# Healthy Urban Development Checklist

A guide for health services when commenting on development policies, plans and proposals

NSW GOVERNMENT

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# FOREWORD

The built environment is increasingly being viewed as influencing the health of the population. Whilst the public health concerns of water-borne and air-borne transmission of disease have largely been mitigated by modern development, today there is growing concern about the link between the built environment and 'lifestyle diseases and risk factors' including overweight and obesity, diabetes mellitus type 2, and heart disease.

That is why, as part of a stronger focus on prevention in relation to chronic disease, NSW Health has been developing its capacity to support urban environments which contribute to ensuring that our communities start out, and stay, healthy.

Whilst there is an increasing dialogue between the planning and health sectors, there is more that NSW Health can do to ensure that our engagement is effective. We need to develop practice in influencing policies and plans. We need to build the evidence base and make it more accessible. And we need to strengthen capacity across the State in the contribution that NSW Health makes to urban development proposals.

This Checklist was commissioned by the NSW Department of Health and Sydney South West Area Health Service to help address these needs. We hope that it will increase health professionals' capacity to examine comprehensively and critically urban development policies, plans and proposals in relation to health. And we want it to promote effective engagement between health professionals and urban planners and developers who value the contributions each can make to creating places where people can live healthy and fulfilling lives.

We believe that the Checklist provides an opportunity for NSW Health to play a key role in realising healthy, sustainable communities in NSW and we strongly encourage health professionals to use it.

Dr Kerry Chant
Deputy Director-General, Population Health
Chief Health Officer, NSW Health

Dr Greg Stewart
Director – Population Health, Planning & Performance
Sydney South West Area Health Service

# 1 Introduction

# 1 Introduction

## 1.1 Background

New South Wales (NSW) is expected to experience continued population growth, with projections suggesting an increase from 6.8 million people in 2006 to 9.1 million in 2036[1]. Population increase will occur across the state, with significant growth in Sydney. The two primary growth areas in Sydney are the North West Growth Centre (which includes Riverstone, Marsden Park and North Kellyville) and the South West Growth Centre (which includes Edmondson Park, Leppington, Oran Park, Catherine Fields and Bringelly). As an example of the scale of this growth, the South West Growth Centre, which is covered by the Sydney South West Area Health Service (SSWAHS), has a target of 110,000 new dwellings.

There is a possibility that growth of such levels, unless carefully planned for and managed, may not contribute positively to the health of the community and may further perpetuate some of the health inequities that currently exist across the state. Population growth of this scale will involve significant development of, and investment in, housing, transport, and a range of infrastructure including social infrastructure. Change of this scale can have major impacts (both positive and negative) on the health of new communities as well as those of the existing population.

1 NSW Department of Planning. New South Wales State and Regional Population Projections, 2006-2036. Sydney: NSW Department of Planning; 2008. http://www.planning.nsw.gov.au/population/pdfs/nsw_state_regional_population_projections_2006_2036_2008release.pdf

Given the increased recognition of the influence of the built environment on health, health services across NSW have been exploring ways to more actively engage in the urban planning and development process.

This has included:

- Training in and conducting Health Impact Assessments (HIAs) on urban policies, plans or projects
- Participation in consultations regarding health impacts, including service effects of policies, plans and projects such as rezoning, renewal and greenfield developments
- The provision of advice on regional, sub-regional and local government plans.

While this experience exists, SSWAHS and NSW Health have recognised the need to develop their capacity to influence healthy urban design and development and to more actively participate in, and influence, urban planning and development processes.

The development of this Healthy Urban Development Checklist is one of the measures that is intended to address these needs.

## 1.2 Purpose and objectives

The purpose of the checklist is to assist health professionals to provide advice on urban development policies, plans and proposals. It is intended to ensure that the advice provided is both comprehensive and consistent. The checklist is principally about helping to answer the questions:

**What are the health effects of the urban development policy, plan or proposal?**

**How can it be improved to provide better health outcomes?**

Although the checklist is a tool for reviewing and commenting on development plans, it is intended that it will also be helpful for providing input and advice from the earliest possible phases of the urban planning and development process.

Although not exclusively, the primary users of the checklist are (initially) intended to be Area Health Service workers who will use the checklist to:

Provide a standardised tool to guide and inform feedback and advice to, for instance, local government and developers on urban development policies and plans in NSW

Evaluate the health aspects of urban developments

Support engagement between urban planners and developers and health professionals

Inform others (planners, developers, policy makers) about the range of factors that need to be considered in healthy urban developments.

There is an opportunity for Area Health Service workers and others to influence how land use decisions affect community health. This means ensuring that the key principles which promote health and wellbeing are considered at all levels of planning including policy development, plan making and development assessment. There are opportunities for participation and contribution at the policy formulation level, at project conception stage and at development assessment. This combination of proactive and reactive measures is important in order to maximise the positive influence of urban planning on health.

The output of this checklist will be in the form of advice to assist planners and proponents understand the health implications of policies, plans or proposals. That advice will include identification of key health issues, relevant supporting evidence and recommendations. Importantly, the advice should identify both positive and negative attributes of the policy, plan or proposal being considered.

The advice provided is not intended to replace the work of planners; it should not advise planners to accept or reject a policy, plan or proposal. It is more about identifying health effects and suggesting how positive effects can be maximised and negative health effects minimised.

While having some necessary limitations in its scope and areas of application (as highlighted in the 'how to use' chapter), this checklist is intended as a tool that can assist health professionals participate, both proactively and reactively, in the planning system with the goal to achieve better health outcomes.

The planning system provides opportunities for parties from a variety of perspectives and interests to comment on proposals. The final decision on the content of a plan, whether a development is approved or what conditions of consent may be applied will be the result of balancing what may often be opposing views.

## 1.3 Development of the checklist

Following a call by NSW Health and SSWAHS for expressions of interest to develop the checklist, Elton Consulting was awarded the contract.

An Executive Committee made up of representatives of both SSWAHS and NSW Health managed the project. The Executive Committee provided guidance, advice and direction throughout the project and acted as a 'sounding board' for the ideas and approaches that were proposed.

Elton Consulting undertook a range of tasks during the course of developing the checklist. These included:

Reviewing policy and practice literature to identify and consider a range of existing healthy urban development checklists and guidelines that have been developed both in Australia and overseas

Interviewing practitioners who have been involved in either developing or implementing checklists.

Interviews were conducted with:

- The London NHS Healthy Urban Development Unit (who have developed and are using the Watch Out for Health checklist[2])

2 Healthy Urban Development Unit. Watch out for health. A checklist for assessing the health impact of planning proposals. London: NHS London Healthy Urban Development Unit; 2009. http://www.healthyurbandevelopment.nhs.uk/documents/integrating_health/HUDU_Watch_Out_For_Health.pdf

- San Francisco Department of Public Health (who have developed the Healthy Development Measurement Tool[3])

- Hunter New England Population Health (who have developed and are using the Building Liveable Communities in the Lower Hunter Region[4])

- Victorian Growth Areas Authority (who have developed and are using a Strategic Framework for Creating Liveable New Communities[5]).

Reviewing academic literature to:

- Assist in identifying the characteristics of healthy urban development

- Confirm the evidence link between urban development and health

- Provide an evidence base to include in, and support, the questions in the checklist.

The references used have been cited throughout this document. This literature search sought to ensure that Australian based research was used as much as possible, although the search was not confined to Australian work only. International research, particularly from the UK and the USA, has been used extensively.

Considering best practice based on the project team's experience and consultations undertaken with planners, designers and health professionals.

Consulting with experts:

- Interviews with key individuals were conducted in two stages: an initial round to help frame the project and learn from others' practical experience and a later round to provide critical feedback on a draft version of the checklist

- A Reference Group was established consisting of representatives of local government, NSW Department of Planning, Landcom, academic institutions, NSW Health and Area Health Services (see Appendix 4).

Piloting of the checklist by Area Health Service workers. Pilot cases that covered both active and retrospective examples were identified. Reference Group members were used to identify appropriate projects for piloting. Piloting was organised through SSWAHS and formal feedback and debriefing was conducted.

3 San Francisco Department of Public Health. Development Measurement Tool. A Healthy comprehensive evaluation metric to consider health need in urban development. San Francisco: San Francisco Department of Public Health; 2006. http://www.thehdmt.org, http://www.sfdph.org/dph

4 Wells V, Licata M, Mackenzie A, Gillham K, Hodder R, Butterworth, I. Building Liveable Communities in the Lower Hunter Region. Wallsend: Hunter New England Population Health; 2007. http://www.pcal.nsw.gov.au/__data/assets/file/0018/27630/building_liveable_communities.pdf

5 West S, Badham M. Creating Liveable New Communities. Checklist for Liveability Planning. Melbourne: Growth Areas Authority; 2008. http://www.gaa.vic.gov.au/Assets/Files/Liveability%20Planning%20Checklist%209%20April%2008.pdf

## 1.4 A note on evidence

A broad and comprehensive view of health, discussed in the next chapter, necessarily involves consideration of many different factors and a high level of complexity. This complexity means that the evidence required to assess plans and support recommendations is diverse in nature and emanates from a range of fields. We consider this multidisciplinary approach to be a strength of the checklist.

Clinical researchers and epidemiologists appropriately place considerable emphasis on creating standardised experimental conditions, randomised selection or allocation of participants, control groups and double blind procedures. These conditions and techniques are often impractical and sometimes unethical in studies involving people and the built environment. Consequently, the methods used to investigate, and the findings available about, the links between health and the built environment are often different to those encountered in more controllable situations. However, methodologically sound studies still produce robust and valid evidence.

This checklist draws on evidence from diverse types of studies and on the slowly increasing number of systematic reviews available in this field. It also recommends that it is desirable to indicate wherever possible the strength of the evidence available to support any recommendations arising from the use of the checklist.

## 1.5 Document structure

This document is organised in the following sections:

Chapters 2-5 are introductory and provide the background and context for the checklist. Topics covered include the relationship between health and urban development (chapter 2), guiding principles for development and use of the checklist (chapter 3), an overview of the NSW planning system (chapter 4) and information on how to use the checklist (chapter 5).

Chapter 6 includes some questions to consider before commencing the checklist proper. It aims to assist users appreciate the context for the policy, plan or proposal they are assessing, its place in the planning system, where it is in the planning process, and develop an understanding of the community where it is situated.

Chapters 7-16 are the checklist chapters, each based on a key characteristic of healthy urban development. These chapters include sections covering the relevance of the issue to NSW, evidence and leading practice, a few key summary questions, specific questions related to each key question, and sources of further information.

Chapter 17 provides some additional information to consider for specific development contexts. This chapter covers urban renewal and infill, greenfield and semi-rural/rural development settings.

Chapter 18 describes some of the things that can occur beyond the use of this checklist and discusses the role of education and partnerships in implementation.

Chapter 19 is a glossary which defines some of the terms used throughout the checklist.

Appendix 1 is a checklist summary form to assist in recording information as you work through the checklist.

Appendix 2 is a guide to assist with preparing a response.

Appendix 3 is a form to provide feedback on the checklist itself.

Appendix 4 details the membership of the Healthy Urban Development Checklist Reference Group.

# 2 Health & Urban Development

# 2 Health and Urban Development

## 2.1 What is Health?

The Constitution of the World Health Organisation (WHO) defines health as "a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity"[6]. This checklist is guided by a broad definition of what constitutes health and is aligned with the WHO definition and its emphasis on physical, mental and social wellbeing.

Chronic diseases have overtaken infectious diseases as the leading causes of ill health in Australia. The most common causes of death in NSW are cardiovascular diseases, including coronary heart disease and stroke, cancers, chronic respiratory diseases, nervous system diseases, and digestive system diseases. Cardiovascular diseases, cancer and mental illness account for well over half of the overall burden of disease in NSW[7].

Given this, public health in NSW has moved beyond a focus on personal factors to also consider a wide range of social and other factors that can influence a person's health. This understanding of health aligns with the commonly cited 'social determinants of health' popularised by the WHO[8].

A social determinants of health approach proposes that health is linked not only to individual characteristics, such as age and gender, but also to wider factors such as education, employment, housing, social networks and relationships, air quality, food access, and access to social infrastructure including services and facilities such as health care[9]. By considering wider determinants of health, including socio-economic conditions, the focus turns more to the health of communities rather than only that of the individual.

A social model of health encourages both prevention and early intervention to change those aspects of the environment that contribute to ill health, rather than simply dealing with illness after it appears or continuing

6 World Health Organization. Constitution of the World health Organization. New York: World Health Organization; 1946. http://www.searo.who.int/LinkFiles/About_SEARO_const.pdf

7 NSW Department of Health. A New Direction for NSW: State Health Plan – Towards 2010. Sydney: NSW Department of Health; 2007. http://www.health.nsw.gov.au/pubs/2007/pdf/state_health_plan.pdf

8 World Health Organization. Social determinants of health: the solid facts. 2nd ed. Copenhagen: World Health Organization; 2003. http://www.euro.who.int/document/e81384.pdf

9 The Mayor of London. The London Plan: Spatial Development Strategy for Greater London. London: Greater London Authority; 2004. http://www.london.gov.uk/mayor/strategies/sds/london_plan/lon_plan_all.pdf

to exhort individuals to change their behaviour, especially when "the environment in which they live and work gives them little or no choice or support"[10]

Considering the impacts of the built environment on health is an example of this early intervention and prevention approach and of the focus of public health on the community and not just individuals.

## 2.2 The relationship between health and urban development

Urban planning and health were once intrinsically linked. Indeed the links between town planning and health are at the origin of planning as a profession. However, this shared origin was forgotten and the fields of planning, development and health have not been as closely aligned as they were historically.

A wide range of academic and policy literature has argued for the broadening and strengthening of the relationship between health and urban planning. Evidence suggests that the health of both individuals and communities is affected by the built and social environments. At a broad scale, these influences arise from the impact of land use and transport planning, land use mix and infrastructure provision. At a more local scale, the design and availability of public spaces and transport networks, the design of street networks, the perceived and actual safety of an area, as well as personal resources, are suggested to be important environmental and social influences on health and wellbeing[11]. There is a growing acceptance that "the urban environment is an important determinant of health"[12].

Recent concerns at the local, state, national and global level about levels of physical activity, obesity, mental health and social and environmental inequality have given impetus to exploring and utilising the link between health and planning. It has been noted that "Health professionals more and more recognise the importance of the built environment in directly affecting people's health and the central role that planners play in providing environments which support healthy behaviour"[13].

However, the links between health and planning are complex, with the relationships being both direct and indirect. This complexity has been depicted in a 'health map' which shows the relationship between the social determinants of health and the key features of 'human settlement' including the built environment[14].

10 Department of Human Services. Environments for Health: Promoting health and wellbeing through built, social, economic and natural environments, Municipal Public Health Planning Framework. Department of Human Services, State Government of Victoria; 2001. http://www.health.vic.gov.au/localgov/mphpfr/downloads/mphpf.pdf

11 Lavin T, Higgins C, Metcalfe O, Jordan A. Health Impacts of the Built Environment: A Review. The Institute of Public Health in Ireland; 2006. http://www.publichealth.ie/files/file/Health_Impacts_of_the_Built_Environment_A_Review.pdf

12 Capon A, Blakely E. Checklist for healthy and sustainable communities. NSW Public Health Bulletin 2007; 18(3-4): 51-4. http://www.publish.csiro.au/?act=view_file&file_id=NB07066.pdf

13 Thompson S, McCue P. The CHESS Principles for Health Environments: A holistic and strategic game plan for inter-sectoral policy and action. Sydney: NSW Premier's Council on Active Living; 2008. http://www.pcal.nsw.gov.au/__data/assets/file/0003/27651/chess.pdf

14 Barton H, Grant M. A health map for the local human habitat. Journal of the Royal Society for the Promotion of Health 2006; 126(6): 252-3.

The 'health map' positions people at its core with the different facets of 'human settlement' shown in the surrounding rings which move through social, economic and environmental systems. The 'health map' shows the numerous factors that interact to affect health. These include:

People factors including age, sex and heredity

Lifestyle factors including diet, physical activity and work-life balance

Community factors including social capital and networks

The local economy including wealth creation and access to, and the nature of, markets

Activities such as working, shopping, moving around, living, playing and learning

The built environment including buildings, places, streets and routes

The natural environment including air, water, land and natural habitat.

These spheres are all situated in a broader global context that considers climate change, biodiversity and international economic and political forces.

While the built environment is the sphere of direct planning influence, this sphere does impact to a greater or lesser degree on all the others. For example, while a development control plan or revitalisation plan for a town centre may sit within the built environment sphere, it influences and is influenced by a wide range of interconnected factors including:

Its effects on activities such as walking, shopping, moving and playing

Potential significant implications for local economic development in relation to job creation and the provision of markets (which may in turn have major consequences for transport and travel behaviour)

Potential to provide (or perhaps remove) recognised meeting places for a range of groups where social interaction and perhaps community events and cultural expression could occur

It could have lifestyle effects including greater opportunities for healthy food outlets and provision of a safe and well connected destination and activity centre which could affect physical activity patterns and local employment opportunities (which, in turn, may alter commuting time and affect work/life balance).

The key influences of the 'health map' on the development of this checklist are:

Recognition that people are at the centre of any form of assessment or advice. How a plan, policy or proposal affects the health, wellbeing and quality of life of people is the fundamental question

Understanding that a wide range of factors can influence both individual and community health, not only the built environment but also activities, the local economy, community and lifestyle

Recognition that there is an interdependence between various factors and that action or activity in one sphere may affect (positively or negatively) others.

### 2.2.1 Urban Form

A range of research evidence suggests that urban form has a significant influence on health[15]. The Greater Western Sydney Health Impact Assessment of the Sydney Metropolitan Strategy[16] identifies two common meanings of 'urban form':

A more macro level that refers to the "general pattern of development" that is determined by density, land use distribution (residential, commercial, industrial, etc.), amount and location of open space and conservation areas, transport infrastructure and development corridors

A local level that refers to "features of the urban environment at the human scale" including nature and scale of buildings, mix of buildings (purpose, type, etc.), how pedestrians are accommodated, parks and open space and the transport network.

The following elements of urban form have been found to have a positive influence on physical activity and health generally[17]:

Mixed land use including housing, industrial, retail, commercial, education, recreation, etc. in close proximity

More compact developments characterised by higher densities of people, dwellings and employment opportunities

Quality and proximity of destinations, with a 400-500 metre radius (considered to be a comfortable walking distance for most people) as a common basis for access to a range of daily needs including shops, open space, community facilities and public transport. Current NSW guidance recommends that 400 metres is considered to be a reasonable walking distance to

15 Capon A. Promoting Nutrition, Physical Activity and Obesity through Urban Planning. Sydney: NSW Health Department and NSW Centre for Overweight and Obesity; 2005.

16 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

17 See Footnote 16

a bus stop and that for metropolitan railway stations households should be within 800-1000 metres[18]

Street connectivity and continuity that promotes directness of routes

Neighbourhood environment including aesthetic appeal, presence of footpaths, cycleways, shade trees, separation of pedestrians from vehicle travel, interesting streetscapes

Walking and cycling infrastructure linking key destinations and providing safe and inviting alternatives to automobile travel.

While this checklist is intended to cover a range of different development contexts, including urban renewal, greenfield and semi rural/rural settings, these elements of urban form can generally be considered to be desirable from a health perspective.

Urban sprawl, although often poorly defined[19], has generally been identified as an anathema to the creation of healthy communities. Some of the consequences of urban sprawl have been identified as "increased reliance on automobile transportation and decreased ability to walk to destinations, decreased neighbourhood cohesion, and environmental degradation"[20]. There is growing evidence regarding links "between contemporary public health epidemics, such as obesity and depression, and aspects of our urban environment", which have emerged in parallel with the increasing suburbanisation of Australian cities[21].

While urban sprawl has been primarily derived from the American planning and development context, and it is recognised that the processes of urban planning, development and management in Australia and the United States are quite different, there are common concerns about the impacts of 'sprawling' patterns of urban development. Some of those concerns include that "sprawling suburban environments" characterised by "low residential densities, car dependency and separation of home and work" are linked to "behaviour patterns that contribute to poor physical and mental health"[22]. Some of the urban form characteristics and consequences identified as problematic include:

Location of shops a long way from houses so that transport other than by car is difficult

Unsafe or unfriendly pedestrian environments which inhibit or prevent children walking to school or

18 NSW Department of Urban Affairs and Planning. Improving Transport Choice – Guidelines for Planning and Development. NSW Department of Urban Affairs and Planning; 2001. http://www.planning.nsw.gov.au/programservices/pdf/prg_transport.pdf

19 Mead E, Dodson J, Ellway C. Urban Environments and Health: Identifying key relationships and policy imperatives. Brisbane: Urban Research Program, Griffith University; 2006. http://www.griffith.edu.au/__data/assets/pdf_file/0011/48647/urp-rm10-mead-et-al-2006.pdf

20 Lopez R. Urban Sprawl and Risk for Being Overweight or Obese. American Journal of Public Health 2004; 94(9):1574-9.

21 Capon A. Cities fit to live in. About the House (Australian House of Representative Magazine) 2003; 19: 20-23. http://www.aph.gov.au/house/house_news/magazine/ath19_fitcities.pdf

22 Thompson S, McCue P. The CHESS Principles for Health Environments: A holistic and strategic game plan for inter-sectoral policy and action. Sydney: NSW Premier's Council on Active Living; 2008. http://www.pcal.nsw.gov.au/__data/assets/file/0003/27651/chess.pdf

playing outside and many other forms of incidental exercise by other population groups

Uniform, and often predominantly detached, housing residential areas which often function as 'bedroom communities' with those left behind experiencing social isolation (and also creating environments that lack housing choice)

Lack of local employment opportunities requiring some people to travel long distances from home to work, meaning that they "do not have the time or energy to form meaningful relationships with their neighbours"[23] as well as a lack of time for their own family relationships and activities.

Consequently, the conventional post war and car dependent suburban form, with its uniform housing, separation of home and work and lack of quality pedestrian and cycling environments, is generally considered to be unsustainable and a more diverse and connected form of suburban development is now being promoted (for instance the type of greenfield development being promoted in Sydney's growth centres by the NSW Department of Planning).

Suburbs will continue to be important places for housing Australia's population. About 70% of Australians are estimated to currently live in what is considered to be 'the suburbs'[24], and the NSW State Plan and the Sydney Metropolitan Strategy include targets for 30% of new housing to be built in greenfield areas. A key objective is that these new suburbs include a variety of housing forms and densities and they will need to be carefully planned so that the issues attributed to urban sprawl are not repeated. Health considerations have an important role to play in ensuring that our growing suburbs, centres and towns reflect a more sustainable approach to urban planning and development[25].

While this checklist goes into considerably more detail, it is important to keep in mind these broader elements of urban form (both at the macro and local levels) that may affect health.

Reflecting this understanding of health and urban development and the determinants of health, the ten characteristics of healthy urban development focused on in this checklist are:

Healthy food
Physical activity
Housing
Transport and physical connectivity
Quality employment
Community safety and security
Public open space
Social infrastructure
Social cohesion and social connectivity
Environment and health.

23 See footnote 22

24 Davidson A. Stuck in a cul-de-sac: Suburban history and urban sustainability in Australia. Urban Policy and Research 2006; 24(2): 201-16.

25 Thompson S. A planner's perspective on the health impacts of urban settings. NSW Public Health Bulletin 2007; 18(9-10): 157-60. http://www.publish.csiro.au/?act=view_file&file_id=NB07093.pdf

# 3 Guiding Principles

# 3 Guiding Principles

Four key principles guide the development and implementation of this checklist:

- Equity
- Early engagement
- Interdependence
- Building partnerships.

## 3.1 Equity

Equity is a fundamental consideration in public health and is recognised as a key principle of the WHO Healthy Cities Project. Equity is understood here to mean that access to all aspects of a community (including health, safety, open space, transport and economic development) is fair to all residents regardless of socioeconomic status, cultural background, gender, age or ability[26].

The state of NSW, and particularly the growth centres in Sydney, will undergo significant population growth and change over the next 20-30 years. The management of this growth will have a significant influence on the extent to which health inequities are increased or ameliorated. As identified in a Health Impact Assessment of the Sydney Metropolitan Strategy[27]:

New development has the potential to do things better in terms of urban design, amenity and environmental conditions. But if these improvements are made without any benefit to existing communities, then geographic inequities in health will be worsened.

Urban development policies, plans and proposals, the subjects of this checklist, must recognise the importance of equity and the effect of planning intervention on it. Urban planning and development can play a significant role in ensuring that new and existing community members have equal access to a range of facilities and services including health, education, employment and social support and that there is equal access to health promoting features of urban development including open space, safe pedestrian and cycling environments, gathering places and natural areas.

