaining to the identified sites.

Prior to visiting the identified sites, a Site Visit and Observations Template (Appendix A) was compiled to compare and contrast outdoor gyms within Sydney. The observations template collected information regarding users at the time of visit, provision of facilities, outdoor gym equipment specifics and site selection. Each site was visited with photographs and an observations template completed. This produced an inventory of outdoor gyms in Sydney. The site visits identified numerous types of outdoor gyms including community, simple, all-in-one, exercise stations, fitness trails and modern outdoor gyms.

An analysis of the observations template findings revealed there is generally no relationship between geographical locations within Sydney and the types of outdoor gyms installed. Outdoor gyms tend to be a unique local council initiative, resulting in no consistency or genuine consideration for providing supporting facilities to encourage their use. Issues

relating to outdoor gyms tend to be prior to their installation, such as cost barriers and gaining community and senior management approval.

The findings of this thesis and understanding local governments perspective pertaining to the installation of outdoor gyms have assisted in the development of best practice principles for outdoor gyms. These principles provide local government with an understanding of the necessary elements required to implement a successful outdoor gym.

Sydney's outdoor gyms have the capacity to be improved. Gentrifying them with design features, such as providing supporting facilities, considering equipment type and the selection of the site will result in more welcoming and successful outdoor gyms. Through applying these principles, local government can have outdoor gyms that achieve equitable access and provide communities with opportunities for cultural and social expression, whilst providing opportunities for physical activity.

Recommendations

This thesis has examined the key issues relating to the installation of outdoor gyms as a way of encouraging physical activity at a local level. Upon completion of the research methodology, particular issues were raised through the analysis of its findings. The following recommendations are therefore suggested:

1. The implementation of outdoor gyms should be recognised by the NSW Department of Planning as a legitimate and effective way to promote physical activity at a local level. It is recommended that the Department issue a fact sheet based on the best practice principles established by this thesis to local government to ensure outdoor gyms are implemented effectively.
2. The issue of there being no Australian Standard for the implementation and use of outdoor gym equipment is seen as a future concern for local government. Currently, local government is applying the Australian Standard for Playgrounds. It is recommended that the appropriate government agency issue suitable standards for this increasingly popular local government initiative.

3. This thesis provides a succinct inventory of outdoor gyms within Sydney. It is therefore recommended that all local governments in Sydney receive a copy of this thesis to review its findings. Subsequently, local governments with outdoor gyms should instigate necessary upgrades of existing facilities as well as consider increasing the number of outdoor gyms within their LGA. Local governments without outdoor gyms should consider the findings of this thesis and contemplate the installation of an outdoor gym within their LGA.

Further Research Opportunities

This thesis represents original research pertaining to the implementation of outdoor gyms at a local government level. However, a number of considerations relating to outdoor gyms would require further research. Resource and time constraints resulted in such research opportunities unable to be completed within this thesis. Completion of the below research opportunities would provide a more extensive research base for outdoor gyms and would also complement the findings of this thesis.

This thesis has identified the types of exercise equipment which are currently installed around Sydney; results of which show a vast diversity in installed equipment. Future research should focus on the types of outdoor gym equipment that are the most successful in encouraging the local community to partake in physical activity. Research into what exercise equipment is the most effective terms of effective physical activity output would also be an important research task. Discussions with current outdoor gym exercise equipment suppliers would complement the research.

While this thesis has aimed to provide an understanding of the perspectives of local government toward outdoor gyms, it has not analysed local government policy. This was mainly due to there being no distinct policy which governed their implementation. Future research should investigate state governments consideration of outdoor gyms in consultation with relevant government agencies such as the Premier's Council for Active Living, the Department of Planning and the Department of Health. This would provide local government with more of an understanding of the State governments perspective of outdoor gyms and other physical activity interventions within the urban environment.