26 International City/County Management Association. Active Living and Social Equity: Creating healthy communities for all residents. A guide for local governments. Washington: International City/County Management Association; 2005. http://www.icma.org/upload/library/2005-02/%7B16565E96-721D-467D-9521-3694F918E5CE%7D.pdf

27 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

Groups who have been identified as facing socio-economic and health inequities (in Greater Western Sydney)[28] include:

- Low income households
- Sole parent families
- Unemployed people
- Some culturally and linguistically diverse populations
- Aboriginal and Torres Strait Islanders
- Older people on government pensions
- People with disabilities or chronic illness.

This checklist has an early section (in chapter 6) on 'understanding the community' which attempts to focus the user's attention on who the potentially affected community is and which groups in that community may be most vulnerable. The equity based health impact assessment literature has been used to inform this section. Equity issues continue to be considered throughout the checklist with a number of questions addressing equity in terms of access to opportunities, services and facilities and the equal distribution of potential impacts (both positive and negative).

## 3.2 Early engagement

Improved health outcomes can be achieved through providing feedback on draft versions of publicly exhibited policies, plans or proposals. However, it is also recognised that maximum influence can be exercised when there are opportunities to participate in the policy or plan making process and contribute at the earliest possible stages of a project's inception. This early or 'upstream' participation, and the ability to consider health from the start, is a much more effective approach than asking a proponent to amend an already formulated or drafted policy, plan or proposal to address health issues.

While a checklist such as this provides a tool to promote early engagement, knowledge of the planning system and the development process is critical to ensuring that health professionals have the opportunity to participate early in the process. Chapter 4 of this checklist, an overview of the NSW planning system, provides some information on the opportunities for participation in the system. Details of the planning system will be different in other states and countries, but similar opportunities are likely to exist.

The guiding principle on partnerships is also critical in ensuring that health professionals are aware of the opportunities to influence and participate proactively in the planning and development processes.

28 See footnote 27

## 3.3 Interdependence

While this checklist is divided into chapters that each deal with a specific element of healthy urban development, it is important to maintain an understanding of the links between these elements and the interdependence of the relationships between them.

The 'health map' highlighted the interdependent nature of the various factors that contribute to health[29]. Studies examining transport disadvantage in Western Sydney found that poor transport access reduced access to work, education and training, health services, sport and recreation and opportunities for social interaction[30]. This finding reinforces the interdependence of the various elements that are considered to be a part of what we consider to be health and healthy urban development.

## 3.4 Building partnerships

Healthy urban development is occurring at the interface between two distinct, but related, professions in planning and health. Cross-sectoral partnerships are, therefore, essential to ensuring that the work remains relevant and maximum influence and benefit is achieved. Criticisms of bureaucracies working in silos are common place. Healthy urban development is an area of work where a multidisciplinary and collaborative approach is essential.

An understanding of the wider determinants of health opens up a range of opportunities for collaboration and partnerships. Planning professionals in all levels of government and private practice and health professionals have much to contribute to each other's work.

As mentioned, early engagement is likely to be important and can significantly enhance the opportunities for influence. Collaborative relationships between health workers and planners will be important to enabling early engagement to be realised. There is a range of opportunities for education across the sectors as well, with long term benefits from health workers understanding more about planning and planners understanding more about health.

29 Barton H, Grant M. A health map for the local human habitat. Journal of the Royal Society for the Promotion of Health 2006; 126(6): 252-3

30 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

Capacity building is an important aspect of building partnerships that has both external and internal dimensions. As mentioned, there is an opportunity for planners and health professionals to work collaboratively to build each other's knowledge and expertise in both planning and health.

Importantly, internal capacity building within health systems also has implications for the ongoing sustainability and effectiveness of promoting healthy urban development. NSW Health's capacity building framework states that capacity building is about "building independence" and defines it as "an approach to the development of sustainable skills, structures, resources and commitment to health improvement in health and other sectors"[31].

Capacity building is important to the implementation of this checklist and is a strategy to maximise its effectiveness. It is recognised that the checklist is a tool that requires an ongoing process of engagement and mutual development between planners and health workers. This will ensure that planning and development become more health promoting over time.

31 NSW Department of Health. A Framework for Building Capacity to Improve Health. Sydney: NSW Department of Health; 2001.

# 4 The Planning System

# 4 The Planning System

## 4.1 Understanding the system

Planning in New South Wales is driven by an evolving set of rules and processes. It is important for those outside the planning profession, like Area Health Services, to understand how to make representations, how to influence policy and how to participate proactively in the planning system. This chapter provides a brief overview of the planning system in NSW including reference to the Growth Centres where a unique system operates.

## 4.2 Environmental Planning and Assessment Act 1979

Land use planning and development in NSW is governed by the Environmental Planning and Assessment Act 1979 (otherwise known as EP&A Act, or just 'the Act')[32]. The objectives of the Act include:

To encourage:

- The proper management, development and conservation of land in its various forms for the purpose of promoting the social and economic welfare of the community and a better environment
- The provision of land for public purposes
- The provision and coordination of community services and facilities
- The protection of the environment
- Ecologically sustainable development
- The provision and maintenance of affordable housing.

To promote the sharing of the responsibility for environmental planning between the different levels of government in the State

To provide increased opportunity for public involvement and participation in environmental planning and assessment.

32 NSW Consolidated Acts. Environmental Planning and Assessment Act 1979. http://www.austlii.edu.au/au/legis/nsw/consol_act/epaaa1979389/

As pointed out in a recent NSW Public Health Bulletin: "The objectives of the Act have direct links to the wider determinants of health. However, this important statutory influence on health is largely unknown to health professionals"[33].

Plan making is covered by Part 3 of the Act. The plan making process covers both statutory and non-statutory planning tools. An overview of NSW planning instruments and legislation is available from the NSW Department of Planning website[34]. For further information on the planning system refer to the Local Environmental Plans section of the NSW Department of Planning website[35].

## 4.3 Environmental planning instruments

Environmental planning instruments (EPIs) are the documents that set the rules for planning in a particular area or relating to a specific issue. They set out what development can or cannot be undertaken on certain land.

The three statutory environmental planning instruments are:

State Environmental Planning Policies

Regional Environmental Plans

Local Environmental Plans.

These planning instruments function in a hierarchy (they are listed above in hierarchical order). If there are inconsistencies then the higher level plan over-rides the lower. The role of Regional Environmental Plans is changing as discussed below.

### State Environment Planning Policies

State Environmental Planning Policies (known as SEPPs) deal with issues of significance to the state and are administered by the NSW Government[36]. With the consolidation of many SEPPs and repeal of others following incorporation of their provisions into other planning instruments, there were in mid-2009 about 40 SEPPs in operation. They cover a range of topics including infrastructure, major projects, Growth Centres, housing for seniors and people with a disability, affordable housing, design quality of residential flats, major transport projects and bushland in urban areas. Many of the SEPPs "have direct and indirect links to health"[37].

33 Harris P, Harris-Roxas B, Harris E. An overview of the regulatory planning system in New South Wales: identifying points of intervention for health impact assessment and consideration of health impacts. NSW Public Health Bulletin 2007; 18(9-10): 188-91. http://www.publish.csiro.au/?act=view_file&file_id=NB07073A.pdf

34 NSW Department of Planning. Legislation and Planning Instruments. http://www.planning.nsw.gov.au/PlanningSystem/Legislationandplanninginstruments/tabid/67/Default.aspx

35 NSW Department of Planning. Local Environmental Plans. http://www.planning.nsw.gov.au/LocalEnvironmentalPlans/tabid/246/Default.aspx

36 NSW Department of Planning. Legislation and Planning Instruments. State Environmental Planning Policies. http://www.planning.nsw.gov.au/PlanningSystem/Legislationandplanninginstruments/tabid/67/Default.aspx

37 Harris P, Harris-Roxas B, Harris E. An overview of the regulatory planning system in New South Wales: identifying points of intervention for health impact assessment and consideration of health impacts. NSW Public Health Bulletin 2007; 18 (9-10): 188-91. http://www.publish.csiro.au/?act=view_file&file_id=NB07073A.pdf

Health advice and feedback on SEPPs will be coordinated through the NSW Department of Health, although Area Health Services may be asked to provide comment. Although not designed specifically for these broader level policies, this checklist may be used as a guide. Draft SEPPs or SEPP amendments may be placed on public exhibition providing an opportunity for comment. They can also be published with guidelines which provide an additional opportunity for input.

### Regional Environmental Plans

Changes to the EP&A Act during 2009 repeal the power to prepare Regional Environmental Plans (REPs). Related provisions of existing REPs will be transferred to SEPPs or Local Environmental Plans. Regional strategies will play a larger role in regional level planning.

REPs were prepared by the NSW Government. They cover issues such as urban growth, commercial centres, extractive industries, recreational needs, rural lands, and heritage and conservation.

### Local Environmental Plans

The recent changes to the Act also introduce changes to the processes for the preparation of Local Environmental Plans (LEPs). These came into effect during 2009 and the discussion following is based on the principles of the new procedures. Maintaining a relationship with local councils will help to ensure that participation in the plan development process is timely and relevant.

In standard circumstances, LEPs are developed and administered by local government but require approval and compliance with standards established by the NSW Government. LEPs include zoning (designations which determine which type of land uses are permitted in particular areas) and development standards (controls which regulate heights of buildings, amount of floor area allowed etc.). The NSW Government has introduced a standard LEP template to ensure greater consistency across councils within NSW with a common structure, standard terminology and types of zones[38]. An LEP can cover a whole local government area or can sometimes be prepared for a specific site.

### How is a local environmental plan prepared?[39]

LEPs are prepared by 'relevant planning authorities'. In most cases this will be a local council but the Minister for Planning can also direct the Department of Planning or other person or body to prepare a plan.

Issues such as environmental conservation, population projections, housing and settlement, economic development and infrastructure requirements to support growth are some of the main considerations.

A council preparing a new LEP is required to prepare a planning proposal to explain and justify the new LEP.

38 NSW Department of Planning. Local Environmental Plans. http://www.planning.nsw.gov.au/LocalEnvironmentalPlans/tabid/246/Default.aspx

39 NSW Department of Planning. Local Environmental Plans. http://www.planning.nsw.gov.au/LocalEnvironmentalPlans/tabid/246/Default.aspx

It can require landowners to carry out studies or provide information. The justification must address directions from the Minister for Planning.

The planning proposal, supporting information and details of plans for community consultation are then submitted to the Minister. If approved it must then be placed on public exhibition. While councils may seek public input prior to preparing a planning proposal, the exhibition provides the principal opportunity for submissions. Supporting regulations identify standard consultation requirements including roles for agencies to provide input.

After considering the submissions the council can decide to submit the proposal to the Minister for approval and publication in the Government Gazette.

It is anticipated that the development of LEPs by local government may be one of the key opportunities for application of this checklist.

## 4.4 Other plans related to the Act

### Section 94 Contributions Plans

Section 94 Contributions Plans are based on section 94 of the EP&A Act. They are funding plans that involve levying contributions from development to fund infrastructure identified as being needed to meet the demands of population growth.

Development contributions are levied on private developers by consent authorities and councils in order to fund infrastructure including social infrastructure such as community centres and libraries. Limits on the range of facilities for which contributions can be sought and the amounts able to be levied have been introduced during 2007-2008. New guidelines and manuals on the contributions system are being developed to assist councils and proponents.

The Act now allows councils and development proponents to enter into a Voluntary Planning Agreement (VPA) as an alternative way of funding the infrastructure required as a result of new development. A VPA essentially involves a negotiation between the consent authority and the applicant which addresses what type of community infrastructure will be provided and when.

While Area Health Service input into s94 contributions plans themselves may be worthwhile, most value may be gained by providing input into the studies for social infrastructure, open space etc. that are required to precede and inform the contributions plan. Draft Section 94 plans and VPAs are required by law to be placed on public exhibition.

## 4.5 Non-statutory planning tools

### Regional strategies

Subregional planning will translate some of the objectives of the NSW State Plan, and planning

strategies such as the Sydney Metropolitan Strategy, into a long-term planning blueprint for the local level. As an example, the South West Draft Sub-Regional Strategy[40] covers much of the area of the SSWAHS. The sub-regional strategy includes:

Plans for major housing and employment growth with dwelling targets of 284,000 by 2031 and employment targets of 208,500 by 2031

Development of regional centres such as Liverpool

Calls for the intensification of development around existing centres and public transport corridors

Protection for resource land including water catchment and agricultural lands.

While not statutory instruments, regional strategies are policy documents that provide "ministerial direction which Local Environmental Plans are required to follow. Therefore improved consideration of health impacts within regional strategies could have a wide-reaching influence on health and wellbeing"[41].

It is anticipated that the development and five yearly review of regional strategies and sub-regional strategies by the NSW Department of Planning may be one of the key opportunities for application of this checklist. While stressing the importance of early and proactive input, these plans will also be publicly exhibited providing an opportunity for feedback and comment.

### Development Control Plans

Development Control Plans (DCPs) support controls established in LEPs and provide more detailed planning and design guidance. For example, whereas an LEP might specify the permitted uses of land in a residential zone, the DCP will provide guidance on how the development is carried out.

As part of the NSW planning reforms (2007) restrictions on DCPs mean that rather than having multiple plans all controls must be consolidated into a single DCP for each area.

It is anticipated that the development of DCPs by local government may be one of the key opportunities for application of this checklist. While stressing the importance of early and proactive input, these plans will also be publicly exhibited providing an opportunity for feedback and comment.

40 NSW Department of Planning-Metropolitan Strategy. Subregional Planning – South West Subregion. Draft Subregional Strategy. Sydney: NSW Department of Planning; 2007. http://www.metrostrategy.nsw.gov.au/dev/ViewPage.action?siteNodeId=81&languageId=1&contentId=554

41 Harris P, Harris-Roxas B, Harris E. An overview of the regulatory planning system in New South Wales: identifying points of intervention for health impact assessment and consideration of health impacts. NSW Public Health Bulletin 2007; 18 (9-10): 188-91. http://www.publish.csiro.au/?act=view_file&file_id=NB07073A.pdf

### Residential Development Strategies

A Residential Development Strategy (RDS) is prepared by a local council to show its future plans for residential development and how it aims to meet its dwelling targets, or those included in urban development strategies and policies such as the Sydney Metropolitan Strategy. The RDS would investigate how council proposes to achieve this through the type and location of development. For example this could be with infill development of existing sites or new greenfield sites and release areas. The RDS would also outline strategies and specific areas for increasing or decreasing densification, or retaining existing levels.

The RDS presents another important opportunity for Area Health Services to work with local government in the application of this checklist.

Other non-statutory planning tools that this checklist may be applied to include:

Town centre plans or studies (often prepared by local government)

Concept plans and master plans (often prepared by developers).

A diagrammatic overview of these plans is shown on the following page. Please note that the diagram deals only with plans and policies produced by State Government or Local Government and does not include the range of plans and proposals (such as concept plans and master plans) that may be produced by developers. The process in the diagram is also mostly applicable to the Greater Sydney region. (In the diagram, DoP refers to the NSW Department of Planning.)

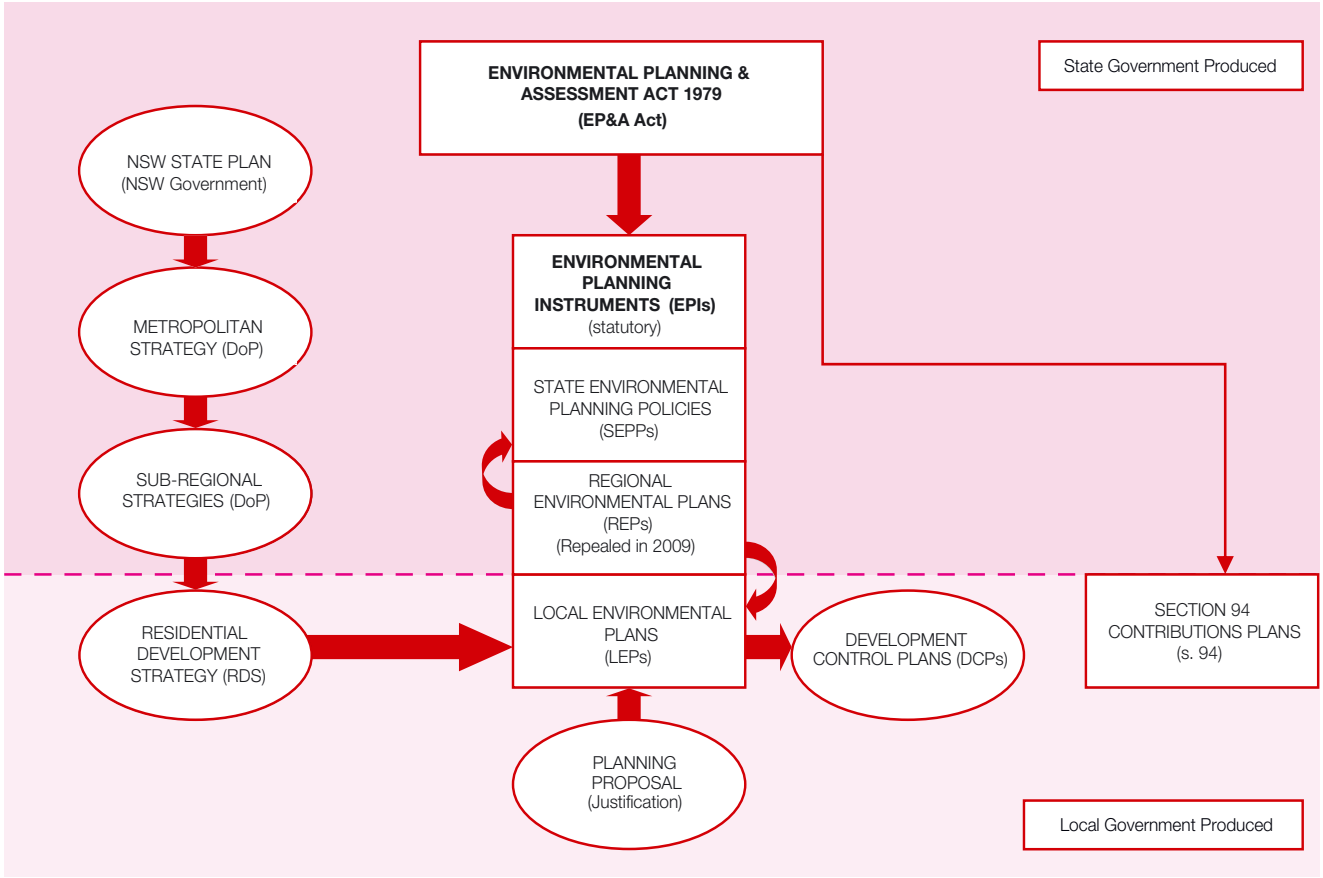
## 4.6 Growth Centres

The North West and South West Growth Centres will fast track the release and development of land to accommodate additional growth for Sydney by streamlining the planning and development application process.

The NSW Government will manage the timing and sequencing of land release in the Growth Centres, the mix of housing, types of centres and employment lands, infrastructure timing, costs and contributions and communication with local communities and landowners[42]. The Government works with other agencies and local governments to speed up the process by dealing with statutory approvals at a precinct or Growth Centre level, saving time and money. In the Growth Centres, State Government undertakes many functions that in other areas are the responsibilities of the local council.

42 Sydney's Growth Centres. A Guide to Growth Centres. NSW Department of Planning; 2008. http://www.gcc.nsw.gov.au/media/Pdf/Brochures/gccbroch2.pdf

## Overview of Plans – Greater Sydney Metropolitan Region



The Sydney Region Growth Centres SEPP 2006 (the Growth Centres SEPP) is the planning instrument which covers development objectives for the Growth Centres. The Government works with other agencies to streamline the planning process and infrastructure provision.

The Growth Centres Development Code guides the planning and design of precincts. Several of the objectives have a health focus such as "provide facilities and services at a local level, including parks, libraries, shops, schools and health facilities… improve walking and cycling pathways, especially between residential areas and shops and schools"[43].

### 4.6.1 Structure Plans

The Structure Plans for the Growth Centres identify the general pattern and strategic direction of development. Structure plans identify precincts and set requirements for how each precinct addresses dwelling targets, employment opportunities, transport and infrastructure. The process is intended to ensure that development of growth centres occurs in a coordinated manner[44].

### 4.6.2 Precinct Plans

Each Growth Centre has been divided into a number of precincts. The Growth Centres SEPP enables each of the precincts to be planned more quickly than through the traditional rezoning process.

Precinct planning involves detailed investigations into appropriate land use options, physical environment constraints (topography, vegetation, bushfire mapping, mapping of water courses etc.) and infrastructure requirements. The process looks at issues including riparian zones, conservation zones, where town centres should be located, the mix and type of housing and key transport routes. It does this at the broader precinct-level, with more detailed work being left to the development application stage.

Studies typically conducted to inform a precinct plan include Aboriginal and European Heritage, land capability and contamination, noise, odour, transport, biodiversity, bushfire, economics and employment, community facilities and open space.

43 Sydney's Growth Centres. Growth Centres Development Code. An Overview of the Precinct Planning Process. NSW Department of Planning; 2006. http://www.gcc.nsw.gov.au/media/Pdf/Corporate/DEVCODE/devcode1.pdf

44 Sydney's Growth Centres. Growth Centres Development Code. An Overview of the Precinct Planning Process. NSW Department of Planning; 2006. http://www.gcc.nsw.gov.au/media/Pdf/Corporate/DEVCODE/devcode1.pdf

These studies help to form an **Indicative Layout Plan** which shows where roads, housing, infrastructure, public areas and services may be located. It is used as a basis for public consultation and for discussions with state agencies regarding infrastructure requirements.

As a result of precinct planning the following plans and reports are produced:

A Precinct Planning report

The draft Indicative Layout Plan

A draft Amendment to the Growth Centres SEPP to facilitate rezoning

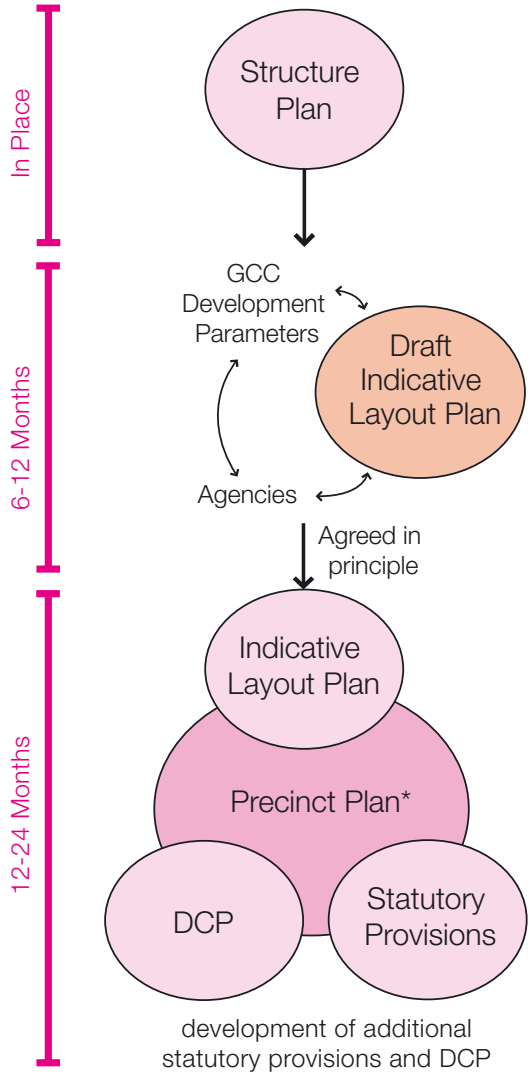
A draft Development Control Plan (a plan which sets standards or requirements for particular types of development)

A draft Section 94 Plan (local infrastructure plans)

Supporting background studies.

### 4.6.3 Growth Centres Precinct Planning Process

The adjacent figure outlines the main elements of the Growth Centres precinct planning process[45].




*In conjunction with this process local Councils will be preparing s.94 Contribution Plans

45 Sydney's Growth Centres. Growth Centres Development Code. An Overview of the Precinct Planning Process. NSW Department of Planning; 2006. http://www.gcc.nsw.gov.au/media/Pdf/Corporate/DEVCODE/devcode1.pdf

The Growth Centres provide an important opportunity for the relevant Area Health Services to influence planning in these key areas. There are opportunities for advice and feedback at all stages. Ideally this would begin in the initial stages and continue throughout (however Structure Plans have already been completed and are unlikely to be revisited in the near future). Relationships with NSW Department of Planning staff including those with responsibility for the Growth Centres are particularly important for the relevant Area Health Service.

## 4.7 Development assessment

Development assessment is the consideration of specific proposals for development. Development assessment is covered by parts 3A and 4 of the EP&A Act.