This thesis took an observational approach to understanding outdoor gyms within Sydney. Future research should examine the community's perspective of implementing outdoor gyms within their local area. In taking this research approach, local councils would be able to have a reference to what the community wants and whether previous outdoor gym installations are considered appropriate in the eyes of the local community. Discussions with personal trainers, indoor gym businesses and users would enhance the findings of this research.

Final Thoughts

It is discomfoting to think the installation of outdoor gyms is in response to combating sedentary lifestyles and not from communities asking for more opportunities to lead an active lifestyle. None the less, the findings of this thesis are highly important as they demonstrate the increasing popularity of outdoor gyms. My research found 27 local governments out of the 41 in Sydney have outdoor gyms in their LGA. It also recognised the eclectic nature of equipment that has been installed across the study area, providing an understanding of the piecemeal approach to their implementation. My research further demonstrated perspectives of local government toward outdoor gyms, presenting an insight into outdoor gym discussions at a local level. It is important that these findings are highlighted as essential considerations when planning for outdoor gyms. This can not only help the preparation of active community policies in the future but to also consider provisions for their appropriate and successful implementation.

This thesis has suggested numerous ways in which urban planners can constructively increase occurrences of physical activity at a local level. It has provided best practice principles for outdoor gyms to better support their effective implementation. These principles were formed using the empirical research, qualitative interviews and personal experiences.

The importance of encouraging and leading an active lifestyle has increased due to a heightened interest in the relationship between the urban environment as well as the frequency and cost of non communicable diseases in cities. It is therefore imperative that urban planners understand their role in providing opportunities, such as outdoor gyms, for communities to engage in physical activity. In turn, increasing positive health benefits for communities.



- Ashton, J 1992, *Healthy Cities*, Open University Press, Buckingham.
- Australian Bureau of Statistics 2006, *2004–05 National Health Survey: summary of results*, Cat. No. 4364.0, Australian Bureau of Statistics, Canberra.
- Australian Bureau of Statistics 2008, *Overweight and Obesity in Adults in Australia 2004-05*, Cat. no 4719.0, Australian Bureau of Statistics, Canberra.
- Australian Institute of Health and Welfare 2010, *Australia's Health 2010*, Australia's health series no. 12, Cat. no. AUS 122, Canberra.
- Babbie, E 2007, *The Practise of Social Research*, 11th Edition, Thompson Wadsworth, Belmont.
- Bankstown City Council 2010, Bankstown, accessed 12 October 2010, <<http://www.bankstown.nsw.gov.au/>>.
- Bankstown Council representative 2010, Qualitative telephone interview with thesis author, conducted 8 October 2010, Sydney.
- Barton, H & Tsourou, C 2000, *Healthy Urban Planning: A WHO guide to planning for healthy people*, Spoon Press on behalf of the World Health Organisation Regional Office for Europe, London.
- Barton, H 2005, Healthy Urban Planning: Setting the Scene, *Built Environment*, vol.34, no.4, pp.281-287.
- Baum, F 1993, Healthy cities and change: Social movement or bureaucratic tool? *Health Promotion International*, vol.8, pp.31-40.
- Bernard, J 1989, *The Pocket Macquarie Dictionary*, 2nd edn, The Jacaranda Pres, Milton.
- Brooks, O 2007, *Parcourse Fitness: Back to Basics, Free of Charge*, Living In Style Magazine, accessed 22 August 2010, <<http://www.livinginstylemagazine.com/articles/81.asp>>.
- Brownson, R, Baker, E, Housemann, R, Brennan, L & Bacak, S 2001, Environmental and policy determinants of physical activity in the United States, *American Journal of Public Health*, vol.91, no.12, pp.1995- 2003.
- Butterworth, I 2000, *The Relationship Between the Built Environment and Wellbeing: a Literature Review*, Victorian Health Promotion Foundation, Melbourne.
- Caldwell, E 2010, Author's own work, photography and adaptations.