Part 3A governs developments defined as 'major projects' by the Minister for Planning and are included in the Major Projects SEPP. The criteria for residential, commercial or retail projects being defined as a major project are that they have "…a capital investment value of more than $50 million and that the Minister determines are important in achieving State or regional planning objectives"[46].

Assessment of major projects is the responsibility of State Government. The Minister for Planning acts as the consent authority and determines applications.

Part 4 relates to other developments (not major projects) and is managed by local councils.

For both Part 3A and Part 4 applications, a pre-lodgement consultation between the applicant and the assessment authority (either the Department of Planning [3A] or local council [4]) is usually undertaken. This represents the first opportunity to influence and provide input on how the application is shaped and what it addresses. The challenge for Area Health Service workers is to have established relationships with assessment authorities to ensure that they are aware of, and invited to, initial and ensuing meetings for relevant projects.

Key steps and possible participation points in the development assessment process include:

Pre-application consultation – when an applicant meets with the assessment authority prior to submitting a development application to understand the assessment authority's policies and planning instruments and to explain to the assessment authority their objectives

Lodgement of application and initial administration

Referrals and public consultation – applications may be referred to a range of agencies including Health. Public notification occurs according to statutory requirements

46 NSW Department of Planning. Criteria for declaring development to be a Major Project under Clause 13 of Schedule 1 of the Major Projects SEPP. NSW Department of Planning. http://www.planning.nsw.gov.au/assessingdev/pdf/gu_majorprojectcriteria_constr.pdf

Assessment by the authority's officers – advice may be sought by development assessment officers

Determination – by the assessment authority, or the Land and Environment Court if required.

It is essential for health workers to understand the planning system and the opportunities for participation. However, to enable change and meaningful participation, relationships between health professionals and planners must be formed. As emphasised throughout, this checklist provides technical support for participation by health workers but it by no means replaces the need to continue to develop relationships with the planning profession, including local and state government and the private sector.

## 4.8 Working with the development industry

This chapter on the planning system has focused on governments and their various roles in, and processes regarding, plan making and development assessment. However, there may also be substantial opportunities for Area Health Services to work with private and government developers who are planning and developing land.

Developers are required to follow the system identified above but have a different role in some cases. In some cases, such as the development of a concept plan, master plan or development application, they are the proponents and responsible for the project's conception and its physical design and planning. Developers often put together a team of consultants to assist them to develop a plan. Background studies and reports of various kinds are often required. These consultant studies, and the design process that follows, can be key opportunities for participation by health professionals.

Just as developing partnerships with local government is important in order for health to be considered early in the planning process, working with private developers can also be an important way to influence development outcomes. In some areas, such as the South West Growth Centre, private developers may be quite easy to identify (as they are often consortiums of large land owners). However, in other areas working through peak bodies such as the Urban Development Institute of NSW and the Property Council may be an alternative.

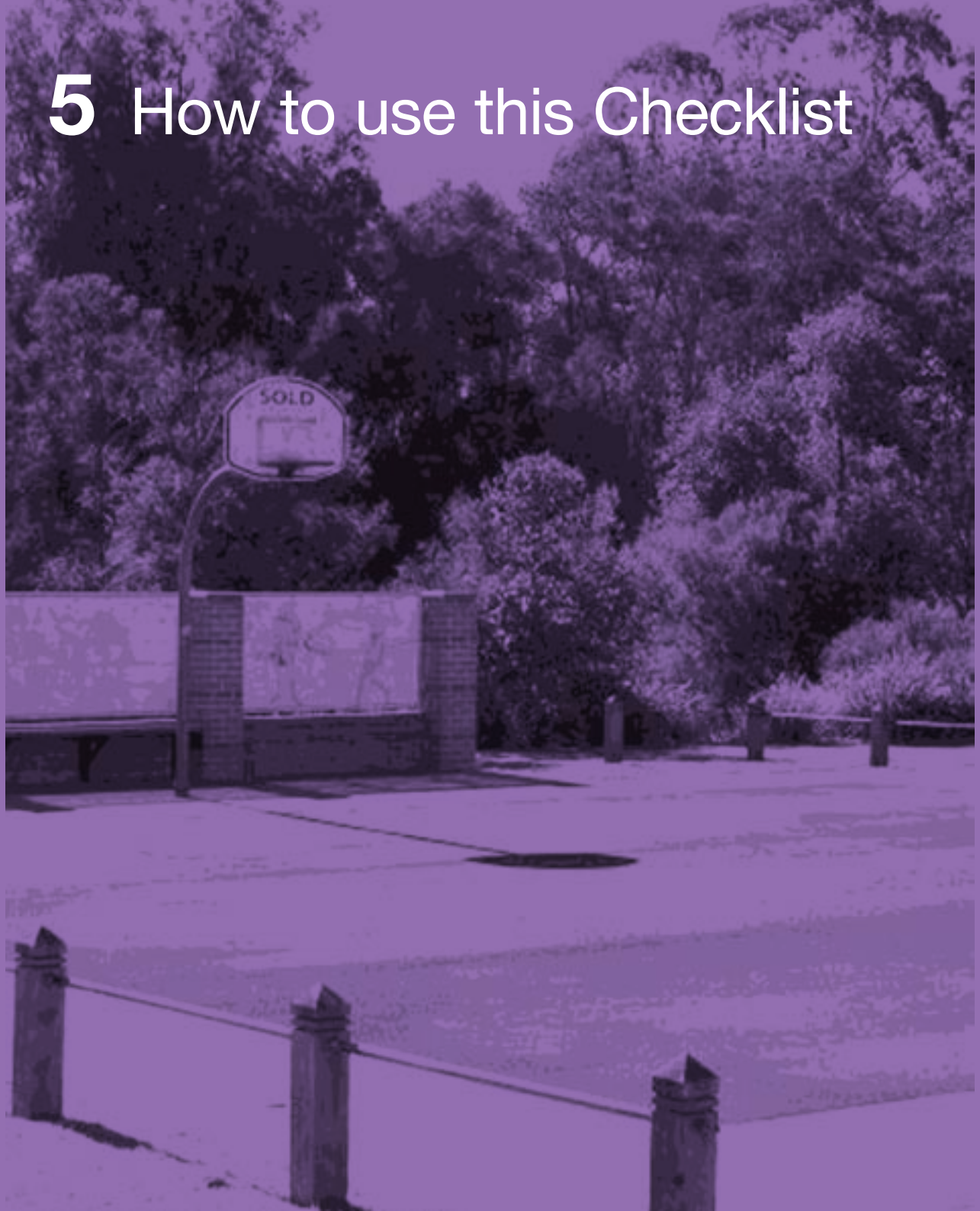
In NSW, Landcom, as essentially the NSW Government's land development agency, is another critical partner in identifying ways for health to become more incorporated into the development process. Landcom has a strong corporate emphasis on social sustainability with health being one of the issues that they consider under this heading.

Landcom, although an important potential partner in its own right, is also a potential avenue to influence the broader (private) development industry. Landcom releases a number of tenders for land development projects throughout New South Wales. Increasingly these tenders are including objectives that relate to social issues (a recent one for development of the Green

Square Town Centre included an objective about leaving a positive social legacy). Inclusion of these types of objectives sees potential (private sector) development partners looking for ways to address the more social dimensions of land development. Health is one of these dimensions and something that both Landcom and the private development industry have expressed some interest in.

As Landcom continues to revise and develop its approach to social sustainability, there may be opportunities for NSW Health and Area Health Services to work with them to investigate how to promote health within their development projects and to their private sector development partners.

# 5 How to use this Checklist



# 5 How to use this Checklist

The relationship between health and urban development is multifaceted and involves a wide range of possible interventions at numerous policy and plan making levels. This presents an inherent complexity and a challenge to creating a tool that is practical and easy to use. As such, this tool is not attempting to address every dimension of healthy urban development and every possible opportunity for participation in the planning and development system. As this tool is intended primarily for use by Area Health Service staff, the focus is on those issues that can be influenced at the regional and local levels.

## 5.1 What to use it for

The focus of the checklist is on opportunities for participation in the planning and development system that Area Health Service workers are most likely to experience. This includes two broad categories:

Policies and strategies

Plans and proposals.

The types of **policies and strategies** that this checklist is intended for include:

Sub-regional strategies such as the South West Draft Sub-Regional Strategy prepared by the NSW Department of Planning[47]

Growth Centres plans and policies including:

- Structure Plans
- Precinct Plans

Local Government planning policies and strategies including:

- Local Environmental Plans (LEP)
- Development Control Plans (DCP)
- Residential Development Strategies (RDS)
- Section 94 contributions plans and voluntary planning agreements.

47 NSW Department of Planning. Criteria for declaring development to be a Major Project under Clause 13 of Schedule 1 of the Major Projects SEPP. NSW Department of Planning. http://www.planning.nsw.gov.au/assessingdev/pdf/gu_majorprojectcriteria_constr.pdf

The types of **plans and proposals** that this checklist is intended for include:

Master Plans (may also be called concept plans)

Town Centre Plans

Development applications for projects like large housing developments, shopping centres, and community and health care facilities.

Generally speaking policies and strategies are broader in focus and often relate to larger areas such as regions, local government areas or large precincts. Their focus is also more on principles and objectives. Plans and proposals are more specific and often relate to a particular site or area. Their focus is more on the physical characteristics of development. They often include a site plan or map.

As mentioned, this checklist cannot address every conceivable opportunity for participation in the planning and development system and remain a practical and useable tool. It is also intended primarily for Area Health Service worker use. Following from this, there are necessarily some planning and development policies, plans and proposals that this checklist has not been designed for. These include:

Plans like the NSW State Plan which NSW Health will take the lead on providing advice and comment on, with Area Health Services likely to play a role in the formulation of that advice

Strategies like the Sydney Metropolitan Strategy which are also at a very broad level with advice and comment led by NSW Health

Plans that are not land use or development focused such as council management plans, strategic plans or social plans (however, it is recognised that some health input into some of these plans may be useful)

Infrastructure projects like major roads which, although they may have significant health impacts and aspects of them fall within the planning and development system, are subject to other processes like environmental impact assessment and potentially health impact assessment

Minor development applications, whose sheer number mean that comment on such applications is not practical for Area Health Services, nor appropriate in most cases

Plans and proposals related to buildings, which are governed by a range of other tools, such as the Building Code of Australia, and are more specific than this checklist's focus on the broader issues of planning and development.

It is important to note that while this checklist has not been written specifically for the above examples, it may still serve as a useful guide for comment and advice related to these kinds of policies, plans and proposals.

## 5.2 When to use it

This tool is intended to be used in two ways:

1. As an early or 'upstream' participation tool to provide advice or input during the developmental phase of policies, plans or proposals

2. As a feedback mechanism to assist with providing comment on draft or publicly exhibited policies, plans or proposals.

It is considered that the earlier the checklist can be applied, the more likely it is to be able to effect change.

## 5.3 How to use it

This section outlines the steps that should be followed to use the checklist (see also the flow chart later in this chapter).

### 5.3.1 Pre-checklist activities

Complete the pre-checklist chapter (chapter 6) which includes:

Initial questions (6.1) about the policy, plan or proposal itself

Understanding the community (6.2) that the policy, plan or proposal will affect

Quick Guide (6.3) to help you identify the priority health issues in the policy, plan or proposal.

### 5.3.2 Checklist questions

Once you have completed the Quick Guide, go through the checklist chapters (7-16):

Healthy food

Physical activity

Housing

Transport and physical connectivity

Quality employment

Community safety and security

Public open space

Social infrastructure

Social cohesion and social connectivity

Environment and health.

In the checklist, specific questions are grouped according to the key questions identified for each chapter. For example, in the Healthy food chapter (chapter 7), there are a number of specific questions listed under each of the three key questions: how does the policy, plan or proposal: promote access to fresh, nutritious and affordable food? preserve agricultural lands? provide support for local food production? For each specific question the checklist provides an indication, with a dot in the relevant column, of whether it is relevant to planning policies and strategies, or to development proposals, or both.

The checklist also makes a distinction between general questions that relate to the objectives or intent of a policy, plan or proposal and 'urban form' questions. Urban form questions are those that relate specifically to the physical aspects of the policy, plan or proposal. These are often the things that can be determined by looking at maps and plans that may accompany a policy, plan or proposal. For a fuller description of urban form and its influence on health see section 2.1 in chapter 2.

For simplicity, questions are phrased in a way that might initially suggest that a yes/no answer is expected. However, this is not the intention. Mostly there will not be a categorical yes/no response and often the context, complications and uncertainties will necessitate contingent answers. Many questions will therefore produce multifaceted and/or contingent responses.

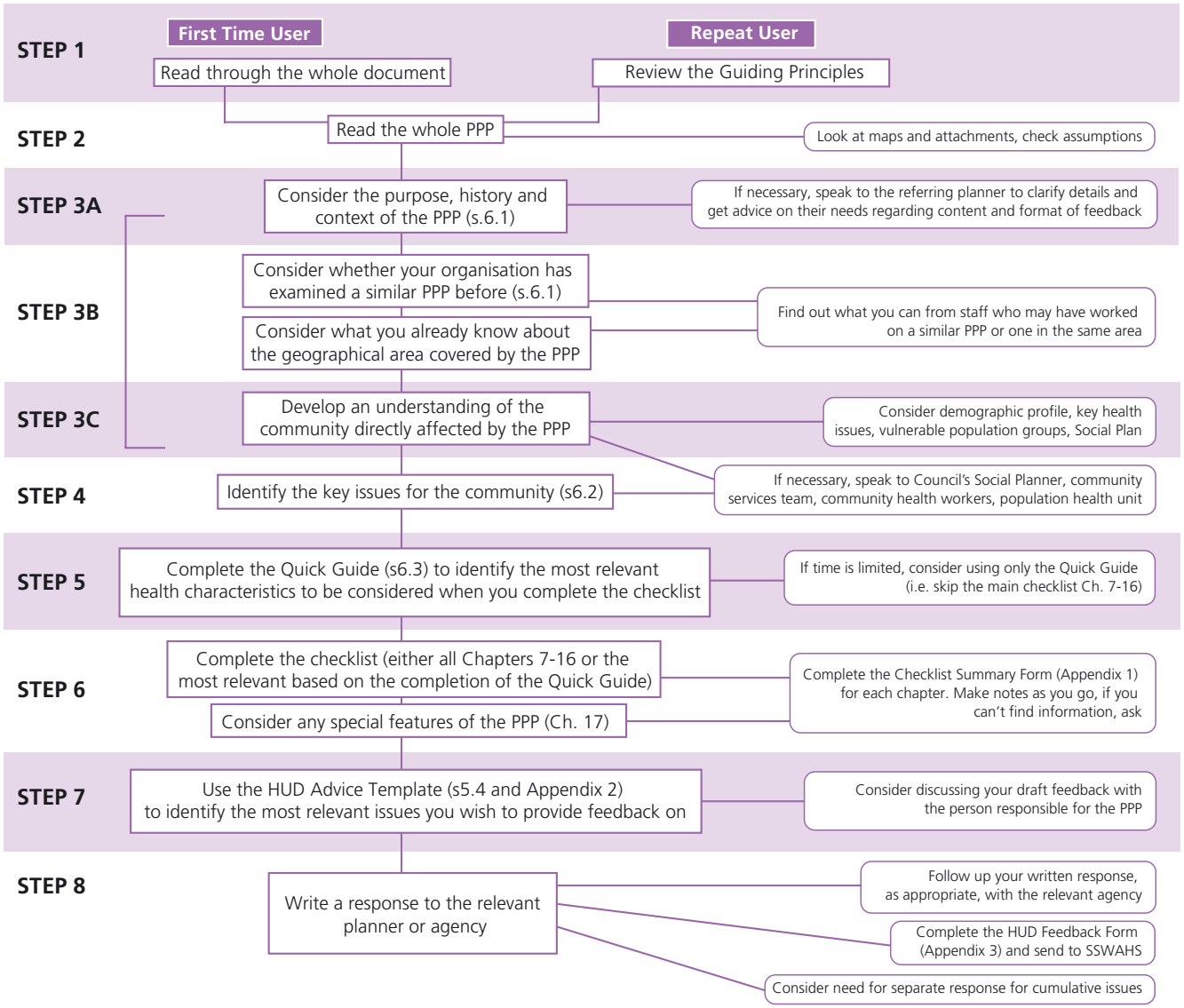
How much of each chapter needs to be read will depend on the experience of the individual user and the nature of the policy, plan or proposal being reviewed. In some cases, a user may be able to go straight to the questions.

The adjacent flow chart outlines the key steps in completing the checklist. Note that a distinction is made between first time users and those with more experience. This recognises that although first time users may benefit from going through the checklist 'from cover to cover', more experienced users will be able to move directly to the chapter or chapters that are most relevant to them. We acknowledge that user experience and knowledge will influence greatly how the tool will be used.

The nature of the checklist and its definition of health mean that there are many overlapping and interrelated issues. This has led to some repetition of questions across chapters. As an example, issues to do with bicycling and walking are relevant to both physical activity and transport and connectivity. This is considered to be a positive feature as it serves to reinforce key issues and emphasise the interrelated nature of the determinants of health.

The Glossary in chapter 19 provides explanations of some of the terms used throughout the checklist.

## PROVIDING FEEDBACK ON A DRAFT POLICY, PLAN OR PROPOSAL (PPP)



## 5.4 Preparing a response

Two forms have been developed to help the user collate their thoughts and formulate a response that identifies the most important issues from a health perspective and is useful to the planner. While there is an emphasis on written responses here, there may also be circumstances where the checklist is used to inform participation in meetings, discussions and workshops where the focus is on verbal advice and dialogue.

Synthesising the information from the checklist is a two stage process. Initially the relevant part of a Checklist Summary Form (see Appendix One) is completed at the end of each chapter. The Checklist Summary Form identifies positive and negative aspects of the policy, plan or proposal, whether there are any significant concerns and possible recommendations or suggestions.

The second stage is conducted on completion of the Checklist Summary Form for all relevant chapters. This involves reviewing the summary form and developing a written response based on the key issues identified. The user will make a decision as to which of the issues identified on the Checklist Summary Form will be incorporated into a written response. In some cases all of the issues identified may be included; in other cases only selected issues will be included. The Healthy Urban Development Advice form (see Appendix Two) may assist in the construction of this response.

The response should include identification of key health issues, recommendations and relevant supporting evidence. Importantly, the response should identify both positive and negative attributes of the policy, plan or proposal being considered, and suggest how positive health effects can be maximised and negative health effects minimised. The National Health and Medical Research Council (NHMRC) guidelines on grades of evidence[48] will assist users to indicate the strength of the evidence cited.

Health workers should be aware that their feedback will not be the only advice received. The health service response is likely to be among a range of submissions made from a variety of perspectives which the planners will have to inform a decision on a policy, plan or proposal.

## 5.5 Guidance for written responses

As mentioned, the written response derived from using this checklist requires careful consideration, analysis and structure. This is not a 'tick a box' checklist and the resulting response must reflect that.

It is advisable to speak with the person who will be the recipient of the advice when you have a reasonable idea about what your advice will include. It is important

48 National Health and Medical Research Council. NHMRC additional levels of evidence and grades for recommendations for developers of guidelines: stage 2 consultation: early 2008 – end June 2009. Canberra: NHMRC. http://www.nhmrc.gov.au/guidelines/_files/Stage%202%20Consultation%20Levels%20and%20Grades.pdf

to ensure that the advice will be useful and relevant, especially if it is not entirely supportive of the policy, plan or proposal in question.

Including evidence to support claims or recommendations is important. This evidence may include information from the academic or policy literature (including that cited in this checklist) or data from a community profile or health statistics that you have obtained.

Some health related effects of development are cumulative in nature and cannot reasonably be identified as the responsibility of a single development proposal. As an example, while the effect on air quality of a single suburban development may, in isolation, be seen as negligible, the cumulative impacts of numerous car-oriented developments that are not well served by public transport may be significant. In these cases the response can comment on the individual development proposal and acknowledge that any single development cannot be made responsible for a wider problem, while also highlighting likely cumulative health impacts of a number of similar small development proposals.

In providing advice, whenever possible mention and support the positive elements of the policy, plan or proposal being considered. The checklist's focus is as much on encouraging positive, health promoting aspects of development as it is on identifying potentially negative impacts.

# 6 Pre-Checklist

# 6 Pre-Checklist Activities

This chapter aims to assist users appreciate the context for the policy, plan or proposal they are assessing, its place in the planning system, and where it is in the planning process, and develop an understanding of the community where it is situated. Please also refer to the flow chart in Chapter 5.

## 6.1 Understanding the policy, plan or proposal

**What is the policy, plan or proposal; what stage of the process is it at; where does it fit into the planning system and what is it supposed to do?**

An initial step is to determine what it is you are being asked to comment on. Is it a policy, plan or proposal? At this stage it is useful to ensure you have a general understanding of where the policy, plan or proposal fits within the planning system and what, in general terms, it is intended to do. The earlier chapter on the planning system (and the references cited within it) can be a starting point.

It might be helpful at this early stage to contact the planner who is responsible for preparing the policy, plan or proposal to clarify some of the fundamentals about it. Possible points include clarification of boundaries, expected population numbers, demographic profile, housing type and expected pricing or affordability levels. This is also an opportunity to confirm what type of feedback the referring planner would find helpful.

Either as part of the conversation with the responsible planner, or as preliminary questions for the user to consider, the following may be used as guides to understand the context of the policy, plan or proposal:

Where is it up to in the plan making or approvals process and what capacity do you have to influence the outcome?

Who created the policy, plan or proposal?

Who has been consulted during the development of the policy, plan or proposal?

Why was the policy, plan or proposal developed?

Why is it being developed now?

What is the stated intent of the policy?

Is there an 'unstated' agenda? If so, what is it?

Does the policy relate to any other relevant policies? If so how?

Can data and information provided in the policy, plan or proposal be verified? Is it accurate? Is it from a recognised source? Can it be reviewed?

### Have you done something similar before?

Have you, or someone in your Area Health Service, commented on a similar policy, plan or proposal before?

### What do you know about the area?

What local government area is it in?

Where exactly is it located? What is there at present?

Are you familiar with the area?

What is in the areas around it?

Is there anyone in your health service who has experience working in the area and with that community? (If so, try to involve those people in the process.)

Do you, or your Area Health Service, have an existing relationship with the local council?

## 6.2 Understanding the community

An understanding of the community where a policy, plan or proposal is located is a fundamental first step in considering how the wider determinants of health may be influenced by, or influence, proposed urban development.

For greenfield sites, it can sometimes be difficult to identify who the 'community' is. It could be the surrounding, existing community or the projected, future community, or both. The important thing is to understand the physical and social context of the development and to identify who in existing or future populations may be affected. Again, discussions with council planners or social planners may be useful to clarify these issues.

This section presents a number of suggestions and questions that can be used to develop a better understanding of the community and check whether a policy, plan or proposal has considered the specific characteristics of the local community. This initial process is intended to be a relatively 'quick scan' and not a detailed project in its own right. The scale of the project will determine the detail to which these questions are answered. For example, for policies like a Structure Plan (see 4.6.1.) a comprehensive community profiling exercise may be appropriate, whereas for a small scale, site-specific proposal, less detail will be required.

### 6.2.1 Initial considerations

Initial considerations for users of this checklist include:

Key characteristics of the existing (including surrounding) population and the future (projected) population including size, age, household composition, socio-economic status and ethnicity

Identification of vulnerable, disadvantaged or at-risk groups in the local population

Key health issues of concern to the local community and/or the Area Health Service

Health determinants including housing conditions, types of housing, environmental and social issues, employment status, socio-economic status, levels of employment or unemployment, transport infrastructure, social support and access to services (including health care services and sport and recreation facilities)

Whether the community has already been consulted during the development of the policy, plan or proposal.

### 6.2.2 Equity considerations

Equity is a fundamental consideration in public health and a guiding principle of this checklist. Equity in this context means that access to opportunities, resources and community benefits (health, safety, open space, transport, housing etc.) are fairly distributed among all residents regardless of their age, gender, cultural background, ability or socioeconomic status.

The following questions are based on Mahoney et al (2004)[49] and are considered essential to understanding a community and using the health characteristic chapters that follow:

Who will most likely be affected by the policy, plan or proposal?

What is known or understood about the sections of the community most likely to be affected?

What will the nature of the effects be (good or bad, positive or negative)?

Are effects likely to be differentially distributed by socioeconomic status, ethnicity, gender, geography, or some other factor?

How do you know this is likely to happen (what is the evidence)?

How likely is it that this will occur?

How severe is this impact likely to be?

49 Mahoney M, Simpson S, Harris E, Aldrich R, Stewart Williams J. Equity Focused Health Impact Assessment Framework. The Australasian Collaboration for Health Equity Impact Assessment (ACHEIA); 2004. http://notes.med.unsw.edu.au/cphceweb.nsf/resources/CHETRErpts1to5/$file/EFHIA_Framework.pdf

### 6.2.3 Sources of information

Sources of information useful for answering some of these questions include[50]:

Australian Bureau of Statistics
http://www.abs.gov.au (Census data and other useful packages such as the SEIFA index of disadvantage)

Report of the NSW Chief Health Officer
http://www.health.nsw.gov.au/public-health/chorep/

Local Government
http://www.dlg.nsw.gov.au/dlg/dlghome/dlg_home.asp

Australian Institute of Health and Welfare
http://www.aihw.gov.au/

State Library of NSW
http://www.sl.nsw.gov.au/links/stats.cfm

Bureau of Crime Statistics and Research (BOCSAR)
http://www.lawlink.nsw.gov.au/bocsar

Profile ID
http://www.id.com.au/home/default.asp?pg=7

Other sources include:

Local council community and statistical profiles. Many councils publish community profiles on their websites that contain an extensive array of community information

The Social Plan of the local council where the policy, plan or proposal is located

For new planned communities it can be helpful to look at the profiles of similar or nearby communities to see what the key similarities and differences might be

Consulting with people in the local area who understand the community and its dynamics:

- Council's Social Planner or Community Services or Community Development Department
- Community Health Centre workers
- Community Development Workers at local community centres and services
- The local Area Health Service's Population Health service
- Department of Environment Climate Change and Water's Contaminated Lands register.

50 Harris P, Harris-Roxas B, Harris E, Kemp L. Health Impact Assessment: A Practical Guide. Sydney: Centre for Health Equity Training Research and Evaluation (CHETRE), Part of the UNSW Research Centre for Primary Health Care and Equity, UNSW; 2007. http://www.hiaconnect.edu.au/files/Health_Impact_Assessment_A_Practical_Guide.pdf

If you are not familiar with the area, a visit to the site, if possible, is also recommended to help get an understanding of the context and local community. If a site visit is not possible, examining an aerial photograph of the area through sources such as Google Maps may also help to gain an appreciation of the site and its context.

The Checklist Summary Form (see Appendix One) includes a section on understanding your community. The form includes space for five key points about the community. Users of the checklist are not necessarily restricted to this but some form of analysis and summary of population data or community profile information is recommended.

## 6.3 Quick Guide

The checklist is structured into ten chapters, each one focused on a characteristic that is important for healthy urban development. Each characteristic has up to five key considerations, formulated as questions. The ten characteristics, and their key considerations, are listed on the following pages, in the form of a Quick Guide, numbered according to their respective chapter numbers.

After developing an understanding of the policy, plan or proposal and thinking about the community it will affect, consider each section in the Quick Guide. Begin by asking how the policy, plan or proposal may affect healthy food, physical activity, housing, etc. to help you gain a first impression of which of the ten characteristics are likely to be most significant for this policy, plan or proposal. Then, if, for example, you think that physical activity may be an issue, use the key consideration questions (e.g. How does the plan, policy or proposal encourage or discourage incidental physical activity?) to confirm whether this is an area that you would like to pursue in more detail with the full checklist chapter. Use the relevance column to tick those issues you would like to explore in more detail with the full checklist. Many policies, plans or proposals may get ticks for every characteristic, others may not.

**If time is limited**, this Quick Guide could be used alone to frame an interim response (using Appendices One and Two if desired) to the referring planner or agency. The response should note that the feedback is based on a preliminary analysis and that it identifies issues that have potential health implications and warrant further consideration.

### 6.3.1 Quick Guide questions

## 7. Healthy Food

| Are there likely to be significant issues related to … | Relevance (tick if relevant) |
|---|---|
| Access to fresh, nutritious and affordable food? | ❐ |
| Preservation of agricultural lands? | ❐ |
| Support for local food production? | ❐ |

## 8. Physical Activity

| Are there likely to be significant issues related to … | Relevance |
|---|---|
| Encouragement of incidental physical activity? | ❐ |
| Opportunities for walking, cycling and other forms of active transport? | ❐ |
| Access to usable and quality outdoor spaces and recreational facilities? | ❐ |

## 9. Housing

| Are there likely to be significant issues related to … | Relevance |
|---|---|
| Provision of housing that supports human and environmental health? | ❐ |
| Dwelling diversity? | ❐ |
| Affordable housing? | ❐ |
| Adaptability and accessibility of housing? | ❐ |

## 10. Transport and Physical Connectivity

| Are there likely to be significant issues related to … | Relevance |
|---|---|
| Availability of public transport services? | ❐ |
| Reduction of car dependency and encouragement of active transport? | ❐ |
| Encouragement of infill development and/or integration of new development with existing development? | ❐ |
| Telephone and internet connectivity? | ❐ |

## 11. Quality Employment

| Are there likely to be significant issues related to … | Relevance |
|---|---|
| Location of jobs to housing and commuting options? | ❒ |
| Access to a range of quality employment opportunities? | ❒ |
| Access to appropriate job training? | ❒ |

## 12. Community Safety and Security

| Are there likely to be significant issues related to … | Relevance |
|---|---|
| Crime prevention and sense of security? | ❒ |

## 13. Public Open Space

| Are there likely to be significant issues related to … | Relevance |
|---|---|
| Access to green space and natural areas? | ❒ |
| Public spaces that are safe, healthy, accessible, attractive and easy to maintain? | ❒ |
| Quality streetscapes that encourage activity? | ❒ |
| Sense of cultural identity, sense of place and public art? | ❒ |
| Preservation and enhancement of places of natural, historic and cultural significance? | ❒ |

## 14. Social Infrastructure

| Are there likely to be significant issues related to … | Relevance |
|---|---|
| Access to a range of facilities to attract and support a diverse population? | ❒ |
| Responding to existing (as well as projected) community needs and current gaps in facilities and/or services? | ❒ |
| Early delivery of social infrastructure? | ❒ |
| An integrated approach to social infrastructure planning? | ❒ |
| Efficiencies in social infrastructure planning and provision? | ❒ |

## 15. Social Cohesion and Social Connectivity

| **Are there likely to be significant issues related to …** | **Relevance** |
|---|---|
| Environments that will encourage social interaction and connection among people? | ❐ |
| Promotion of a sense of community and attachment to place? | ❐ |
| Local involvement in planning and community life? | ❐ |
| Social disadvantage and equitable access to resources? | ❐ |
| Community severance, division or dislocation? | ❐ |

## 16. Environment and Health

| **Are there likely to be significant issues related to …** | **Relevance** |
|---|---|
| Air quality? | ❐ |
| Water quality and safety? | ❐ |
| Disturbance and health effects associated with noise, odour and light pollution? | ❐ |
| Potential for hazards (both natural and man made)? | ❐ |
| Vector catchments and the potential for pest borne disease? | ❐ |

# 7 Healthy Food

# 7 Healthy Food

## 7.1 Introduction

Access to fresh, nutritious and affordable food is a basic requirement for human health and well-being; it is also a recognised human right[51]. Key factors impacting on healthy food access include:

Economic factors – having adequate income, living conditions or resources to buy healthy and fresh food or having affordable food outlets in local neighbourhoods

Physical ability – having the ability to walk, drive or carry purchases home

Physical infrastructure – the availability of public transport or safe walkable routes or footpaths to shops and other healthy food outlets

Geographic location – the availability of shops or community markets with a variety of socially and culturally appropriate healthy food[52].

Individuals' food choices are influenced by various factors including time, taste, knowledge of the health values of certain foods and various cultural norms. This chapter of the checklist focuses mainly on physical infrastructure and geographic location dimensions of healthy food access that can be addressed by urban design and development.

51 United Nations. Universal Declaration of Human Rights. Article 25. Paris: United Nations; 1948. www.un.org/Overview/rights.html

52 Booth S, Smith A. Food Security and Poverty in Australia - Challenges for Dieticians. Australian Journal of Nutrition and Dietetics 2001; 58(3): 150-6.

### 7.1.1 Relevance to NSW

Some of the health conditions to which diet contributes substantially either as a protective influence or a risk factor include coronary heart disease, some cancers, type II diabetes and overweight and obesity[53].

Poor diet also contributes to inequities in health, as those with the greatest barriers to healthy food access often experience other forms of individual and environmental disadvantage[54]. Those most at risk of having limited access to healthy food include low income families (particularly women of child-bearing age, children and adolescents,

53 Centre for Epidemiology and Research. New South Wales Population Health Survey. 2007 Summary Report on Adult Health by Area Health Service. Sydney: NSW Department of Health; 2008. www.health.nsw.gov.au/resources/publichealth/surveys/hsa_07area_nsw.pdf

54 Wood B, Wattanapenpaiboon N, Ross K, Kouris-Blazos A. 1995 National Nutrition Study: All persons 16 years and over by food security. Healthy Eating, Healthy Living Program. Melbourne: Monash University; 2000.

and single parents with young dependent children), people who are unemployed or have limited formal education, people with a disability, including mental illnesses, people from non-English speaking backgrounds (particularly refugees and asylum seekers), frail elderly people (particularly those who are socially isolated and have low incomes), people affected by alcohol and/or substance abuse, homeless people (particularly youth, women of child-bearing age and the elderly) and people from Aboriginal and Torres Strait Islander backgrounds[55].

Approximately 5% of residents in the Greater Sydney area have reported experiencing food insecurity, and studies indicate that residents of suburbs in South West Sydney might experience even greater levels of reduced access to healthy food – as high as 15% for the population[56].

Barriers to healthy food access faced by many Australian families include not having the income to buy healthy food, not having affordable healthy food outlets within easy reach and not having access to the facilities needed to store and cook healthy food[57].

A wide-reaching challenge to food security affecting the Greater Sydney region is the preservation of agricultural production in the Sydney basin. This is especially a concern as new development targets agricultural lands within and surrounding the North West and South West Growth Centre areas, along with other sections of the Sydney basin[58].

The built environment has a direct influence on healthy food access. For example, access to quality and affordable fruit and vegetables is influenced by food production, food transport, retail mix and retail pricing policies. A high prevalence of fast food outlets near schools and workplaces has also been shown to negatively impact on people's food choices[59].

There are few studies that link urban form to healthy eating. However it is clear that the following environmental characteristics can potentially shape people's choice of food and food security at the neighbourhood level:

Location of agricultural lands

Retail type and locations

Food transport systems

Transport infrastructure to food retail locations

Food service locations (including fast food and vending machines)

55 Strategic Inter-Governmental Nutrition Alliance of the National Health Partnership. Eat Well Australia: An Agenda for Action for Public Health Nutrition. Melbourne: National Public Health Partnership; 2001. http://www.nphp.gov.au/publications/signal/eatwell1.pdf

56 See footnote 53

57 See footnote 53

58 NSW Centre for Public Health Nutrition. Food Security Options Paper: A planning framework and menu of options for policy and practice interventions. Sydney: NSW Department of Health; 2003. http://www.health.nsw.gov.au/pubs/2003/pdf/food_security.pdf )

59 Gebel K, King L, Bauman A, Vita P, Gill T, Rigby A et al. Creating healthy environments: A review of links between the physical environment, physical activity and obesity. Sydney: NSW Department of Health and NSW Centre for Overweight and Obesity; 2005. http://www.coo.health.usyd.edu.au/pdf/2005_creating_healthy_environments.pdf

Food advertising exposure in public places

Facilities (e.g. water fountains, community gardens and allotments, breastfeeding locations etc.)

Affordable housing and housing-commercial-industry mix[60].

In addition, research has indicated a range of benefits associated with local food production, including reducing the various costs of food transportation. Such costs include the impact of 'food kilometres' travelled on the nutritional value of food, the affordability of healthy food, opportunities for local employment in agricultural production and the burden of freight transport on traffic congestion and air and noise pollution[61].

### 7.1.2 Key evidence and leading practice

New Zealand research has shown that low income families consume less convenience food than the general public and are generally good at budgeting, but have difficulty obtaining healthy food at the lowest prices due to factors including the location of healthy food outlets and lack of transport and storage[62].

Healthy food education without equitable access to healthy food can contribute to inequalities in health and cause anxiety and frustration amongst those who are currently disadvantaged.

Increased exposure to fast food restaurants, along with the intensive marketing of such foods, has been shown to negatively influence children's eating habits[63].

Public transport is not necessarily designed to help people access healthy food outlets more effectively – including in regards to routes, schedules and space to store parcels en route[64]. 'Shopping shuttles', home delivery services, and/or support for local corner shops and convenience stores might be a more effective approach to supporting healthy food access in some areas and for some specific populations.

Growers' markets can increase food and vegetable consumption amongst low-income participants[65]. In order to reach low income consumers, farmers' markets must be accessible, operate during flexible hours and conduct promotions and offer payment

60 See footnote 59

61 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report: 62-3. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

62 New Zealand Network Against Food Poverty (NZNAPP). Hidden Hunger – Food and Low Income in New Zealand. Referenced in NSW Department of Health. NSW Centre for Public Health Nutrition. Food Security Options Paper: A Planning Framework and Menu of Options for Policy and Practice Interventions. Sydney: NSW Department of Health; 2003. http://www.health.nsw.gov.au/pubs/2003/pdf/food_security.pdf

63 Mikkelsen L, Chehimi S. The Links Between the Neighbourhood Food Environment and Childhood Nutrition. Oakland, California: Prevention Institute; 2007. www.preventioninstitute.org/pdf/foodenv11.07.pdf

64 NSW Centre for Public Health Nutrition. Food Security Options Paper: A Planning Framework and Menu of Options for Policy and Practice Interventions. Sydney: NSW Department of Health; 2003. www.health.nsw.gov.au/pubs/2003/food_security.html

65 Mikkelson L, Chehimi, S, Cohen L. Healthy Eating and Physical Activity: Addressing Inequalities in Urban Environments. Oakland, California: Prevention Institute; 2007. http://www.goforyourlife.vic.gov.au/hav/admin.nsf/Images/Healthy_eating_and_physical_activity_addressing_inequalities_in_urban_environments.pdf/$File/Healthy_eating_and_physical_activity_addressing_inequalities_in_urban_environments.pdf

options that match the cash flow of low income customers. Growers' markets should not take the place of outlets with more regular access to healthy foods.

Home and community gardening is recognised to have numerous positive health and wellbeing outcomes, including for those who engage in these activities and those who enjoy the external benefits of fresh food and an improved local environment[66]. Growers' markets are one strategy for supporting local food production.

Within the Greater Sydney region, productive farmland has been lost to urban development, and this land cannot be replaced[67]. Locally produced foods can be cheaper and can provide low income populations with greater access to fresh nutritious food.

As well as providing a significant source of employment (especially for migrant communities), Sydney market gardeners currently produce:

- 90% of Sydney's perishable vegetables
- 100% of the supply of Asian greens
- 80% of its mushrooms
- 70% of fresh tomatoes
- 91% of spring onions and shallots[68]

It should be noted that challenges to accessing healthy food vary between populations. General initiatives aimed at improving healthy food access should be mixed with activities and strategies targeting the needs of particular groups.

Key references including relevant standards and guidelines are included in the *Further information* section at the end of this chapter.

### 7.1.3 Key questions

How does the policy, plan or development proposal

(HF1) Promote access to fresh, nutritious and affordable food?

(HF2) Preserve agricultural lands?

(HF3) Provide support for local food production?

66 Thompson S, Corkery L, Judd B. The Role of Community Gardens in Sustaining Healthy Communities. Sydney: Faculty of the Built Environment, UNSW; 2007. http://www.fbe.unsw.edu.au/cf/publications/presentations/attachments/SOAC07Thompson&Corkery&Judd.pdf

67 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report: 62-3. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

68 Sydney Food Fairness Alliance and Food Fairness Illawarra. Local Food, Local Economy. Sydney: Sydney Food Fairness Alliance; 2006. http://sydneyfoodfairness.org.au/wp-content/uploads/2009/07/SFFA_syd_basin_v1_dec06www.pdf

## 7.2 Healthy food checklist questions

### HF1: Promote access to fresh, nutritious and affordable food

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| HF1.1 | Does the policy, plan or proposal include access to healthy food in its aims, objectives or provisions? Is it recognised as an issue? | ● | ● |
| HF1.2 | Does the policy, plan or proposal have an impact on those in the area who are most likely to have trouble accessing healthy food? | ● | ● |
| HF1.3 | Does the policy, plan or proposal support or encourage a range of opportunities for the supply of healthy food including supermarkets, fruit and vegetable shops, corner shops and farmers' markets? | ● | ● |
| HF1.4 | Does the policy, plan or proposal provide easy access to healthy foods? (NOTE: This may include the location of healthy food outlets, availability of public transport, etc.) | ● | ● |
| HF1.5 | Does the policy, plan or proposal discourage an over abundance of fast food restaurants? | ● | ● |
| HF1.6 | **URBAN FORM**<br>Are most homes within a comfortable walking distance (approximately 400-500m) of healthy food outlets such as supermarkets and fruit and vegetable shops? | | ● |

## HF2: Preserve agriculture lands

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| HF2.1 | Does the policy, plan or proposal affect prime agricultural land? (as defined by the Department of Primary Industries) | ● | ● |
| HF2.2 | Does the policy, plan or proposal address the potential conflicts between urban and rural land uses? (NOTE: This may include the establishment of appropriate buffer or transitional zones and informing those who decide to reside near agricultural lands of the potential consequences of living in an agricultural area such as noise, odour and dust.) | ● | ● |
| HF2.3 | **URBAN FORM** Are adequate natural buffer or transitional zones between agricultural land and residential development encouraged? Do these buffers minimise the loss of viable agricultural land in their establishment? | | ● |
| HF2.4 | Where development must impact on agricultural lands, are lands of marginal agricultural value targeted first for development? | | ● |

## HF3: Provide support for local food production

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| HF3.1 | Does the policy, plan or proposal promote local food production as a viable approach to increasing access to healthy food for residents of the target area? This could include access to community gardens and the availability of nature strips for edible landscaping. | ● | ● |
| HF3.2 | **URBAN FORM**<br>Does the policy, plan or proposal provide some private open space suitable for home gardening?<br>(NOTE: There are no minimum standards for home gardening and different areas may be appropriate for different housing types.) | | ● |
| HF3.3 | Does the policy, plan or proposal support community gardening by providing space for this use? If so, is the community garden space within walking distance of homes? | | ● |
| HF3.4 | If schools are proposed, do they include space for gardening? | | ● |

## 7.3 Further information

NSW Health – *Live Life Well: Healthy Eating*
www.livelifewell.nsw.gov.au

Australian Government, Department of Health and Ageing – *National Monitoring in Public Health Nutrition*
www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-food-monitoring.htm

Sydney West Area Health Service – *Healthy Homes Guide (improving food and nutrition standards within group homes)*
www.wsahs.nsw.gov.au/services/publicaffairs/documents/Healthy_Homes_Guide_07.pdf

Hawkesbury Harvest
www.hawkesburyharvest.com.au

Sydney Food Fairness Alliance
www.sydneyfoodfairness.org.au

Permaculture Sydney Basin
http://permaculturesydneybasin.org.au

Food Standards Australia New Zealand
www.foodstandards.gov.au

NSW Department of Primary Industries
www.dpi.nsw.gov.au

Australian City Farms and Community Gardens Network
www.communitygarden.org.au

Rural Law Online – *Right to Farm*
www.rurallaw.org.au/handbook/xml/ch02s13.php

Markets as Sites for Social Interaction (including market planning suggestions)
www.jrf.org.uk/bookshop/eBooks/1940-markets-social-interaction.pdf

Foodbank NSW,
www.foodbanknsw.org.au

Lessons from the Field: Promoting Healthy Eating in Schools
www.activelivingbydesign.org/events-resources/resources/lessons-field-promoting-healthy-eating-school

Sydney Morning Herald
– *Green Solutions Just Outside Your Door*
www.smh.com.au/news/environment/green-solution-just-outside-your-door/2008/10/06/1223145261857.html

# 8 Physical Activity

# 8 Physical Activity

## 8.1 Introduction

In healthy communities, physical activity is a normal part of everyday life. Physical activity can be structured or unstructured, planned or incidental. Planned physical activity is a deliberate form of activity where the principal intention is to gain some form of exercise. This may include going for a jog or lap swimming for exercise. Incidental physical activity is exercise gained through a person's normal daily activities such as walking to the bus stop, using the stairs at work or doing household tasks. Any movement that we engage in (be it related to work, recreation, exercise, transport or otherwise) can be considered a form of physical activity[69].

Physical activity is a behaviour that is influenced by various factors, including social and economic contexts, individual preferences and the physical environments (both the natural and the built) in which people live.

Good urban development involves shaping and managing the built environment to support human, as well as environmental, health. This involves designing the built environment to provide various opportunities for physical activity, as well as to remove barriers to physical activity – including those posed by factors of the natural environment, including climate and topography. Built environment features such as providing awnings along pathways and designing pathways to avoid steep slopes are just some examples of how urban design can influence people's physical activity choices.

This chapter of the checklist focuses on improving the built environment at various scales to increase people's physical activity. Other chapters of the checklist explore in greater detail related dimensions of health and urban development that impact on, and are affected by, our physical activity choices. These include transport, public space, community safety, social infrastructure and social cohesion.

69 World Health Organization. Physical activity. World Health Organization; 2009. http://www.who.int/topics/physical_activity/en/

### 8.1.1 Relevance to NSW

It is widely acknowledged that regular physical activity has numerous health benefits and is a key component of a healthy lifestyle. Health benefits associated with physical activity include the reduction of overall mortality, symptoms of stress and depression, and risk of preventable injury, type II diabetes and certain cancers[70].

National physical activity guidelines recommend that adults engage in at least 30 minutes of moderate activity on most, and preferably all, days of the week[71]. National guidelines also indicate that children and young people should participate in at least 60 minutes (and up to several hours) of moderate-to-vigorous-intensity physical activity every day[72].

Despite the health benefits of physical activity, many Australians are not achieving daily physical activity benchmarks. Within Australia, physical inactivity is a growing public health concern due to the negative impact of a sedentary lifestyle on health and the links between physical inactivity and rates of overweight and obesity.

Physical inactivity is second only to smoking as the leading cause of death and disability in Australia, and the 2005 total financial costs of obesity have been estimated at approximately $3.8 billion[73].

Within NSW, approximately half of all adults are overweight or obese (with significantly higher rates of obesity in rural as compared with urban areas), and only approximately half of the adult population participate in an adequate level of physical activity (with no significant differences between rural and urban areas)[74].

In NSW, rates of physical inactivity are approximately 14% higher in the most disadvantaged locations compared to the most advantaged, and overweight and obesity rates are approximately 6% higher[75].

70 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report: 50. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

71 Department of Health and Ageing. An active way to better health: National physical activity guidelines for adults. Canberra: Department of Health and Ageing; 2005. http://www.health.act.gov.au/c/health?a=sendfile&ft=p&fid=-1303901582&sid

72 Department of Health and Ageing. Australia's Physical Activity recommendations for children and young people. Canberra: Department of Health and Ageing; 2007. www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-active-recommend.htm

73 Access Economics. The Economic Costs of Obesity. Diabetes Australia; 2006. www.accesseconomics.com.au/publicationsreports/showreport.php?id=102&searchfor=2006&searchby=year Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

74 Centre for Epidemiology and Research. New South Wales Population Health Survey. 2007 Summary Report on Adult Health by Area Health Service. Sydney: NSW Department of Health; 2008. www.health.nsw.gov.au/resources/publichealth/surveys/hsa_07area_nsw.pdf

75 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report: 50. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

In addition, the Australian National Children's Nutrition and Physical Activity Survey has shown that, nationally, approximately 72% of 2-16 year old children are of a healthy weight, but 17% are overweight, 6% obese and 5% are underweight[76].

In NSW, people aged 45-54 and 75 and older are most at risk for being overweight and obese and not achieving adequate levels of physical activity. In NSW, men are more likely to be overweight and obese and women are more likely not to achieve recommended physical activity levels[77].

Active transport choices, such as walking, cycling, and/or using public transportation for daily travel, can help people attain their minimum physical activity requirements. However, within areas of the Greater Sydney region, the predominant urban forms and public transport provision are not conducive to physical activity[78].

Urban and suburban sprawl, poor public transport infrastructure and separation of jobs, schools and other services from housing are some of the factors encouraging high levels of private car use for travel (approximately 80% of all trips) within the region[79].

These factors, along with lack of access to quality open space and recreational facilities, can negatively impact on individuals' physical activity choices.

### 8.1.2 Key evidence and leading practice

Australian research indicates that women, middle-aged and older adults, non-English speaking groups, parents of young children and those with lower educational attainment are less likely to achieve physical activity recommendations[80].

Living in a neighbourhood that is 'walkable' and/or 'cycleable' (e.g. where housing is close to shops and services, streets and pathways are highly connected, public transport is available, urban design is conducive to walking and cycling, etc.) is associated with higher levels of physical activity. Density, land use mix, street layout, access to public transport and micro-design factors including streetscape and pathway design are important factors impacting on levels of walking and cycling[81].