- Campion, V & Klein, N 2010, 'Marrickville Council investigates playground for its pensioners', *The Daily Telegraph*, 29 June 2010, accessed 30 June 2010.
- Capon, A 2007, 'The way we live in our cities', *Medical Journal of Australia*, vol.187, pp.658-661.
- Centre for Epidemiology and Research 2008, NSW Department of Health, *Report on Adult Health from the 2004 New South Wales Population Health Survey*, NSW Government, Sydney.
- Corburn, J 2007, 'Reconnecting with our roots: American Urban Planning and Public Health in the Twenty-first Century', *Urban Planning Review*, vol.42, no.5, pp.688-713.
- Corburn, J 2009, *Toward the Healthy City*, The MIT Press, Massachusetts.
- Department of Local Government 2010, *Suburb Search*, NSW Government, Sydney, accessed 19 August 2010, <http://www.dlg.nsw.gov.au/dlg/dlghome/dlg_regions.asp?mi=0&ml=8®iontype=0>.
- Department of Local Government, NSW Health Department, NSW Sport and Recreation, National Heart Foundation of Australia (NSW Division) 2006, *Creating Active Communities. Physical activity guidelines for local councils*, NSW Government, Sydney.
- Department of Planning 2008, *Metropolitan Sydney Departmental Region Boundaries*, NSW Government, Sydney, accessed 11 August 2010, <http://www.planning.nsw.gov.au/settingthedirection/pdf/dop_regional_boundaries_sydney.pdf>.
- Dictionary.com 2010, *definition: gym*, IAC Group, accessed 22 August 2010, <<http://www.dictionary.com>>.
- Dieleman, F & Wegener, M 2004, 'Compact city and urban sprawl', *Built Environment*, vol.30, no.4, pp.308-323.
- Doyle, S, Kelly-Schwartz, A, Schlossberg, M, & Stockard, J 2006, 'Active community environments and health', *Journal of the American Planning Association*, vol.72, no.1, pp.19-31.
- Ewing, R, Pendall, R & Chen, D 2002, *Measuring Sprawl and Its Impact: Volume I*, Institute for Transportation & Development Policy, Washington DC.
- Finlay, N 2010, Qualitative interview with thesis author, conducted 8 October 2010, Sydney.
- Frank, L, Engelke, P, & Schmid, T 2003, *Health and Community Design: The Impact of the Built Environment on Physical Activity*, Island Press, Washington.

- Frumkin, H 2002, 'Urban sprawl and public health' *Public Health Reports*, vol.117, pp.201-217.
- Frumkin, H, Frank, L & Jackson, R 2004, *Urban sprawl and public health: designing, planning and building healthy communities*, Island Press, Washington.
- Galster, G, Hanson, R, Radcliffe, M, Wolman, H, Coleman, S & Freihage, J 2001, 'Wrestling sprawl to the ground: Defining and measuring an elusive concept' *Housing Policy Debate*, vol.72, no.4, pp.681-717.
- Gebel, K, King, L, Bauman, A, Vita, P, Gill, T, Rigby, A & Capon, A 2005, *Creating healthy environments: A review of links between the physical environment, physical activity and obesity*, NSW Health Department and NSW Centre for Overweight and Obesity, Sydney.
- Halpern, D 1995, *Mental Health and the Built Environment: More than bricks and mortar?*, Taylor & Francis, London.
- Harmon, L 2008, 'Get out and stay out' *Parks and Recreation*, vol.43, no.6, pp.51-56.
- Haskell, W, Lee, I, Pate, R, Powell, K, Blair, S, Franklin, B, Macera, C, Heath, G, Thompson, P & Bauman, A 2007, 'Physical activity and public health: updated recommendation for adults from the American College of Sports Medicine and the American Heart Association' *Medicine & Science in Sports & Exercise*, vol.39, pp.1423-34.
- Hebert, G 1941, *Physical Education and the Natural method*, Vuibert Library, Paris.
- Jenkins, J 2004, *Encyclopaedia of Leisure and Outdoor Recreation*, Routledge, New York.
- Kahn, E, Ramsey, L, Brownson, R, Heath, G, Howze, E, Powell, K, Stone, E, Rajab, M & Corso, P (eds) 2002, 'The effectiveness of interventions to increase physical activity: A systematic review' *American Journal of Preventive Medicine*, vol.22, no.4, sup.1, pp.73-107.
- Kelly-Schwartz, A, Stockard, J, Doyle, S, & Schlossberg, M 2004, 'Is Sprawl Unhealthy?: A multilevel analysis of the relationship of metropolitan sprawl to the health of individuals' *Journal of Planning Education and Research*, vol.24, pp.184-196.
- Lalonde, M 1974, *A new perspective on the health of Canadians*, Health and Welfare Canada, Ottawa.
- Low, N 2003, 'The active city' *Urban Policy and Research*, vol.21, no.1 pp.5-7.
- Marrickville Municipal Council 2010, Marrickville, accessed 12 October 2010, <<http://www.marrickville.nsw.gov.au/marrickville/internet/me.get?site.home>>.