A distance of 400-500m (or approximately 5 minutes of walking) between destinations is a generally accepted measure for a comfortable walking distance

76 Australian Food and Grocery Council. 2007 Australian National Children's Nutrition and Physical Activity Survey. Canberra: Commonwealth of Australia; 2008. http://www.health.gov.au/internet/main/publishing.nsf/Content/66596E8FC68FD1A3CA2574D50027DB86/$File/childrens-nut-phys-survey.pdf

77 See footnote 74

78 See footnote 75

79 Transport and Population Data Centre. Transfigures: Statistics for the Subregional Planning Process. Sydney: NSW Department of Planning; 2006. http://www.transport.nsw.gov.au/tdc/documents/transfigures-jun2006.pdf

80 Bauman A, Bellew W, Booth M, Hahn A, Stoker L, Thomas M. NSW Health Promotion Survey 1994. Towards best practice for physical activity in the areas of NSW. Sydney: NSW Department of Health; 1996.

81 Radbone I, Hamnett S. Land Use, Walking and Cycling: A review of recent research, Australian policies and suggestions for further work. 26th Australasian Transport Research Forum. Wellington, New Zealand; 2003.

for most people[82]. However, quality and pedestrian-orientated, human-scaled urban design can influence and extend the distances that people are willing to walk between destinations[83].

The design of pathways and other public spaces can create areas that present a real or perceived threat to people walking or cycling. Layout, landscaping and inadequate lighting can create areas of concealment and/or make casual surveillance or emergency response difficult. Similarly, poor maintenance and management of public spaces can negatively impact on perceptions of neighbourhood safety, which can challenge physical activity[84]. Subsequent chapters of this checklist address community safety in greater detail.

Street crossings (including side streets and driveways) can be a major challenge to walking and cycling, and intersections with wide streets often have high pedestrian crash rates[85]. Suggestions for improving street design to improve physical activity are explored in greater detail in the transport and connectivity chapter of this checklist.

The time spent by pedestrians and cyclists waiting to cross streets affects the comfort and desirability of walking and cycling as a transportation mode. Pedestrians and cyclists are more likely to ignore the signal (and risk injury) if wait times are perceived as too long[86].

In the UK, innovations such as 'green gyms' (packaging open space conservation and management as a planned physical activity for volunteers) are gaining popularity – and drawing on people's desires to exercise out of doors[87].

Key references including relevant standards and guidelines are included in the *Further information* section at the end of this chapter.

### 8.1.3 Key questions

How does the policy, plan or development proposal:

(PA1) Encourage incidental physical activity?

(PA2) Promote opportunities for walking, cycling, and other forms of active transport?

(PA3) Promote access to usable and quality public open spaces and recreational facilities?

82 Western Australia Planning Commission. Liveable Neighbourhoods. Perth: State of Western Australia; 2000. www.wapc.wa.gov.au/Publications/LN_ed2.pdf?id=597

83 Wilkinson WC, Eddy N, MacFadden G, Burgess B. Increasing Physical Activity Through Community Design: A Guide for Public Health Practitioners. Washington: National Center for Bicycling & Walking; 2002. www.bikewalk.org/pdfs/IPA_full.pdf

84 Bennett G, McNeill L, Wolin K, Duncan D, Puleo E, Emmons K. Neighborhood Safety and Physical Activity Among Public Housing Residents. PloS Medicine 2007; 4(10): 1599-607. http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=2039759&blobtype=pdf

85 See footnote 83

86 City of Vancouver. Policy Report: Traffic and Transit. Vancouver: City of Vancouver; 2001. http://vancouver.ca/ctyclerk/cclerk/010605/tt3.htm

87 Green Gym. http://www2.btcv.org.uk/display/greengym

## 8.2 Physical activity checklist questions

### PA1: Encourage incidental physical activity

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PA1.1 | Does the policy, plan or proposal include aims or objectives related to increasing or encouraging physical activity? | ● | ● |
| PA1.2 | Does the policy, plan or proposal have an impact on those in the target area who are identified as most at risk of not achieving national physical activity guidelines? | ● | ● |
| PA1.3 | **URBAN FORM**<br>Are most homes and places of employment within a comfortable walking distance (400-500 metres) of frequent destinations to meet every day basic needs such as shops, schools, parks, transport stops? (Whilst current NSW guidance recommends that 400 metres is considered to be a reasonable walking distance to a bus stop, it says that for metropolitan railway stations households should be within 800-1000 metres.)[88] | ● | ● |
| PA1.4 | Are land uses arranged to encourage walking, cycling and other forms of active transport between activities? | ● | ● |
| PA1.5 | Are streets (including bicycle and pedestrian networks) highly connected, offering direct routes to destinations of choice? | ● | ● |

88 NSW Department of Urban Affairs and Planning. Improving Transport Choice – Guidelines for Planning and Development. NSW Department of Urban Affairs and Planning; 2001. http://www.planning.nsw.gov.au/programservices/pdf/prg_transport.pdf

## PA1 continued

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PA1.6 | Are streetscapes designed to be attractive, interesting and welcoming to pedestrians and cyclists, including by providing enjoyable scenery, appropriate amenities and shelter from the weather? (refer to chapter 13 on public space)<br>(NOTE: A continuous row of buildings with windows and entrances facing the street can help create an interesting and secure walking and cycling environment. Garage doors, blank walls, open parking areas and too many driveways facing the street can discourage walking and cycling.) | | ● |
| PA1.7 | Are retail and commercial areas designed to encourage physical activity and active transport? Are they linked to public transport, pedestrian and cycle networks? Is there a network of connecting footpaths within the area? (see chapter 13 on public space for more information about streetscapes) | | ● |
| PA1.8 | Are pedestrian areas (such as public plazas, squares, pathways, trails, shopping areas, etc.) universally accessible (designed to accommodate the widest range of potential users)? | | ● |

## PA2: Promote opportunities for walking, cycling and other forms of active transport

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PA2.1 | Does the policy, plan or proposal promote walking, cycling and active transport as part of its stated aims or objectives? | ● | ● |
| PA2.2 | Does the policy, plan or proposal include provisions for bicycle and pedestrian pathways or networks, and a strategy for funding them? | ● | ● |
| PA2.3 | Based on the proposed sequencing of development will pedestrian and bicycle provisions be available from the earliest possible stages of planned use and/or settlement? | | ● |
| PA2.4 | **URBAN FORM**<br>Are footpaths and bicycle lanes and paths provided throughout the proposed development? Do footpaths, bike lanes and bike paths link activity generators like schools and shopping areas with residential areas? Has the pedestrian and bicycle network been mapped? | | ● |
| PA2.5 | Do pedestrian and bicycle pathways link with regional networks and key destinations such as residential areas, open space, schools, shops, employment areas, sporting fields, public transport stops and hubs? | ● | ● |
| PA2.6 | Do pathways consider topography, minimising steep slopes and providing alternatives to steps? | | ● |
| PA2.7 | Are footpaths and shared paths designed to comfortably accommodate users travelling in each direction? | | ● |
| PA2.8 | Does the policy, plan or proposal promote safe movement for pedestrians and cyclists?<br>(NOTE: This could include traffic calming in high pedestrian and biking areas, minimising vehicle crossings of paths, clear signage, bike paths running parallel with roads where possible, adequate lighting, freedom from obstacles such as poles, etc.) | | ● |

PA2 continued

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PA2.9 | Does the design of streets promote pedestrian activity and bicycle use by considering the comfort and amenity of users including whenever possible:<br>Providing footpaths along both sides of the street (NOTE: This may not be appropriate in some locations including semi-rural and rural areas)<br>Including a buffer zone between the roadway and the walking area to provide a safer, more comfortable walking environment<br>Avoiding placing pedestrian and cycling crossing points at busy intersections<br>Locating pedestrian and cycle crossings as close to the direct line of travel as possible<br>Including rest facilities along well used paths and trails<br>Ensuring there are clear views of traffic at crossing points<br>Providing kerb ramps<br>Providing alternatives to pedestrian and bicycle crossings at roundabouts?<br>(NOTE: Refer to NSW Department of Planning's Planning Guidelines for Walking and Cycling.) | | ● |
| PA2.10 | Is bicycle use encouraged by providing:<br>Ample, safe, attractive, and convenient bicycle parking at key destinations<br>Bike paths of sufficient width to enable two cyclists going in opposite directions to pass comfortably<br>Path continuity, so that cyclists do not have to stop frequently<br>Bike lanes that are outside of the 'door zone' of parked cars<br>Clearly marked bike lanes or pathways that are easily identified by both cyclists and motorists? | | ● |

**PA3: Promote access to usable and quality public open spaces and recreational facilities**

(See chapter 13 for more information on public open space)

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PA3.1 | Does the policy, plan or development proposal provide for an allocation of public open space to meet the needs of the future community? On what basis has the amount of open space been determined – has there been a needs analysis, what benchmarks have been used? | ● | ● |
| PA3.2 | Will the future population have access to a range of public open spaces and recreational facilities within the local area? | ● | ● |
| PA3.3 | Do proposed new areas of open space and recreation facilities complement existing recreational opportunities in the area? | ● | ● |
| PA3.4 | Are proposed resources adequate and appropriate for all sections of the expected population, especially vulnerable groups and those most at risk for not achieving national physical activity recommendations? | ● | ● |
| PA3.5 | Will the design and management of open space and recreation facilities encourage a broad range of activity choices? | ● | ● |
| PA3.6 | Does the policy, plan or development proposal provide a suitable funding source for the proposed open spaces and recreation facilities (e.g. via Voluntary Planning Agreements or Section 94 Contributions Plans)? | ● | ● |
| PA3.7 | Does the policy, plan or development proposal propose that open space and recreation facilities will be available from the earliest possible stages of planned use and/or settlement? | ● | ● |
| PA3.8 | Is there local open space within a reasonable walking distance (400-500 metres) of most homes? | ● | ● |

PA3 continued

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PA3.9 | **URBAN FORM**<br>Are open space areas and recreation facilities safely and comfortably accessible to pedestrians and cyclists? | ● | ● |
| PA3.10 | Are recreation opportunities equitably located, in regards to access by vulnerable groups and based on population densities? | ● | ● |
| PA3.11 | Do parks and open spaces include places to rest, quiet areas, places for gatherings, drinking fountains, shaded areas, public toilet facilities and pathways that connect to the greater area? | | ● |
| PA3.12 | Are parks and open spaces designed to be universally accessible and appropriate to different ages?<br>(NOTE: Australian Standard 1428.1 refers to accessibility.) | | ● |
| PA3.13 | Is outdoor gym and training equipment provided along pathways to encourage use of pathways for planned recreation (in addition to providing opportunity for more vigorous forms of incidental physical activity)? | | ● |

## 8.3 Further information

NSW Department of Planning – *Planning Guidelines for Walking and Cycling*
www.planning.nsw.gov.au/plansforaction/cycling.asp

NSW Health Department
– *Creating Healthy Environments*
www.coo.health.usyd.edu.au/publications/creatin.php

Premier's Council for Active Living
– *Designing Places for Active Living*
www.pcal.nsw.gov.au/planning_and_design_guidelines

Landcom – *Street Design Guidelines, Open Space Guidelines and Street Tree Design Guidelines*
www.landcom.com.au/whats-new/publications-reports/the-landcom-guidelines.aspx

Heart Foundation – *Active By Design Guidelines*
www.heartfoundation.org.au/Professional_Information/Lifestyle_Risk/Physical_Activity/Active_by_Design.htm

NSW BikePlan – *What's Happening and How to Get Involved*
www.pcal.nsw.gov.au/new_nsw_bikeplan_-_whats_happening_and_how_to_get_involved

Australian Standard 1428.1,
*Design for Access and Mobility*
http://www.saiglobal.com/PDFTemp/Previews/OSH/as/as1000/1400/NN14281.pdf

Austroads – *Pedestrian-Cyclist Conflict Minimisation on Shared Paths and Footpaths*
www.austroads.com.au

Making Cycling Irresistible – *Lessons from The Netherlands, Denmark and Germany*
www.activeliving.org/node/797

Living Streets – *'Liveability' Survey*
www.livingstreets.org.uk/what_you_can_do/assess_livability.php

Sport England – *Active Design: Planning Opportunities for Sport and Physical Activity through Good Design*
www.sportengland.org/se_facilities_active_design_complete.pdf

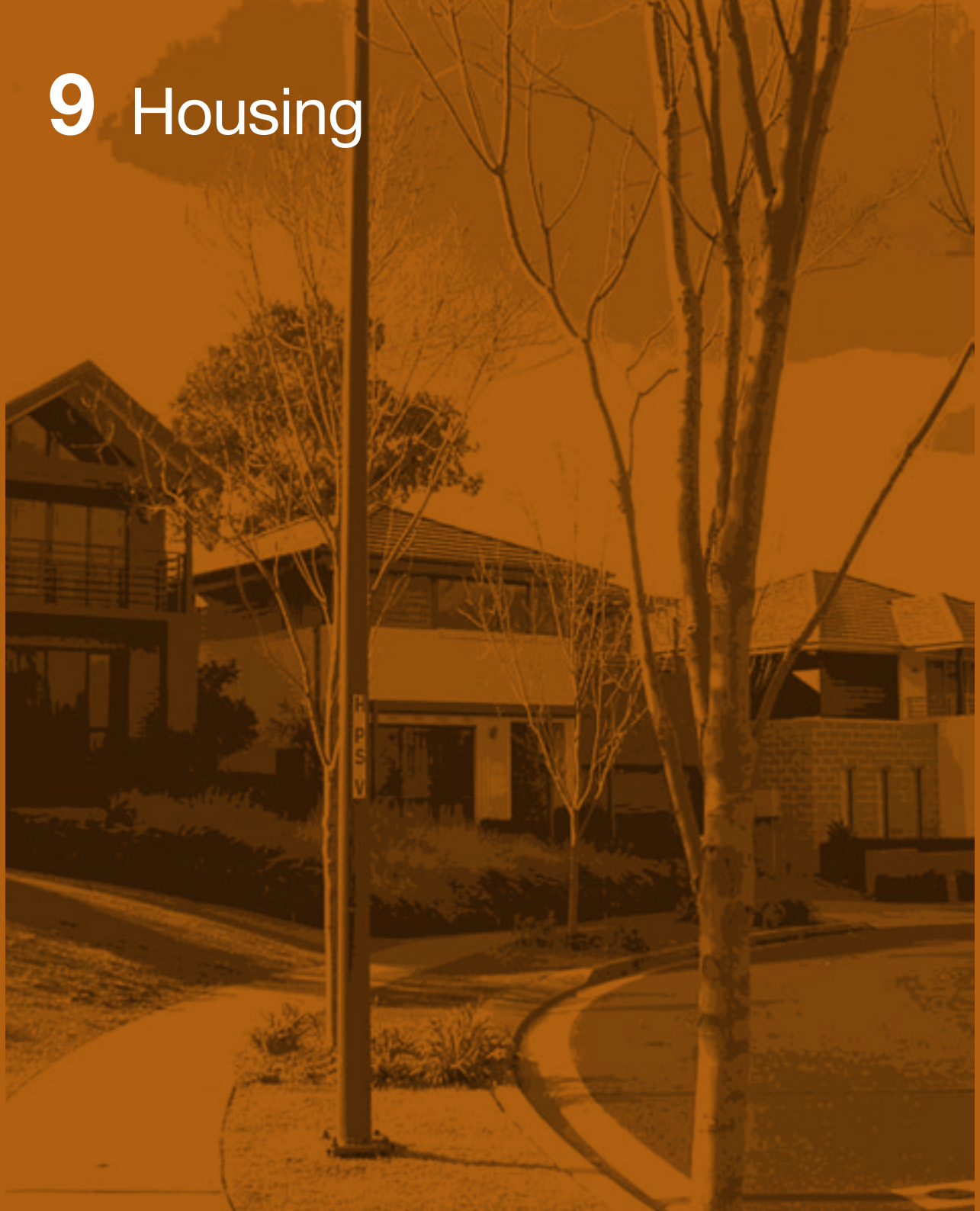
Hunter New England Population Health – *Building Liveable Communities in the Lower Hunter Region*
www.pcal.nsw.gov.au/__data/assets/file/0018/27630/building_liveable_communities.pdf

NSW Department of Local Government – *Creating Active Communities: Physical Activity Guidelines for Local Councils*
www.dlg.nsw.gov.au/Files/Information/physguid.pdf

NSW Department of Planning
– *Metropolitan Greenspace Program*
www.planning.nsw.gov.au/programservices/met.asp

NSW Department of Planning
– *Sharing Sydney Harbour Access Program*
www.planning.nsw.gov.au/harbour/sydney_access.asp

# 9 Housing



# 9 Housing

## 9.1 Introduction

Basic housing or shelter is fundamental to human health. Our housing impacts on many aspects of our lives, including personal and family wellbeing, mental and physical health, employment opportunities, social connectedness and environmental sustainability[89].

Healthy housing demonstrates the following basic qualities:

Shelter (protection from the elements) is provided

Any immediate life threatening dangers (electrical, gas, fire, sewage and structural safety issues) are addressed

There are adequate facilities for bathing and washing, and drains and toilets are functioning properly

There are adequate facilities for preparing and storing food (see chapter 7 on access to healthy food)

Living conditions are not overcrowded

The impact of vectors (pests) is reduced (see chapter 16 on environmental health)

Dust is minimised to reduce risk of respiratory illness

Indoor pollutants such as mould, radon and chemical emissions from building materials are not present

Indoor temperatures are comfortable (not too hot or too cold) to reduce health risks

Any non-life threatening trauma (such as that caused by real or perceived insecurity, isolation, stigma or safety issues) are reduced (see chapter 12 on community safety and security, and chapter 15 on social cohesion)

Residents enjoy access to quality private open space, for gardening (including healthy food production), exercise and relaxation, as well as utility purposes such as clothes drying[90].

89 Bridge C, Flatau P, Whelan S, Wood G, Yates J. Housing Assistance and Non-Shelter Outcomes: Final Report no. 40. Melbourne: Australian Housing and Urban Research; 2003.

90 NSW Department of Health. Housing for Health. www.health.nsw.gov.au/PublicHealth/environment/aboriginal/housing_health.asp

Ideally, the quality and diversity of housing options within an area can allow individuals the opportunity to live in that location or place, choosing from a range of different housing types and arrangements throughout their lives based on their needs and resources. Housing choice should aim to respond to different household sizes and compositions, as well as the needs of vulnerable groups such as older people, people with disabilities and the economically disadvantaged. A varied housing stock promotes a more diverse population. This diversity of population helps to inhibit the distinct 'peaks and troughs' of a less balanced population which makes utilisation of community infrastructure and the provision of human services difficult to manage.

Housing affordability is a key component of housing choice. A lack of affordable housing can lead to overcrowding as households on low incomes seek smaller dwellings for lower rent. An inability to access affordable housing can result in households having little choice about the location of their housing, and it may result in households living in areas that have poor access to community services, employment opportunities and support networks.

Social trends in Australia that impact housing choice and affordability include an ageing population, decreasing household size, changes in family composition, increasing economic uncertainty, and young people remaining at home with parents longer[91]. Housing security means having housing which is stable, safe, private and comfortable[92]. This chapter of the checklist focuses on urban development factors that can influence access to healthy housing.

### 9.1.1 Relevance to NSW

Many Australian households, especially private renters and home purchasers, have experienced a dramatic decline in the affordability of housing in recent decades. There are historically high levels of homelessness which are in part due to declining housing affordability, and an increasing proportion of lower income private renters are experiencing housing stress[93].

The link between inequities in health outcomes and socio-economic disadvantage (particularly, in terms of higher average mortality and morbidity rates) is well established and documented for Sydney and NSW[94]. Limited housing choice can negatively impact on social and economic participation, as well as access to healthcare and healthy environments.

Land use planning in the Greater Sydney region over the past 50 years has been shaped by an assumption of universal car ownership and the need to separate residential areas from

91 Gold Coast City Council. GCCC: Our Living City Report: 2004-2005. City of Gold Coast: Gold Coast City Council. www.goldcoast.qld.gov.au/attachment/publications/our_living_city0405_chp3_6.pdf

92 Hulse K, Saugeres L. Housing insecurity and precarious living: an Australian exploration. Report for the Australian Housing and Urban Research Institute. Melbourne, Swinburne-Monash Research Centre; 2008. http://www.ahuri.edu.au/publications/download/50361_fr

93 Atkinson R, Dalton T, Norman B, Wood G. New Ideas for Australia's Cities. Melbourne: RMIT University; 2007. http://mams.rmit.edu.au/vvhxslt9g97az.pdf

94 Glover J, Tennant S. A social health atlas of Australia (second edition) - Volume 2: New South Wales. Adelaide: Public Health Information Development Unit, University of Adelaide; 1999. http://www.publichealth.gov.au/publications/a-social-health-atlas-of-australia-%5Bsecond-edition%5D---volume-2:-new-south-wales.html

commerce and industry, encouraging low density suburban development[95]. As a result of this trend, low to moderate income households are turning to urban fringe settlements in increasing numbers for more affordable housing, and many people are forced to commute over long distances to jobs and to access basic services.

Housing markets are helping to create increasingly segregated urban communities with growing distinctions between low, moderate and high income households in the Greater Sydney region[96].

The Sydney Metropolitan Strategy plans for a population increase of 1.1 million people by 2031 for Sydney as a whole. Of the 640,000 new dwellings envisaged in the Sydney region to 2031, Greater Western Sydney is expected to accommodate about 375,000 (including 135,000 in the Growth Centres)[97]. New housing should be focused around public transport, have a mix of dwelling types and have shops and facilities accessible by walking or cycling[98].

It should also be noted that in NSW in 2006, one in eight people was aged 65 and older. By 2051 this is predicted to grow to one in four, with an increase in the "older old" – people aged 85 and older. New housing should reflect this trend and accommodate older people's desire for ageing in place[99].

### 9.1.2 Key evidence and leading practice

Housing conditions can significantly affect public health. Childhood lead poisoning, injuries, respiratory diseases such as asthma, and quality of life issues have been linked to substandard housing units. Residents of poor housing may also be at increased risk for fire, electrical injuries, falls, rodent bites, and other illnesses and injuries. Other issues of concern include exposure to pesticide residues, indoor toxicants, tobacco smoke, and combustion gases. In addition, the burning of oil, gas, and kerosene for lighting, heating or cooking purposes within dwellings can release a variety of combustion products, including carbon monoxide, a known cause of illness and death[100].

Research indicates that individuals place a high importance on housing security and that they and their family need to feel settled before they are able to start looking for paid work[101]. Housing affordability is an important issue affecting individuals' ability to maintain social diversity in our communities and the opportunity for workers to live close to sources of employment[102].

95 Transport and Population Data Centre. Transfigures: Statistics for the Subregional Planning Process. Sydney: NSW Department of Planning; 2006. http://www.transport.nsw.gov.au/tdc/documents/transfigures-jun2006.pdf

96 See footnote 93

97 NSW Department of Planning. City of Cities: A Plan for Sydney's Future. Metropolitan Strategy Supporting Information. Sydney: NSW Department of Planning; 2005. http://www.metrostrategy.nsw.gov.au/dev/uploads/paper/introduction/index.html

98 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report: 22. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

99 Landcom. Universal Housing Design Guidelines. Landcom; 2008. www.landcom.com.au/whats-new/publications-reports/the-landcom-guidelines.aspx

100 Department of Health and Ageing. Healthy Homes - A guide to indoor air quality in the home for buyers, builders and renovators. Canberra: Commonwealth of Australia; 2002. http://www.health.gov.au/internet/main/Publishing.nsf/Content/B9252301BA2F6A4ECA2573CB0082ABD1/$File/healthyhomes.pdf

101 Hulse K, Saugeres L. Housing insecurity and precarious living: an Australian exploration. Report for the Australian Housing and Urban Research Institute. Melbourne, Swinburne-Monash Research Centre; 2008.

102 See footnote 101

Diversity in housing form and cost is also desirable to accommodate differing housing needs during a family's lifecycle. Family changes (such as children leaving home, students requiring inexpensive housing for the duration of their studies, couples separating or the death of a spouse) may entail a different need for housing in terms of size, cost, closeness or access to amenities. Without such housing diversity being available, changing housing needs can mean that people have to move out of the area or adopt unsatisfactory accommodation arrangements, which can have significant impact on the health and well being of individuals and families as their relationships and social support are affected[103].

Many older people want to continue living in a familiar environment throughout their maturing years. Ageing in place means living in their home safely, independently and comfortably, regardless of age or ability level. The provision of "universal housing" addresses the need to avoid remodelling existing homes and to design new homes so people can 'age-in-place' and not have to move to assisted living facilities as they age[104].

Research has found that moving into home ownership has a significant impact on life satisfaction but only small and insignificant effects on self-esteem and sense of control[105].

Private (including communal) open space can provide facilities for improving physical health and can help alleviate stress and other mental health problems[106]. Ideally, private open space includes "deep soil zones" for planting and gardening (see chapter 7 on access to healthy food), as well as space for outdoor drying for greater household energy efficiency (see chapter 16 on environmental health).

Key references including relevant standards and guidelines are included in the *Further information* section at the end of this chapter.

### 9.1.3 Key questions

How does the policy, plan or development proposal:

(H1) Encourage housing that supports human and environmental health?

(H2) Encourage dwelling diversity?

(H3) Promote affordable housing?

(H4) Ensure that housing is adaptable and accessible?

103 Bridge C, Flatau P, Whelan S, Wood G, Yates J. Housing Assistance and Non-Shelter Outcomes: Final Report no. 40. Melbourne: Australian Housing and Urban Research; 2003.

104 Australian Local Government Association. Ageing-in-place: Implications for local government. Canberra: Australian Local Government Association; 2006. http://www.alga.asn.au/policy/healthAgeing/ageing/resources/publications/AgeingInPlace.pdf

105 Rohe W, Stegman M. The effects of home ownership on the self-esteem, perceived control and life satisfaction of low-income people. Journal of the American Planning Association 1994; 60(2): 173-85.

106 North Lanarkshire Council: Open Space Strategy 2004 - Advocacy. North Lanarkshire: North Lanarkshire Council; 2004, http://www.northlanarkshire.gov.uk/index.aspx?articleid=10482

## 9.2 Housing checklist questions

### H1: Encourage housing that supports human and environmental health

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| H1.1 | Does the policy, plan or proposal provide housing in locations that allow residents to walk, cycle or travel by public transport to work and services? Is housing located within a reasonable walking distance (approximately 400-500m) of shops, schools, public transport hubs and other important community services and destinations? (Whilst current NSW guidance recommends that 400 metres is considered to be a reasonable walking distance to a bus stop, it says that for metropolitan railway stations households should be within 800-1000 metres[107].) | ● | ● |
| H1.2 | Does the plan, policy or proposal encourage car dependency? If residents living in this area did not have a car could they access employment, shops, schools, entertainment and recreation? | ● | ● |
| H1.3 | Does the policy, plan or proposal encourage or provide compact development and/or housing that integrates with existing development (including infill development)? | ● | ● |
| H1.4 | Does the policy, plan or proposal encourage or provide housing that demonstrates the basic qualities of healthy housing, including in regards to safety, sanitation and ventilation? | ● | ● |
| H1.5 | Does the policy, plan or development proposal indicate compliance with BASIX[108] or other relevant energy efficiency ratings systems (see chapter 16 on environmental health)? | ● | ● |
| H1.6 | Does the policy, plan or development proposal discourage or prevent housing on contaminated sites that have not yet been mitigated (see chapter 16 on environmental health)? | | ● |

107 NSW Department of Urban Affairs and Planning. Integrating Land Use and Transport. Improving Transport Choice – Guidelines for Planning and Development: 34. Sydney: NSW Department of Urban Affairs and Planning; 2001. http://www.planning.nsw.gov.au/programservices/pdf/prg_transport.pdf

108 NSW Department of Planning. Building Sustainability Index (BASIX). http://www.basix.nsw.gov.au/information/index.jsp

## H2: Encourage dwelling diversity

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| H2.1 | Does the policy, plan or development proposal encourage a diversity of lot sizes and housing types in residential areas to accommodate households at different life cycle stages and with different levels of affordability? (NOTE: This could be diversity within the proposed development itself. Diversity can also be increased by providing a relatively uniform proposed development that provides a different form of housing to what exists in the surrounding area. Refer to 'understanding the community' [chapter 6] to identify how housing can contribute to diversity in the subject area.) | ● | ● |

## H3: Promote affordable housing

| Code | Question | Planning Policies and Strategies | Proposal Development |
|---|---|---|---|
| H3.1 | Does the policy, plan or proposal provide affordable housing opportunities for households with low and moderate incomes? | ● | ● |
| H3.2 | Does the proposed provision of housing meet the need for affordable housing in the area, including in regards to dwelling type, size and location? | ● | ● |
| H3.3 | **URBAN FORM** Is affordable housing distributed throughout the development and not concentrated in an identifiable cluster? | ● | ● |
| H3.4 | Is affordable housing designed to be indistinguishable from other forms of housing? | | ● |

## H4: Ensure that housing is adaptable and accessible

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| H4.1 | Does the policy, plan or development proposal encourage housing that is capable of being adapted to meet the needs of people as they age or become disabled?<br>(NOTE: See Australian Standard 4299 – 1995 Adaptable Housing. Also see Landcom Guidelines on Universal Housing.) | ● | ● |

## 9.3 Further information

WHO/Europe – *Housing and Health*
www.euro.who.int/Housing

NSW Health – *Housing for Health*
www.health.nsw.gov.au/PublicHealth/environment/aboriginal/housing_health.asp

Housing NSW – *Changes to Public Housing*
www.housing.nsw.gov.au/Changes+to+Public+Housing/

Housing NSW – *Centre for Affordable Housing*
www.housing.nsw.gov.au
Centre+For+Affordable+Housing/About+Us/

Disability Council of NSW
– *Position Statement on Housing*.
www.disabilitycouncil.nsw.gov.au/portfolios/accomodation/housing.html

Non-English Speaking Background (NESB)
Housing Taskforce NSW
www.shelternsw.infoxchange.net.au/nht/nht.html

NSW Aboriginal Housing Office
www.aho.nsw.gov.au/

Australian Housing and Urban Research Institute
– *Do Housing Conditions Impact on Health Inequalities between Australia's Rich and Poor?*
www.ahuri.edu.au/publications/projects/p30002

Australian Government
– *White Paper on Homelessness*
www.facsia.gov.au/internet/facsinternet.nsf/housing/white_paper_on_homelessness.htm

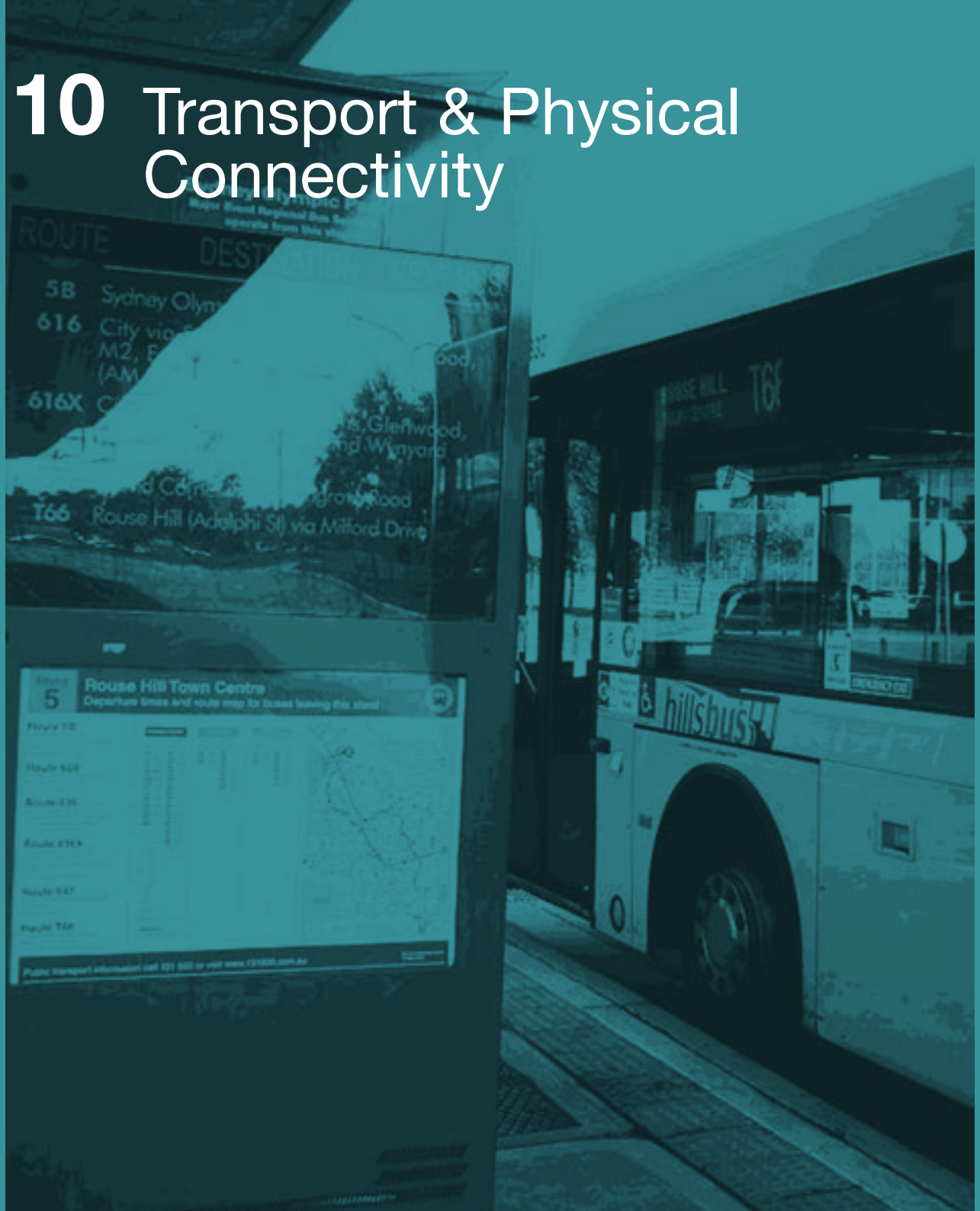
NSW Government BASIX web site
http://www.basix.nsw.gov.au/information/index.jsp

Landcom (2008), *Universal Housing Design Guidelines*,
http://www.landcom.nsw.gov.au/whats-new/publications-reports/the-landcom-guidelines.aspx

Australian Standard 4299,
*Adaptable Housing*, available for purchase at
http://infostore.saiglobal.com/store/Details.aspx?docn=stds000013512

Master Builders Association, *Adaptable Living*,
http://www.mba.org.au/public/page.php?id=79

# 10 Transport & Physical Connectivity



# 10 Transport and physical connectivity

## 10.1 Introduction

Our transport options and choices impact on our health and well-being in a number of ways. For example, private car use is a major contributor to air pollution and greenhouse gas emissions, and it increases risk for obesity and traffic-related accidents and death[109]. The design and management of the built environment shapes our transport choices, as well as the transport options available to us. Densities and urban design can support more active forms of transport, including walking and cycling[110].

Beyond challenging our ability to achieve minimum physical activity guidelines (see chapter 8 on physical activity) and posing other personal health challenges, reliance on private vehicles for transport can have negative effects on our mental health and sense of community[111]. Reducing the kilometres travelled by private vehicle and encouraging more active forms of transport (including public transport use) is an important objective for healthy urban development and environmental sustainability.

Subsequent chapters of this checklist will explore social cohesion issues directly. This chapter of the checklist focuses on more spatial aspects of 'connectivity' and on reducing kilometres travelled by private vehicle for our daily transport needs.

### 10.1.1 Relevance to NSW

The existing urban form in large parts of Greater Sydney has been described as 'sprawling', poorly integrated with existing development and not conducive to more active forms of transport[112]. On average, residents of these areas own more cars and drive more kilometres than residents in sections of Sydney where densities

109 Sustainable Development Commission. Health, Place and Nature. How outdoor environments influence health and well-being: a knowledge base. London, Sustainable Development Commission; 2008. http://www.sd-commission.org.uk/publications/downloads/Outdoor_environments_and_health.pdf

110 Ministry for the Environment. The Value of Density. New Zealand Government. www.mfe.govt.nz/publications/urban/value-urban-design-summary-jun05/html/page6.html

111 Giles-Corti B. The Impact of urban form on public health. Paper prepared for the 2006 Australian State of the Environment Committee. Canberra: Department of the Environment and Heritage; 2006. www.environment.gov.au/soe/2006/publications/emerging/public-health/pubs/public-health.pdf

112 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report: 51. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

are greater[113]. Although inner city suburbs of Sydney have reasonable access to public transport, much of the Greater Sydney region is currently poorly serviced by public transport.

### 10.1.2 Key evidence and leading practice

Areas characterised by low density, poorly connected street networks and limited access to local destinations discourage more active forms of transport[114]. In contrast, areas with greater population, land use mix, identifiable centres and greater connectivity are more likely to promote active transport[115].

Grid street patterns are considered to help create greater connectivity, slow traffic speeds and decrease distances between destinations – factors that can encourage more walking and cycling. However, a range of design features must be considered in creating built environments that are conducive to walking and cycling[116]. These include (but are not limited to) street surfaces, street widths, the existence of separate pedestrian and bicycle paths, and the quality of streetscapes (see chapter 8 on physical activity for additional information).

Street blocks generally in the range of 70m wide by 120-240m long (with shorter blocks at town and neighbourhood centres) are considered more 'walkable'[117].

Studies indicate that trips by walking and cycling grow with increased housing density and mix of land uses. Mixed uses within buildings can help increase the diversity of land uses in higher density areas[118].

When new development is integrated with existing development it can minimise development pressure on greenfield lands, including agricultural lands; preserving agricultural lands is key to healthy food access (see chapter 7 on access to healthy food)[119]. Integrating new development with existing development can combat urban sprawl and encourage better use of infrastructure such as pathways and other amenities that support walking and cycling and physical activity (see chapter 8 on physical activity)[120].

113 See footnote 112

114 See footnote 111

115 Garden F, Jalaludin B. Impact of Urban Sprawl on Overweight, Obesity, and Physical Activity in Sydney, Australia. Journal of Urban Health 2009: 81(1): 19-30.

116 Radbone I, Hamnett S. Land Use, Walking and Cycling: A review of recent research, Australian policies and suggestions for further work. 26th Australasian Transport Research Forum. Wellington, New Zealand; 2003.

117 ERM Mitchell McCotter Pty Ltd, TTM Consulting Pty Ltd, Roberts Day Group Pty Ltd, Curtin Consulting Services Ltd. Liveable Neighbourhoods: Street Layout, Design and Traffic Management Guidelines. Perth: Western Australian Planning Commission; 2000. www.wapc.wa.gov.au/Publications/27.aspx

118 Radbone I, Hamnett S. Land Use, Walking and Cycling: A review of recent research, Australian policies and suggestions for further work. 26th Australasian Transport Research Forum. Wellington, New Zealand; 2003.

119 Chicago Metropolitan Agency for Planning. Brownfields Redevelopment Strategy Report. Chicago; Chicago Metropolitan Agency for Planning; 2008. www.goto2040.org/ideazone/forum.aspx?id=698

120 Koll-Schretzenmayr M. From Greenfield Development to Brownfield Redevelopment: New Challenge for Planning Process, Planning Strategies and Planning Law. DISP Journal 1999; 139: 43-48. http://www.nsl.ethz.ch/index.php/en/content/download/305/1879/file/

Public transport extends the distances that people travel by foot and bicycle because it is associated with higher levels of incidental physical activity than private vehicle use[121]. In order to be viable, public transport must be supported by higher population densities. Lack of public transport in areas can contribute to inadequate access to vital goods and services, including jobs, healthcare, and healthy food (see chapter 7 on access to healthy food).

Traffic danger (both real and perceived) can discourage people from walking and cycling. Fear of falling and inadequate time to cross intersections is also a key concern for children and the elderly[122] (see chapter 8 on physical activity for additional information).

Telecommuting can reduce the number of vehicle trips, vehicle kilometres travelled and travel time, supporting environmental and personal health benefits[123]. Currently, the Federal Government is exploring policy options for increasing "e-commerce" in Australia.

The adverse health effects of motorised travel include climate change, road-traffic injuries, physical inactivity, air pollution and environmental degradation. More sustainable forms of transport development include investing in improving walking and cycling infrastructure, increasing access to cycles and investing in improving public transport options[124]. Studies have shown that increasing the number of people walking and cycling in an area improves road safety, as motorists take more care when driving in these areas[125].

In some localities, private car use is being dissuaded by greatly increasing the efficiency, convenience and comfort of public transport use. Improvements to public transport include more express routes, greater security, improved frequency of service, internet access for passengers, more comfortable seating and smoother, quieter rides[126].

Key references including relevant standards and guidelines are included in the *Further information* section at the end of this chapter.

121 Lee V, Mikkelsen L, Srikantharajah J, Cohen L. Strategies for Enhancing the Built Environment to Support Healthy Eating and Active Living. Oakland, California: Prevention Institute; 2008. www.convergencepartnership.org/atf/cf/%7B245A9B44-6DED-4ABD-A392-AE583809E350%7D/CP_Built%20Environment_printed.pdf

122 See footnote 121

123 The Vu S. Analysis of Impacts of Telecommuting for Reduction of Environmental Pollution. Sydney: School of Civil and Environmental Engineering, University of New South Wales; 2007. http://civil.eng.monash.edu.au/its/caitrhome/prevcaitrproceedings/caitr2007/vu_caitr2007.pdf

124 TDM Encyclopedia. Health and Fitness: Strategies that Improve Health Through Physical Activity. Victoria, Canada: Victoria Transport Policy Institute; 2008. www.vtpi.org/tdm/tdm102.htm

125 Jacobson P. Safety in Numbers: More Walkers and Bicyclists, Safer Walking and Bicycling. Injury Prevention 2003; 9: 205-9. http://www.tsc.berkeley.edu/newsletter/Spring04/JacobsenPaper.pdf

126 TDM Encyclopedia. Public Transit Encouragement. Victoria, Canada: Victoria Transport Policy Institute; 2008. www.vtpi.org/tdm/tdm102.htm

### 10.1.3 Key questions

How does the policy, plan or development proposal:

(TC1) Improve public transport services?

(TC2) Reduce car dependency and encourage active transport?

(TC3) Encourage infill development and/or integration of new development with existing development (including existing key destinations and active transport infrastructure)?

(TC4) Encourage telephone and internet connectivity (in order to help reduce kilometres travelled by private car)?

## 10.2 Transport and connectivity checklist questions

### TC1: Improve public transport services

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| TC1.1 | Does the policy, plan or development proposal identify the provision of public transport as a priority? | ● | ● |
| TC1.2 | Does the policy, plan or development proposal make provision for public transport routes/services to link the proposed development to the wider area? | ● | ● |
| TC1.3 | Does the policy, plan or development proposal identify public transport routes that address the needs of different groups in the population (e.g. travel to education, shopping, recreation and employment areas)? | ● | ● |
| TC1.4 | Does the policy, plan or development proposal encourage alternative transport system development such as car share programs, electric taxis, walking/cycling "bus" programs and/or community bike hire schemes? | ● | ● |

## TC1 continued

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| TC1.5 | **URBAN FORM**<br>Are public transport stops located in comfortable walking distance (approximately 400-500m for bus stops and 800m for train stations) of housing, employment and other local destinations?<br>(NOTE: The quality of urban design can influence and extend the distances that people are willing to walk between destinations. Similarly, poor design can discourage people from walking even relatively short distances.) | | ● |
| TC1.6 | Are public transport systems and nodes designed to be universally accessible? | | ● |
| TC1.7 | Are public transport nodes safe and easy to approach on foot and bicycle (are they clearly signed and well-lit with direct routes and safe and convenient crossing points)? | | ● |
| TC1.8 | Do public transport nodes include places to park and/or rent bicycles? Can bicycles be taken onto trains and/or buses? | | ● |
| TC1.9 | Do public transport nodes include amenities such as: shelter, seating, proper lighting, transport user information, wayfinding guidance, washrooms, refreshments, bicycle parking, power outlets and internet service, as well as information about the surrounding area and transport options (including walking or cycling) for the onward journey? | | ● |
| TC1.10 | Is the policy, plan or proposal located near an existing transport node and, if so, does this require upgrading to ensure that it can meet the needs of the future population? | | ● |

## TC2: Reduce car dependency and encourage active transport

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| TC2.1 | Is a stated goal of the policy, plan or proposal to reduce car dependency and car use and encourage more active forms of transport? | ● | ● |
| TC2.2 | Does the policy, plan or proposal propose measures to encourage walking and cycling such as vehicle speed limits, restrictions on vehicle access, parking requirements etc.? | ● | ● |
| TC2.3 | Does the policy, plan or proposal encourage car pooling or car sharing, including through designated parking spaces for car share programs? | ● | ● |
| TC2.4 | Does the policy, plan or proposal include incentives to encourage bicycle use such as 'park and bike' measures, shared bicycle schemes etc.? | ● | |
| TC2.5 | Does the policy, plan or proposal encourage the reduction of car parking spaces in urban areas (particularly where there is good public transport available) including the re-allocation of car parking spaces for bicycle parking and cycling routes? | ● | ● |
| TC2.6 | **URBAN FORM**<br>Does the plan, policy or proposal provide a well connected street pattern? (NOTE: This includes blocks that are relatively short, a road and pedestrian network that provides numerous alternative routes, mid-block pedestrian access links, and the avoidance of cul-de-sacs especially those without any pedestrian and bicycle through access.) | | ● |
| TC2.7 | Are there particular features that present potential safety hazards, such as busy roadways separating schools from residential areas, level crossings of rail lines etc.? | | ● |
| TC2.8 | Are there areas with both high pedestrian and bicycle activity, and high vehicle traffic that could benefit from additional safety measures? | | ● |
| TC2.9 | Do trees border streets where walking and cycling is desired (as a means for improving amenity and helping to reduce traffic speeds)? | | ● |

## TC2 continued

| Code | Question | Planning Policies and Strategies | Proposal Development |
|---|---|---|---|
| TC2.10 | Are walking and cycling entrances to buildings prioritised and safe (avoiding conflict with cars)? | | ● |
| TC2.11 | Are walking and cycling routes through parking areas clearly marked and safe (avoiding conflict with cars)? Is bicycle parking prioritised? | | ● |
| TC2.12 | Where traffic 'squeeze points' are introduced (to slow traffic speeds and provide safer pedestrian crossings) are there provisions for cyclists to pass through unobstructed? | | ● |
| TC2.13 | Are pedestrian areas (such as public plazas, squares, pathways, trails, shopping areas, etc.) designed to be universally accessible? | | ● |

## TC3: Encourage infill development and/or integration of new development with existing development

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| TC3.1 | Does the policy, plan or proposal encourage the integration of new development with existing development and key destinations? | ● | ● |
| TC3.2 | **URBAN FORM**<br>Does the street network (including bicycle and walking pathways) build from and add new connections to an existing street network? | | ● |
| TC3.3 | Are block sizes conducive to walking and cycling, and do they integrate with existing blocks? | | ● |

## TC4: Encourage telephone and internet connectivity

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| TC4.1 | Does the policy, plan or proposal encourage equitable access to telephone and internet connectivity? | ● | ● |
| TC4.2 | Does the policy, plan or proposal encourage access to the internet in public spaces (including parks and public transport) and semi-public spaces (such as cafes)? | ● | ● |
| TC4.3 | **URBAN FORM**<br>Do all areas have access to telephone and high-speed internet? Is the proper infrastructure in place to allow for this? | ● | ● |
| TC4.4 | Where mobile towers are required, are they located in appropriate locations? Are they designed to serve multiple purposes? | | ● |
| TC4.5 | In public areas and semi-public areas where internet use is desired, is there signage promoting the availability of internet access? Are adequate power outlets and seating amenities provided? | | ● |

## 10.3 Further information

TravelSmart Australia
www.travelsmart.gov.au/

Landcom – *Street Design Guidelines and Street Tree Design Guidelines*
www.landcom.com.au/whats-new/publications-reports/the-landcom-guidelines.aspx

NSW Transport – *Planner's Toolkit*
www.transport.nsw.gov.au/abouttrans/planners-toolkit.html

NSW RTA – *Travel Demand Management*
www.rta.nsw.gov.au/usingroads/traveldemandmanagement/index.html

Western Australia – *The Street Layout, Design and Traffic Management Guidelines*
www.wapc.wa.gov.au/Publications/27.aspx

Victoria Transport Policy Institute – *Online TDM Encyclopedia*
www.vtpi.org/tdm

Healthy Transport, Healthy People
www.walk.com.au/wtw/Page.asp?PageID=805

Transport and health: en route to a healthier Australia?
www.mja.com.au/public/issues/172_05_060300/mason/mason.html

Brisbane – *Public Bike System Tender*
www.evalua.com.au/etb/bcc/ExternalTenderDetails.htm?id=5570824#bottom

City of Sydney – *Car Sharing*
www.cityofsydney.nsw.gov.au/ABOUTSYDNEY/ParkingAndTransport/CarShare.asp

Car-Sharing: Where and How it Succeeds
http://onlinepubs.trb.org/Onlinepubs/tcrp/tcrp_rpt_108.pdf

Walking School Bus: A Guide for Parents and Teachers
www.travelsmart.gov.au/schools/pubs/guide.pdf

Vision Australia – *Accessible Design for Public Buildings* (including links to Australian Standards and Australian Building Codes)
www.visionaustralia.org.au/%5Cinfo.aspx?page=721

SEPP (Infrastructure) 2007
www.planning.nsw.gov.au/planningsystem/infrastructuresepp.asp

Draft SEPP No. 66
– Integration of Land Use and Transport
www.planning.nsw.gov.au/planningsystem/sepp2.asp

# 11 Quality Employment

# 11 Quality Employment

## 11.1 Introduction

Employment can have a powerful effect on health and well being. The quality of our work and working environments impacts on our health, in terms of job strain and other work-related hazards. In addition, the income derived from employment and the general location of jobs can shape other factors important to our health, including housing and transport choice and healthy food options. Beyond the financial benefits of work, the very state of being employed or not can have implications for our health, as unemployment and job loss has been shown to have negative psychological effects that can impact on immediate and long-term health[127].