- MapData Sciences 2010, Google Maps, accessed 6 September 2010, <http://maps.google.com.au/maps?hl=en&tab=wl>.
- Matlawski, B 2006, *Towards Healthy Cities: A Planning Perspective* Undergraduate Thesis, University of New South Wales.
- Medibank Private 2007, *The cost of physical inactivity: What is the lack of participation in physical activity costing Australia?*, Sydney, accessed 8 August 2010, <http://www.medibank.com.au/Client/Documents/Pdfs/pyhsical_inactivity.pdf>.
- National Heart Foundation of Australia 2004, *Healthy by Design: A planners guide to environments for active living*, National Heart Foundation of Australia Victorian Division, Melbourne.
- National Preventative Health Taskforce 2009a, *Australia: The Healthiest Country by 2020 – National Preventative Health Strategy – Overview*, Australian Government, Canberra.
- National Preventative Health Taskforce 2009b, *Australia: The Healthiest Country by 2020 – Technical Report No. 1 – Obesity in Australia: a need for urgent action*, Australian Government, Canberra.
- National Preventative Health Taskforce 2010, *Taking Preventative Action – A Response to Australia: The Healthiest Country by 2020*, Australian Government, Canberra.
- Nechyba, T & Walsh, R, 2004, *Urban sprawl* *Journal of Economic Perspectives*, vol.18, no.4, pp.117-200.
- NSW Department of Planning 2005, *Sydney Metropolitan Strategy: City of Cities*, NSW Government, Sydney.
- NSW Department of Sport and Recreation, undated, *Active Community Guide: Getting Active*, NSW Government, accessed 3 August 2010, <<http://www.dsr.nsw.gov.au>>.
- NSW Government 2010, *NSW Bike Plan*, NSW Transport and Infrastructure, NSW Government, Sydney.
- Petherick, D 2010, *National Outdoor Strategy 2009-2012 March 2010*, Outdoor Council of Australia, Sydney.
- Planning Institute of Australia 2009, *Healthy Spaces and Places: A national guide to designing places for healthy living*, Planning Institute of Australia, Kingston.
- Premier's Council for Active Living NSW 2007, *Why Active Living Statement 2007*, NSW Government, Sydney.