Numerous factors impact on our employment status. This chapter of the checklist focuses on the physical dimensions of access to quality employment that can be addressed by planning, development and the built environment.

### 11.1.1 Relevance to NSW

A main concern for the Greater Sydney region as it expands westwards is improving access to employment opportunities within the region. Currently, jobs are quite dispersed rather than being focused in particular centres. At present, approximately 30% of all workers living within the Greater Western Sydney region have to travel outside the region for work, and many people experience long journeys to work. Time spent commuting adds to stress levels and reduces time

available to spend with family and friends or to engage in social activities and community events[128].

This distribution of jobs encourages higher levels of car-based commuting and the associated adverse health impacts of this mode of travel (see chapter 10 on transport and connectivity)[129]. A key strategic direction of the Sydney Metropolitan Strategy is to create more jobs in western Sydney and to focus employment growth in centres, particularly regional cities such as Penrith and Liverpool and the existing and proposed major centres including Leppington and Rouse Hill. A basic objective is to provide a range of quality jobs in a variety of locations that are well served by public transport and that meet the needs of the local population.

127 Huliq News. Link between solid employment and health. Huliq Media; 2008. www.huliq.com/11/68449/link-between-solid-employment-and-health

128 Capon A. Health Impacts of Urban Development: Key Considerations. NSW Public Health Bulletin 2007; 18(9-10): 155-6. www.publish.csiro.au/nid/226/issue/4093.htm

129 Weis E. Your Car + Your Health = A Trip to the Doctor. The Washington Post 2007 April 9: B01. www.washingtonpost.com/wp-dyn/content/article/2007/04/08/AR2007040801177.html

In addition, within the Greater Sydney region, high unemployment rates tend to be concentrated in particular suburbs[130]. A key issue in combating area unemployment is providing the appropriate training opportunities and facilities, such as TAFE, needed to upgrade skills and qualifications.

Other issues include providing for the employment needs of the predicted and desired population growth for the region, attracting a greater diversity of quality jobs to the region and establishing the public transport and training infrastructure needed to best serve the current and future workforce[131].

### 11.1.2 Key evidence and leading practice

Work has been found to be "generally good for the physical and mental health and well-being of healthy people, many disabled people and most people with common health problems. Work can be therapeutic for people with common health problems. Work can reverse the adverse health effects of unemployment"[132].

In order to increase access to quality employment, people must be supported to gain the appropriate skills needed to participate in quality work. Vocational training and delivery must meet the needs of the community, including the need for retraining aging populations[133].

When commuting times to work are longer than 30 minutes and the transport mode is sedentary, a worker's time for physical activity, social contact and community participation can be negatively impacted[134].

It is increasingly understood that overwork (more than 40 hours per week) and imbalance between work and private life can have negative impacts on health and well being[135].

Stress from work is associated with a 50% excess risk of coronary heart disease[136]. Jobs with high demands, low control and effort-reward imbalance are risk factors for health problems including major depression, anxiety disorders and substance use disorders.

Key references including relevant standards and guidelines are included in the *Further information* section at the end of this chapter.

130 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report: 30. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

131 See footnote 130

132 Waddell G, Burton A. Is work good for your health and well-being: 31. London: The Stationary Office; 2006. http://www.workingforhealth.gov.uk/documents/is-work-good-for-you.pdf

133 Commission on Social Determinants of Health. Closing the gap in a generation: Health equity through action on the social determinants of health: 79. Geneva: World Health Organization; 2008. www.who.int/social_determinants/final_report/en/

134 Capon A. Health Impacts of Urban Development: Key Considerations. NSW Public Health Bulletin 2007; 18(9-10): 155-6. www.publish.csiro.au/nid/226/issue/4093.htm

135 See footnote 133

136 Huliq News. Link between solid employment and health. Huliq Media; 2008. www.huliq.com/11/68449/link-between-solid-employment-and-health

### 11.1.3 Key questions

How does the policy, plan or development proposal:

(EM1) Improve location of jobs to housing and commuting options?

(EM2) Increase access to a range of quality employment opportunities?

(EM3) Increase access to appropriate job training?

## 11.2 Employment checklist questions

### EM1: Improve location of jobs to housing and commuting options

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| EM1.1 | Does the policy, plan or proposal enable the residential population to have access to a range of employment opportunities within a 30 minute commute of where they live? | ● | ● |
| EM1.2 | Does the policy, plan or proposal encourage employment to be located in employment centres or clusters close to homes (to support more active forms of transport to work)? | ● | ● |
| EM1.3 | Does the policy, plan or proposal encourage employees to utilise public transport and active transport for journeys to work? | ● | ● |
| EM1.4 | Does the policy, plan or proposal ensure that public transport serves employment centres? | ● | ● |
| EM1.5 | Does the policy, plan or proposal support home based employment? | ● | ● |
| EM1.6 | **URBAN FORM**<br>Are district centres designed to be mixed use (including providing employment, residential, open space, education and training facilities)? | | ● |
| EM1.7 | Do places of employment include amenities that encourage people to walk or cycle to work (such as showers and bicycle parking)? | | ● |

### EM2: Increase access to a range of quality employment opportunities

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| EM2.1 | Does the policy, plan or development proposal encourage access to a variety of employment opportunities in different job sectors, for different levels of skill? | ● | ● |
| EM2.2 | **URBAN FORM**<br>Do proposed places of employment include, or are near to, stress-relieving and health improving features such as places to have a break, places for social interaction and networking, exercise equipment, open space and quiet areas, and access to healthy food and snacks? | | ● |
| EM2.3 | Do places of employment include the option of staircases to access multiple levels of the work place? | | ● |

### EM3: Increase access to appropriate job training

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| EM3.1 | Will the future population have reasonable access to higher education and job training facilities? | ● | ● |
| EM3.2 | Does the policy, plan or proposal require places of education to be located in close proximity to employment centres and residential areas, as well as public transport nodes? | ● | |
| EM3.3 | Does the policy, plan or proposal encourage training to be aligned with current and projected employment needs in the local area and region? | ● | |
| EM3.4 | Are employment training facilities universally accessible and designed to be inclusive? | | ● |
| EM3.5 | Is child care available for use by participants of employment training? | ● | ● |

## 11.3 Further information

NSW Occupational Health and Safety (OHS)
www.nswohs.com.au

Australian Government
– *Workplace Layout and Design Factsheet*
www.ascc.gov.au/ascc/HealthSafety/SafeDesign/Understanding/Workplacelayoutanddesignfactsheet.htm

National Public Health Partnership – *Promoting Physical Activity in Worksites*
http://fulltext.ausport.gov.au/fulltext/2002/nphp/chapter2.4.asp

London Health Commission
– *London Works for Better Health*
www.londonshealth.gov.uk/regen2.htm

World Health Organization
– *Commission on Social Determinants of Health*
www.who.int/social_determinants/en/

Business Alliance for Local Living Economies (BALLE)
www.livingeconomies.org/aboutus

# 12 Community Safety & Security

# 12 Community Safety and Security

## 12.1 Introduction

Human settlements have always sought to provide their inhabitants with safety and security. The provision of safety and security within communities encompasses a wide range of concerns and issues ranging from the right to access basic needs (such as food and shelter) through to protection from crime and violence and the impacts of natural disasters.

Elements of design and planning can add to the sense of safety and security felt by specific communities. Research has convincingly described how poor urban design exacerbates crime risk for all, regardless of gender, race, age or class[137].

Fear, vulnerability and impact of crime and violence vary considerably across different communities. Whilst some communities may experience sporadic episodes of crime and violence, other communities are subject to more systemic issues that generate cumulative and interacting impacts.

There are also community structures and behaviour patterns which, in turn, make some communities more vulnerable to safety and security risks. These include location and spatial patterns of settlement; the historical origins and development of specific communities; structures of community power; levels of and differences in income and wealth; and the perceived justice or injustice in the distribution of various conditions

137 Wekerle G, Whitzman, C. Safe cities: guidelines for planning, design, and management. New York: Van Nostran Reinhold; 1994.

and privileges. The interaction of these factors and differences within communities conditions how safety and security is experienced.

This chapter of the checklist focuses on improving the way in which urban planning and development can increase safety and security (actual and perceived). Issues such as road safety and natural disaster are addressed elsewhere within this checklist.

### 12.1.1 Relevance to NSW

Within NSW a broad range of social and physical planning policies and strategies have been used over the past few decades to deal with issues of safety and security.

One of the most notable strategies is CPTED – Crime Prevention through Environmental Design. CPTED, also known as 'Designing Out Crime', is a place-based strategy

which is premised on the understanding that 'the proper design and effective use of the built environment can lead to a reduction in the fear of crime and the incidence of crime, and to an improvement in the quality of life'[138].

CPTED provides a set of strategies to increase territoriality (sense of ownership), surveillance and access control and promotes activities within urban developments including higher densities and mixed-use development in order to optimise the number of potential 'eyes on the street'.

CPTED promotes the maintenance and management of urban space and the discouragement of the under-use of space (e.g. dereliction and/or vacancy) as crime prevention strategies[139].

CPTED applies at various scales including the individual building, community/neighbourhood and town/city levels. Community participation is a vital component of the CPTED process. CPTED is best applied at the design stage but is also used to modify existing urban environments.

Studies have also reported positive reductions in levels of recorded crime and fear of crime in developments that have been designed using CPTED principles[140] and more recently a major international review of CPTED firmly demonstrates its efficacy as a crime prevention strategy[141].

Early versions of CPTED sought to promote a feeling of safety and deter crime and violence through physical planning (e.g. increasing light levels or designing buildings so that windows provide natural surveillance of surrounding streets). Acknowledging that crime and violence are also a result of social processes, second generation CPTED has recently evolved and seeks to engender positive social activities and diversity to encourage communities to take ownership of space and to take advantage of natural surveillance. This concept promotes community capacity, cohesion and connectivity[142].

In New South Wales these CPTED strategies have been promoted by all levels of government, the police and community organisations to help communities address their unique safety and security issues. CPTED strategies have also been incorporated into NSW government legislation, see Section 79C of the Environmental Planning and Assessment Act (1979).

While CPTED is an accepted practice regarding the design and management of the built environment it does have its critics. Some of those criticisms include the potential for a stringent application of CPTED to create public spaces that are potentially sterile and not fun and interesting for users.

138 Crowe T. Crime prevention through environmental design: applications of architectural design and space management concepts. 2nd ed. Oxford: Butterworth-Heinemann; 2000.

139 Kraut DT. Hanging out the no vacancy sign: eliminating the blight of vacant buildings from urban areas. New York University Law Review 1999; 74: 1139–77. Ross CE, Mirowsky J. Disorder and decay: the concept and measurement of perceived neighbourhood disorder. Urban Affairs Review 1999, 34(3): 412–32.

140 Armitage R. An evaluation of secured by design housing schemes throughout the West Yorkshire area. Huddersfield: University of Huddersfield; 1999.

141 Cozens PM, Saville G, Hillier D. Crime prevention through environmental design (CPTED): a review and modern bibliography. Property Management 2005; 23(5): 328-56. http://www.emeraldinsight.com/Insight/ViewContentServlet?Filename=/published/emeraldfulltextarticle/pdf/1130230502.pdf

142 Saville G, Cleveland G. An introduction to 2nd Generation CPTED: Part 1. CPTED Perspectives 2003; 6(1): 7–9. Saville G, Cleveland G. An introduction to 2nd Generation CPTED: Part 2. CPTED Perspectives 2003; 6(2): 4–8.

As well as the design-led approach advocated by CPTED, community safety can also be promoted through a range of social and community development initiatives. Crime Prevention Through Social Development (CPSD) is an approach that sits well with a social determinants approach to health as it concentrates on preventative measures and the risk factors that may lead to crime. These include inadequate living conditions, family factors, poverty, employment and educational opportunities, personality and behavioural factors, relationships, sense of community, identity and belonging[143]. CPSD seeks to foster 'protective factors', such as positive family support that may mitigate situations of risk or disadvantage that contribute to crime and victimisation. The social approach to crime prevention does intersect with urban design and planning as it also relates to designing places that encourage high levels of use and promote a sense of belonging and ownership. Chapter 15 on 'Social cohesion and social connectivity' addresses many of these issues.

### 12.1.2 Key evidence and leading practice

The impacts and fear of crime and violence cause more than physical harm, as they can increase levels of stress, erode self confidence and sense of worth and leave people feeling psychologically vulnerable.

Beyond the obvious reduction in physical harm, enhanced perceptions of safety and reduced crime resulting from the implementation of CPTED-style design and planning initiatives within particular communities have been found to reduce depression[144], improve daily coping and mental wellbeing[145] of community members and support mental health[146] by promoting community capacity, cohesion and connectivity. Most importantly these initiatives have the ability to contribute to reversing the cumulative negative impacts on a particular community that often result in people relocating away from communities that are perceived to be unsafe[147].

Crime and the fear of crime are not evenly distributed either spatially or temporally, and the notion of 'hot spots' of crime (where/when crime and/or the fear of crime are highly concentrated) has received increasing attention in recent years[148].

143 NSW Attorney General's Department. Crime Prevention through Social Development Fact Sheet. NSW Attorney General's Department; 2008. http://www.crimeprevention.nsw.gov.au/Lawlink/cpd/ll_cpdiv.nsf/vwFiles/SocialDevelopmentFactsheet_2008.pdf/$file/SocialDevelopmentFactsheet_2008.pdf

144 Galea S, Ahern J, Rudenstine S, Wallace Z, Vlahov D. Urban built environment and depression: A multilevel analysis. Journal of Epidemiology and Community Health 2005; 59(10): 822–7. Weich S, Blanchard M, Prince M, Burton E, Erens BOB, Sproston K. Mental health and the built environment: Cross-sectional survey of individual and contextual risk factors for depression. British Journal of Psychiatry 2002; 180(5): 428–33. http://bjp.rcpsych.org/cgi/reprint/180/5/428

145 Whitley R, Prince M. Can urban regeneration programmes assist coping and recovery for people with mental illness? Suggestions from a qualitative case study. Health Promotion International 2006; 21(1): 19–26. http://heapro.oxfordjournals.org/cgi/reprint/21/1/19

146 Kawachi I, Berkman LF. Social ties and mental health. Journal of Urban Health 2001, 78(3): 458–67.

147 Kearns A, Parkes A. Living in and leaving poor neighbourhood conditions in England. Housing Studies 2003; 18(6): 827.

148 Brantingham PJ,.Brantingham PL. Environmental criminology: from theory to urban planning practice. Studies on Crime and Crime Prevention 1998; 7(1): 31–60. Vrij A, Winkel W. Characteristics of the built environment and fear of crime; a research note on interventions in unsafe locations. Deviant Behaviour 1991; 12: 203–15.

Increased levels of crime have been associated with specific environments such as transit stations (rail and bus), drinking establishments and alcohol outlets, car parks and shopping malls[149].

Places with clear and logical layouts including well defined routes, spaces and entrances discourage crime, enhance perceptions of safety and help orientation and way-finding[150].

Public spaces with a compatible mix of uses and increased human activity reduce risk of crime, promote safety and sense of place[151].

A sense of ownership of spaces increases the level of care, respect and territorial responsibility that communities have towards such public spaces[152].

Places that provide a quality environment and are subject to ongoing management and maintenance discourage crime and promote community safety in the present and future[153].

CPTED and wider safety initiatives are likely to be more effective if appropriate partnerships are developed between local communities, service providers and government. The nature and scale of partnerships will vary in accordance with the aim of the planning policies and strategies[154].

Key references including relevant standards and guidelines are included in the *Further information* section at the end of this chapter.

### 12.1.3 Key Questions

How does the policy, plan or development proposal:

(CS1) Consider crime prevention and sense of security?

149 See footnote 148

150 Ministry of Justice. National Guidelines for Crime Prevention through Environmental Design in New Zealand – Part 1: Seven Qualities of Safer Places. Wellington: Ministry of Justice; 2005. www.securitytransformation.org/images/documentos/322_Guidelines_for_crime_prevention_through_environmental_design_in_NZ.pdf

151 See footnote 150

152 Western Australian Planning Commission. Ownership over spaces increases the level of care, respect and territorial responsibility that communities have towards such public spaces. Perth: Western Australian Planning Commission; 2006. www.wapc.wa.gov.au/Publications/Downloads_GetFile.aspx?id=896

153 The Royal Borough of Kensington and Chelsea. Designing Out Crime Supplementary Planning Document. www.rbkc.gov.uk/Planning/unitarydevelopmentplan/designingoutcrime_spd.pdf

154 Crime Prevention Division. Plan It Safe: Partners in Community Safety. Lawlink NSW; 1999. www.lawlink.nsw.gov.au/swp/swp.nsf/pages/swp_3

## 12.2 Safety and security checklist questions

### CS1: Consider crime prevention and sense of security

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| CS1.1 | Does the policy, plan or proposal include community safety and crime prevention in its objectives? | ● | ● |
| CS1.2 | Has the policy, plan or proposal been referred to the Local Area Command of the Police Service, or other appropriate body, to conduct a community safety and crime prevention review/audit?<br>(NOTE: If the answer is yes, there may be no additional value in the health service providing comments on crime prevention and community safety. If the answer is no, an appropriate action may be to recommend that review by the Police Service, or other accredited body, occurs.) | ● | ● |
| CS1.3 | **URBAN FORM**<br>Does the policy, plan or proposal promote natural surveillance and clear sightlines?<br>(NOTE: Factors to consider include:<br>Opportunities for surveillance from adjoining buildings or from nearby streets, shops etc.<br>Design that prevents opportunities for concealment in public spaces<br>Improving visibility through the type of fence, landscape and streetscape used<br>Use of appropriate lighting.) | | ● |

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| CS1.4 | Does the policy, plan or proposal promote safe and easy movement?<br>(NOTE: Factors to consider include:<br>The inclusion of a simple and logical layout with appropriate signage and way finding<br>Whether the proposal improves environmental conditions and enhances personal safety<br>Whether the entrances and exit points of public spaces are clearly signed and easily accessible<br>Whether the landscape helps to make the places easier to navigate (such as clear and direct routes, the ability to view the surrounding area when walking in public.)) | | ● |
| CS1.5 | Does the policy, plan or proposal promote an active mix of land uses?<br>(NOTE: Factors to consider include:<br>The inclusion of mixed use and activity generators into public spaces, community facilities and other buildings<br>The compatibility of uses within an area<br>Consideration of appropriate night time uses.) | | ● |
| CS1.6 | Do spaces appropriately identify their intended use? Will it be clear to future users who owns the space (is it public, private or communal), what the space is supposed to be for, and who is able to use it? | | ● |

## 12.3 Further information

Guidelines under Section 79C of the Environmental Planning and Assessment Act 1979
www.police.nsw.gov.au/__data/assets/pdf_file/0003/9390/duapguide_s79c.pdf

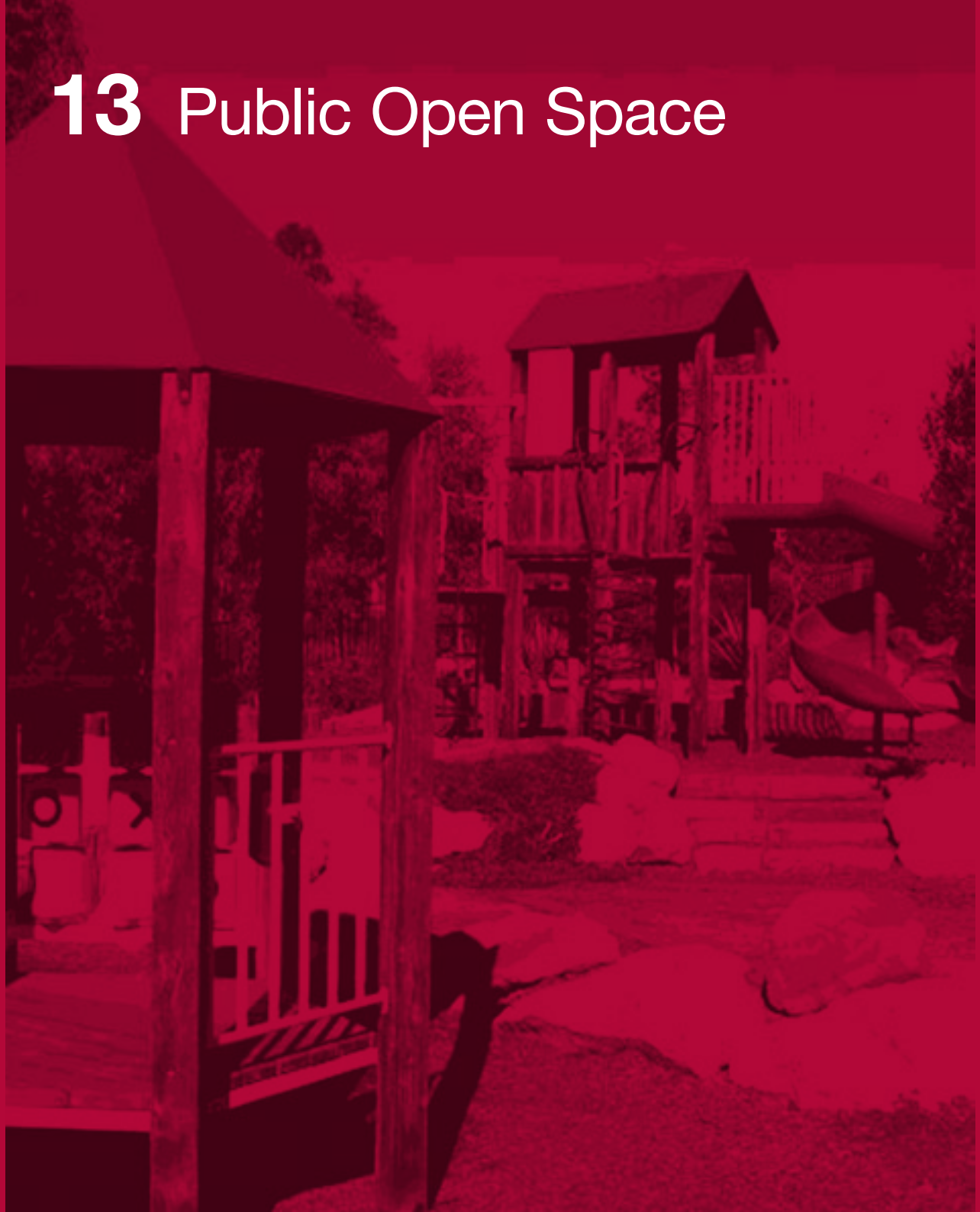
Section 79C of the Environmental Planning and Assessment Act 1979 No203
www.legislation.nsw.gov.au/fragview/inforce/act+203+1979+pt.4-div.2-sec.79c+0+N

International CPTED Association resource page
www.cpted.net/resources.html

NSW Government Crime Prevention Checklists
www.crimeprevention.nsw.gov.au/Lawlink/cpd/ll_cpdiv.nsf/pages/CPD_factsheets

NSW Governments Crime Prevention Framework
www.crimeprevention.nsw.gov.au/lawlink/cpd/ll_cpdiv.nsf/vwFiles/CrimePreventionFramework_June2008.pdf/$file/CrimePreventionFramework_June2008.pdf

# 13 Public Open Space



# 13 Public Open Space

## 13.1 Introduction

Public open space can include parks, gardens, shopping areas, sporting fields, streets, public squares and plazas, playgrounds, walking and biking trails and natural areas. Public space is generally considered to improve physical and psychological health, as well as contribute to the social connections that help to make a community. Public internal spaces (such as community centres and recreation facilities) are considered in chapter 14 on social infrastructure.

Providing public open spaces that encourage people to exercise, to meet with others, to relax and to play can assist them to be more active and engaged and can help to diminish the impact of major risk factors to health such as lack of physical activity, being overweight, social isolation and stress. When public spaces are inaccessible, unpleasant or unsafe many people are discouraged from utilising them and their health can be adversely affected as a result.