- Premiers Council for Active Living NSW 2010, *Why Active Living? A health, economic, environmental and social solution*, NSW Government, Sydney.
- Stark, J 2008, 'Australia now world's fattest nation' *The Age*, 20 June 2008.
- Racioppi, F, Dora, C, & Rutter, H 2005, 'Urban Setting and Opportunities for Healthy Lifestyles: Rediscovering walking and cycling and understanding their health benefits' *Built Environment*, vol.31, no.4, pp.302-314.
- Ramsay, A 2010, *The Benefits of Outdoor Training*, accessed 21 August 2010, <http://www.gymless.com/_blog/Gymless_Training_Blog/post/The_Benefits_of_Outdoor_Fitness_Training/>.
- Regan, M 2010, Qualitative interview with thesis author, conducted 9 October 2010, Sydney.
- Sloane, D 2006, 'From congestion to sprawl: Planning and health in historical context' *Journal of the American Planning Association*, vol.72, no.1, pp.10-18.
- Time Magazine 1972, *Modern Living: The Jog Strip*, Time Magazine, accessed 5 August 2010, <<http://www.time.com/time/magazine/article/0,9171,905863,00.html>>.
- United Nations Department of Economic and Social Affairs, Department for Sustainable Development 1992, *Earth Summit Agenda 21: The United Nations Programme of Action from Rio*, Geneva, accessed 8 August 2010 <<http://www.un.org/esa/dsd/agenda21/index.shtml>>.
- Urban Freeflow 2008, 'George Hebert and the Natural Method of Physical Culture' viewed 23 August 2010, <<http://www.urbanfreeflow.com/2008/12/24/george-hebert-and-the-natural-method-of-physical-culture/>>.
- Van Doren, C, Priddle, G & Lewis J (eds) 1979, *Land and Leisure: Concepts and methods in outdoor recreation*, 2nd edn, Maaroufa Press, Texas.
- Warringah Council 2010, Dee Why, accessed 12 October 2010, <<http://www.warringah.nsw.gov.au/home/index.aspx>>.
- World Health Organisation 1981, *Global Health Strategy for All by the Year 2000*, United Nations, Geneva.
- World Health Organisation 2004, *Global Strategy on Diet, Physical Activity and Health*, World Health Organisation, Geneva.

Outdoor Gym Site Visits and Observations Template

<i>General Information</i>						
Day		LGA				
Date		Suburb				
Time		Location				
Weather Conditions	Sun	Overcast	Rain	Wind	Temperature	

<i>Users</i>						
How many people, sex, age, what equipment are they using, for how long etc						
How many using facility?		Gender	M	F	Supervisors/ Personal trainers present?	Y N
Age	<18	18-35	36-55	55+		
Any other people nearby?			Do other people impact on gym users?			
Comments						

<i>Provision of Facilities</i>					
Does the outdoor gym equipment have these facilities in its vicinity?					
Sun shade	Y	N	Accessible toilets	Y	N
Rain shelter	Y	N	Clean bubblers	Y	N
Seating quantity			Seating quality	Acceptable	Poor
Seating	Y	N	Lighting	Y	N
Security cameras	Y	N	Bins	Y	N
Directional signage	Y	N	Instructions signage	Y	N
Is the site accessible for people with a disability?	Y	N	Comments		

<i>Gym Equipment</i>		
Is the outdoor gym constructed and designed well?		
General	Cardiovascular	Muscular Strength
	Other:	
	How many elements are installed?	

	Is it a Fitness Trail?	If so how many Stations along the trail?		
Range of advanced and beginner equipment	Y N	Diversity of equipment	Y N	
Good construction quality?	Made of hard wearing materials Sturdy/Robust Major material component		Y N Y N	
Gym equipment company name		Level surface	Y N	
Signs of maintenance (Circle)	Graffiti	Rubbish	Mown	Weeds
Aesthetically pleasing?	Green environment Views Other	Y N Y N	Evidence of high use	Y N
Comments				

<i>Site Selection</i>				
Has the site been selected with consideration to the following factors?				
Passive surveillance	Y N	Located on active pedestrian routes	Y N	
Integrated well into site setting	Y N	Close proximity to active urban hubs	Y N	
Parking nearby	Y N	Access to public transport options	Y N	
Proximity to quality and substantial open space	Y N	Other sports facilities nearby?	Y N	
Cafes nearby?	Y N	Dog Park nearby?	Y N	
Child Care nearby?	Y N	Library nearby?	Y N	
Comments				

<i>Overall Comments and Reflection</i>