Although we tend to think of public open space in terms of parks and plazas, the public realm in many areas is comprised primarily of the street. In recent years, the street has been defined less as a site for social interaction and activity than as a transportation route dominated by cars. It has been noted that "designing streets primarily for traffic movement, rather than as places in their own right, has reduced the richness and variety of public space and its uses"[155].

Based on evaluations of thousands of public spaces around the world, the Project for Public Spaces has identified four key qualities of successful public spaces:

They are accessible

People are engaged in activities there

The space is comfortable and has a good image

It is a sociable place – one where people meet each other[156].

155 Commission for Architecture and the Built Environment. Civilised Streets. London: Commission for Architecture and the Built Environments; 2008. http://www.cabe.org.uk/files/civilised-streets.pdf

156 Project for Public Spaces. What makes a successful place? New York: Project for Public Spaces; 2008. www.pps.org/info/placemakingtools/casesforplaces/gr_place_feat

Public space can provide opportunities for social interaction, social mixing and social inclusion and it can facilitate the development of community ties[157].

As addressed in detail in the physical activity chapter of this checklist, greater levels of physical activity contribute positively to health and reduce the risk of a wide range of diseases. Public open space, including parks, provides a range of settings and facilities for various levels of formal and informal sport, recreation and leisure activities including walking, running, cycling, ball games, dog walking/training and climbing.

However, public open space is much more than a venue for physical activity. A 'big picture' view of public space argues that the health of a city is dependent on exchange (social, economic, cultural and environmental) and public space is a "vital conduit" and "shared resource" that enables this exchange to happen[158].

Public open space is also an important forum for the expression of local identity and culture and celebration of community and place. The importance of community and stakeholder involvement in both the design and management of public space has been stressed: "The success of a particular public space is not solely in the hands of the architect, urban designer or town planner; it relies on people adopting, using and managing the space – people make places, more than places make people"[159].

Design of public open spaces should not only address amenity and aesthetics but should also respond to, and reflect, local culture, character and identity. The inclusion of public art is one way to reflect local character in public space. Importantly, artistic and cultural representation cannot be imposed on a community but should be a product of a process of community engagement where local people have had an opportunity to be involved in the design and development of public art, space design and cultural interpretation.

In addition, a range of research has shown that public access to the natural environment is particularly important for good health and that this access is becoming increasingly difficult to maintain. A growing research base shows that contact with the natural world provides social, health and psychological benefits but that these benefits are becoming harder to secure with the shift to more urban patterns of living[160].

Access to the natural environment is considered to be of particular importance in the healthy development of children with concerns that 'nature deficit disorder' is having an adverse impact on children's physical and

157 Worpole K, Knox K. The Social Value of Public Spaces. York, Joseph Rowntree Foundation, 2007. http://www.jrf.org.uk/sites/files/jrf/2050-public-space-community.pdf

158 Mean M, Tims C. People Make Places: Growing the public life of cities. London: Demos; 2005. www.demos.co.uk

159 Worpole K, Knox K. The Social Value of Public Spaces. York: Joseph Rowntree Foundation; 2007. http://www.jrf.org.uk/sites/files/jrf/2050-public-space-community.pdf

160 Brookfield P. The Provision of Open Space for Urban Residents: Theory of the Relationship between Community Environmental Values and Performance Based Planning Processes. Griffith University Urban Research Program and Gold Coast City Council; 2007. http://www.fbe.unsw.edu.au/cityfutures/SOAC/theprovisionofopenspace.pdf

social development[161]. Beyond natural areas, children also need opportunities for unstructured, imaginative and adventurous outdoor play in their local neighbourhoods, and not just via fixed equipment playgrounds. These spaces allow for the type of creative play and participation in "communal games, which in turn create a sense of belonging and attachment to local places"[162].

Finally, while children are an important group to consider in the development of public spaces, research suggests that planning for public space should consider multiple users. Design for multiple uses is important in ensuring that a range of user groups are able to use the parks throughout different times of the day. It has been found that the public spaces that were most "valued" were those that were "actively used and shared by different individuals and groups"[163]. It has been suggested that playing fields should be redesigned for multiple use including "organised sports participants, walkers and passive recreational users – thereby making better use of this important community resource"[164].

161 Louv R. Last Child in the Woods: Saving our children from nature deficit disorder. Chapel Hill, NC: Algonquin Books of Chapel Hill; 2006. http://richardlouv.com/

162 See footnote 159

163 Mean M, Tims C. People Make Places: Growing the public life of cities. London: Demos; 2005. www.demos.co.uk

164 Giles-Corti B, Broomhall M, Knuiman M, Collins C, Douglas K, Ng K et al. Increasing Walking: How important is distance to, attractiveness, and size of public open space? American Journal of Preventive Medicine 2005; 28(2S2): 169-76. http://download.journals.elsevierhealth.com/pdfs/journals/0749-3797/PIIS0749379704002983.pdf

### 13.1.1 Relevance to NSW

In the Sydney metropolitan area, approximately 70% of new dwelling construction in the next 30 years is expected to be medium density housing[165]. This form of housing has implications for the provision of public space as private open space in the form of the backyard is likely to be smaller, and may not accommodate the same kind of active uses as has historically been the case. To ensure that healthy lifestyles can be maintained, the 'new city' will have to incorporate new public spaces that encourage physical activity, children's play, relaxation and well-being, social and community connections, and perhaps food production.

The NSW State Government's aims for public open space development in Growth Centres include:

Ensure access to open space

Connect the regional cities of Penrith and Liverpool to riverside open space

Improve the quality of regional open space, particularly the Western Sydney Parklands

Place recreation trails in Growth Centre areas such that all residents are within 1.5 kilometres of a trail

165 Thompson S, Corkery L, Judd B. The Role of Community Gardens in Sustaining Healthy Communities. Sydney: Faculty of the Built Environment, University of New South Wales; 2007. http://www.fbe.unsw.edu.au/cf/publications/presentations/attachments/SOAC07Thompson&Corkery&Judd.pdf

Improve the quality of existing open space (including that in established areas as a part of urban renewal)

Improve access to waterways and links between bushland, parks and centres[166].

### 13.1.2 Key evidence and leading practice

Landcom has developed a range of policy documents and guidelines that provide guidance on aspects of quality public space design – including recommendations related to open space and park design and public art (see the *Further information* section at the end of this chapter).

In the UK, the Manual for Streets is based on a new hierarchy of street design that moves from pedestrians, cyclists, public transport, specialist vehicles and then to other motor traffic[167]. It has been reported that some of the characteristics of "safe and inviting streets" include good quality footpaths, kerb cuts, slowed traffic, pedestrian separation from traffic and amenities including trees, benches and public art[168].

As addressed in greater detail in the physical activity chapter of this checklist, greater levels of physical activity contribute positively to health and reduce the risk of a wide range of diseases. Research suggests that when people have access to parks, they exercise more[169]. It has been found that enhanced access to places for physical activity led to a 26% increase in the percentage of people exercising on three or more days per week[170]. A review of a number of studies showed that enhanced access to places for physical activity combined with information outreach produced a 48% increase in frequency of physical activity[171].

Skin cancer prevention is an important element of public space design. The provision of shade is particularly important at children's playgrounds and other outdoor areas used by children and young people.

Access to shade and the provision of drinking water (bubblers) is also important in the prevention of heat stress, particularly areas with extreme heat such as in western New South Wales as well as parts of Western Sydney.

166 NSW Department of Planning. City of Cities: A Plan for Sydney's Future. Metropolitan Strategy Supporting Information. Sydney: NSW Department of Planning; 2005. http://www.metrostrategy.nsw.gov.au/dev/uploads/paper/introduction/index.html

167 Department for Transport. Manual for Streets. London: Department of Transport; 2007. www.dft.gov.uk/pgr/sustainable/manforstreets

168 Lee V, Mikkelsen L, Srikantharajah J, Cohen L. Strategies for Enhancing the Built Environment to Support Healthy Eating and Active Living. Oakland, California: Prevention Institute; 2008. www.convergencepartnership.org/atf/cf/%7B245A9B44-6DED-4ABD-A392-AE583809E350%7D/CP_Built%20Environment_printed.pdf

169 Sherer P. The Benefits of Parks: Why America needs more city parks and open space. San Francisco: The Trust for Public Land; 2006. http://www.childrenandnature.org/downloads/parks_for_people_Jul2005.pdf

170 Centre for Disease Control. Increasing Physical Activity: A report on recommendations of the task force on community preventive services.Centre for Disease Control; 2001. http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5018a1.htm

171 Kahn E, Ramsey L, Brownson R, Heath G, Howze E, Powell K et al. The Effectiveness of Interventions to Increase Physical Activity. American Journal of Preventive Medicine 2002; 22(4S): 73-107.

Tobacco use (including passive smoking) remains the leading cause of morbidity and mortality in NSW, causing more than 6,500 deaths and over 55,500 hospitalisations in 2004. The total social costs of tobacco smoking in NSW in 1998–99 were estimated to be $6.6 billion[172]. Globally, the negative health impacts of smoking are prompting smoking bans in public spaces and workplaces. Smoke free outdoor environments have been introduced to protect outdoor air quality and have been used extensively in sports grounds, children's playgrounds, transport stops and around shopping centres.

Risky drinking and high risk drinking caused an estimated 31,132 deaths in Australia between 1992 and 2001, and between 1989–90 and 2002–03 there was a 23% increase in hospitalisations attributable to alcohol[173]. Alcohol bans in public spaces have been shown to be effective in breaking patterns of public disorder without merely displacing it to other locations[174].

Providing good public space is seen as one way to help to improve people's trust of one another. It has been found that "when properly designed and cared for, [public spaces] bring communities together, provide meeting places and foster social ties"[175]. On a more personal level, public space can provide environments for restoration from mental fatigue, solitude and quiet, education, artistic expression, contemplation, reflection and inspiration and invoke a sense of place[176].

Natural environments, such as parks and bushland, have been found to foster recovery from mental fatigue[177]. Exposure to natural environments has been found to enhance the ability to cope with and recover from stress, cope with subsequent stress, and recover from illness and injury[178].

Key issues related to the planning of parks, streets, trails and other public spaces are:

### 1. Proximity and access

A return to more traditional planning principles has seen a re-emphasis on the value of planning communities based on walkable distances. A distance of 400 metres has become generally accepted in contemporary planning practice as a reasonable distance (approximately a five minute walk) for most people to walk. Planning for some form of

172 Population Health Division. Healthy People NSW: Improving the health of the population. Sydney, NSW Department of Health; 2007. http://www.health.nsw.gov.au/pubs/2007/pdf/healthy_people.pdf

173 See footnote 172

174 Greenaway A, Conway K, Field A, Edward S, Bhatta K, Huckle T et al. Young People, Alcohol and Safer Public Spaces. Auckland: Alcohol & Public Health Research Unit, University of Auckland; 2002. www.aphru.ac.nz/projects/publicSpaces.pdf

175 Commission for Architecture and Built Environment (CABE) Space. The Value of Public Space. London: Commission for Architecture and Built Environment. www.cabespace.org.uk/policy/reports.html

176 Maller C, Townsend M, St Leger L, Henderson-Wilson C, Pryor A, Prosser L et al. Healthy Parks, Healthy People: The health benefits of contact with nature in a park context. School of Health and Social Development. Melbourne: Deakin University; 2008. http://www.parkweb.vic.gov.au/resources/mhphp/pv1.pdf

177 See footnote 176

178 See footnote 176

neighbourhood focal point, whether it be shops, a community facility or public space, to be within 400-500 metres of where most people live is seen as a desirable goal in a range of plans and policies[179]. This catchment radius can be extended to 800 metres if centred around a rail station as it is understood that the more permanent nature of a train station encourages people to walk from a greater distance.

Factors found to influence the use of public open space include: perceived proximity; accessibility (in terms of absence of major roads etc.); aesthetic features such as trees, water and birdlife; levels of maintenance; size (in terms of variety of opportunities and the possibility of 'losing oneself'); and availability of amenities such as walking tracks[180] and perceived levels of safety.

Given demographic trends and an ageing population, access and inclusive design remain high priorities in planning public space[181].

Social access is also important and how welcoming public space is to different user groups.

## 2. Type of space – active/passive, structured/ unstructured

While sport is an important component of Australian culture, and sporting fields are valuable forms of public space, an overemphasis on planning for structured activities may not be the best way to promote good health through planning. Although participation in organised sport is significant (with 27% of Australians aged 15 and over participating), research also shows that the most popular forms of sport and recreation are unstructured activities like walking[182,183].

This suggests that planning for urban development needs to not only consider the provision of sporting fields for structured activities but also the planning and design of communities that enable and encourage unstructured activities such as walking and cycling. In a survey of Perth residents it was found that living on a quiet street with footpaths, trees and shops increased the likelihood that survey participants walked the recommended daily amount[184].

179 Western Australian Planning Commission. Liveable Neighbourhoods. Perth: Department of Planning and Infrastructure; 2007. www.wapc.wa.gov.au/Publications/1594.aspx

180 Giles-Corti B, Broomhall M, Knuiman M, Collins C, Douglas K, Ng K et al. Increasing Walking: How important is distance to, attractiveness, and size of public open space? American Journal of Preventive Medicine 2005; 28(2S2): 169-76. http://download.journals.elsevierhealth.com/pdfs/journals/0749-3797/PIIS0749379704002983.pdf

181 See footnote 176

182 Australian Bureau of Statistics. Involvement in Organised Sport and Physical Activity. Canberra: Australian Bureau of Statistics; 2007. www.abs.gov.au/ausstats/abs@.nsf/mf/6285.0

183 Australian Sports Commission. Participation in Exercise, Recreation and Sport Annual Report 2007. Canberra: Department of Health and Ageing; 2007. www.ausport.gov.au/__data/assets/pdf_file/0008/241865/ERASS_Report_2007_FINAL.pdf

184 Giles-Corti B, Donovan R. Relative Influences of Individual, Social Environmental, and Physical Environmental Correlates of Walking. American Journal of Public Health 2003; 93(9): 1583-9. http://www.ajph.org/cgi/reprint/93/9/1583

It is suggested that "access to convivial neighbourhoods not only encourages more walking, but also encourages interactions between neighbours, thereby increasing sense of community, which in turn may beneficially influence positive mental and physical health in local residents"[185].

### 3. Quality of public space

While much urban planning concentrates on the size of public space, relative to the size of the population, recent Australian research has shown that it is not only the size but also the quality of public space that influences people's use.

It has been found that "The quality of the public realm appears to be important for both mental and physical health. Access to large, attractive public open space increases the odds of higher levels of walking, but is said to be restorative, reducing mental fatigue and improving well being"[186].

It is held that walking is the most popular form of recreational physical activity for Australian adults, and that walkers are attracted to parks and public spaces with more attributes, rather than traditional ovals and sporting fields. "With thoughtful design, it is possible to design and redesign public open space for multiple users: sports people, walkers and passive recreational users. Public open space landscaped with trees and shrubs selected to create interest and maximise visibility is likely to increase their use"[187].

A review of research on street design and public places identified a number of common characteristics of urban environments that have been found to increase the likelihood of walking and cycling. Those factors included 'a friendly, attractive or pleasant neighbourhood', 'presence of pavements and enjoyable scenery' and 'pedestrian friendly design' characterised by 'pavements, street lighting and planted strips'[188].

Key references including relevant standards and guidelines are included in the *Further information* section at the end of this chapter.

185 Giles-Corti B. The impact of urban form on public health. Paper prepared for the 2006 Australian State of the Environment Committee. Canberra: Department of the Environment and Heritage; 2006. http://www.environment.gov.au/soe/2006/publications/emerging/public-health/pubs/public-health.pdf

186 See footnote 185

187 See footnote 185

188 Cave B, Molyneux P, Coutts A. Health Sustainable Communities: What works? Wellingborough: Milton Keynes and South Midlands Health and Social Care Group; 2004. http://www.mksm.nhs.uk/FileAccess.aspx?id=148

### 13.1.3 Key questions

How does the policy, plan or development proposal:

(PS1) Provide access to green space and natural areas?

(PS2) Ensure that public open spaces are safe, healthy, accessible, attractive and easy to maintain?

(PS3) Promote quality streetscapes that encourage activity?

(PS4) Engender a sense of cultural identity, sense of place and incorporate public art?

(PS5) Address the preservation and enhancement of places of natural, historic and cultural significance?

## 13.2 Public open space checklist questions

### PS1: Provide access to green space and natural areas

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PS1.1 | Does the policy, plan or proposal include access to green space and natural areas in its objectives? | ● | ● |
| PS1.2 | Will the future population have access to green space and natural areas within their local neighbourhood? | ● | ● |
| PS1.3 | Has the amount of public open space provided considered the projected population growth and nature of demand, the potential for wider regional use, existing deficits in the area, and the context of the development (i.e. greenfield, urban renewal etc.)?<br>(NOTE: Planning for open space has moved away from a standards based approach. (see Department of Planning's guidelines on open space for a contemporary approach to open space planning)) | ● | ● |
| PS1.4 | Are green space and natural areas (such as parklands, remnant bushlands, creeks, forests and wetlands) accessible from where most people live? | ● | ● |
| PS1.5 | Are most homes within a reasonable walking distance (approximately 400-500 metres) of a park, playground or other form of useable public open space?<br>(NOTE: The quality of urban design can influence and extend the distances that people are willing to walk between destinations. Similarly, poor design can discourage people from walking even relatively short distances.) | ● | ● |
| PS1.6 | Where new development is proposed, does it preserve or enhance access to green space and natural areas? | ● | ● |
| PS1.7 | **URBAN FORM**<br>Are public open spaces connected via a network of footpaths, trails and public transport? | | ● |
| PS1.8 | Is there a public transport stop within easy walking distance (approximately 400-500 metres or up to 800-1000 metres for a railway station) of key public open spaces? | | ● |
| PS1.9 | Can people, including children, walk and cycle safely from major residential areas to a local park, playground or natural area? | | ● |

## PS2: Ensure that public open spaces are safe, healthy, accessible, attractive and easy to maintain

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PS2.1 | Does public open space planning support a range of experiences and potential users? Are there opportunities for active and passive recreation, reflection, learning, play, adventure, gathering, and celebration? | ● | ● |
| PS2.2 | Is there good access to formal and informal and structured and unstructured public space? | ● | ● |
| PS2.3 | Are amenities (such as seating, public toilets, access to drinking water, shade and baby changing facilities) proposed, to encourage use of public space by a wide range of user groups? | ● | ● |
| PS2.4 | Has safety been considered in such a way that it does not 'design out' people and/or fun, adventure, excitement? | | ● |
| PS2.5 | Is public open space integrated with other uses such as commercial, retail, and community facilities such as libraries, community centres, schools and child care? | | ● |
| PS2.6 | Is the space universally accessible and designed to be inclusive? | | ● |
| PS2.7 | Does the policy, plan or development proposal encourage a wide variety of uses in public open space, both day and night? | | ● |
| PS2.8 | Are dog walking or leash free areas included in the proposal and, if so, are the appropriate amenities and services provided? | | ● |
| PS2.9 | Does the policy, plan or proposal encourage a public domain that provides protection against traffic and accidents, crime and violence, and climatic extremes (such as sun exposure)? | | ● |
| PS2.10 | Does the policy, plan or proposal address restrictions on smoking and drinking in public open space? | | ● |
| PS2.11 | **URBAN FORM**<br>Are play areas designed to be easily observable by parents? Is seating available for parents/guardians to observe children when playing? | | ● |

## PS2 continued

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PS2.12 | Can you see the public open space from a distance? Is its interior visible from the outside? | | ● |
| PS2.13 | Can people using wheelchairs and prams/strollers get to, and move freely about, the space? | | ● |
| PS2.14 | Are public open spaces sufficiently buffered from traffic in terms of noise, fumes and pedestrian safety? | | ● |
| PS2.15 | Do public open spaces offer clear lines of sight, with few "hiding" or unobservable spaces? | | ● |
| PS2.16 | Are some public open spaces 'intimate', allowing space for quiet reflection and moderate privacy? | | ● |

## PS3: Promote quality streetscapes that encourage activity

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PS3.1 | Does the policy, plan or development proposal design streets and other public spaces that encourage people to use and linger in them (for instance through attractive landscaped streetscapes, benches for chatting or people watching)? | ● | ● |
| PS3.2 | Does the policy, plan or development proposal encourage high quality building facades and ground floor street frontages on important streets? | ● | ● |
| PS3.3 | Does the policy, plan or development proposal discourage through traffic in areas where enhanced public life is desired? | ● | ● |
| PS3.4 | **URBAN FORM** Are design features included to encourage activity on streets such as street trees, landscaped nature strips and street furniture? | | ● |

## PS3 continued

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PS3.5 | Are streets designed to prioritise use by pedestrians and cyclists by including bike lanes and wide footpaths free from obstacles? | | ● |
| PS3.6 | Are streets and other public spaces appropriately lit to encourage safe use after dark? | | ● |
| PS3.7 | Do walking and cycling paths offer travel at a good rhythm with few interruptions (such as crossing busy intersections with long waiting times)? | | ● |

## PS4: Engender a sense of cultural identity, sense of place and incorporate public art

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PS4.1 | Does the policy, plan or development proposal include a public art strategy? Will public art be included in the planned public spaces? | ● | ● |
| PS4.2 | Have measures been taken to ensure that public art reflects local community identity? | ● | |
| PS4.3 | Is there potential for users to be involved in the design and management of public space? | ● | |
| PS4.4 | Will local community character be reflected in the design of the public space? | ● | |
| PS4.5 | **URBAN FORM**<br>Are public spaces designed to accommodate community celebrations, festivals and other events? | | ● |
| PS4.6 | Are amenities such as picnic areas and cooking facilities (barbeques) included in park design? | | ● |

## PS5: Address the preservation and enhancement of places of natural, historic and cultural significance

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| PS5.1 | Are there measures in place to protect and improve existing public open space? | ● | |
| PS5.2 | Have natural areas of significance been identified and protected through the proposed planning controls? | ● | |
| PS5.3 | Have items of local heritage (Indigenous and non-Indigenous) significance been preserved? How have these items been reflected in the proposed public spaces? | ● | ● |
| PS5.4 | **URBAN FORM**<br>Is interpretive signage provided and well designed? | | ● |

## 13.3 Further information

Landcom – *Street Design Guidelines, Open Space Guidelines, Public Art Guidelines and Street Tree Design Guidelines*
www.landcom.com.au/whats-new/publications-reports/the-landcom-guidelines.aspx

City of Adelaide – *Public Spaces and Public Life*
www.adelaidecitycouncil.com/adccwr/publications/reports_plans/public_spaces_public_life.pdf

Young people, Alcohol and Safer Public Spaces
www.aphru.ac.nz/projects/publicSpaces.pdf

The State of Practice – *Examples of New Street Design Guidance from around the world*
www.cnu.org/sites/files/Cameron.pdf

UK – *Manual for Streets*
www.communities.gov.uk/publications/planningandbuilding/manualforstreets\

CABE – Designing and Planning for Play
www.cabe.org.uk/default.aspx?contentitemid=2792

CABE – *Public Space Resources*
www.cabe.org.uk/default.aspx?contentitemid=41

The Project for Public Spaces
www.pps.org

CABE/Mayor of London – *Open space strategies. Best practice guidance*
http://www.cabe.org.uk/files/open-space-strategies.pdf

Australian Clearinghouse on Youth Studies – *Youth and Public Space*
www.acys.info/topics/public_space

UNISA – *Negotiating Public Space: Discourses on Public Art*
http://arrow.unisa.edu.au:8080/vital/access/manager/Repository/unisa:28847

Design Council – *Inclusive Design*
www.designcouncil.org.uk/en/About-Design/Design-Techniques/Inclusive-design

Under Cover: Guidelines for Shade Planning and Design
www.cancersa.org.au/cms_resources/documents/Resources/sunsmart/Undercover03update.pdf

NSW Department of Environment and Climate Change, Aboriginal People and Cultural Life,
http://www.environment.nsw.gov.au/nswcultureheritage/AboriginalPeopleAndCulturalLife.htm

Australian Museum, Aboriginal Heritage Unit,
http://www.amonline.net.au/ahu/

# 14 Social Infrastructure

# 14 Social Infrastructure

## 14.1 Introduction

Social infrastructure includes a wide range of services and facilities that meet community needs for education, health, social support, recreation, cultural expression, social interaction and community development. Social infrastructure (including schools, community centres, libraries, community health centres and recreation facilities) are essential features of holistically planned communities and contribute to overall community well-being. Also considered to be social infrastructure are some of the basic services that are essential for the proper functioning of a community. These include local shops, pharmacies, post offices, banking facilities and other services.

Social infrastructure planning and provision contributes to the development of healthy and sustainable communities by ensuring that population growth is supported by a network of facilities and services that are accessible, affordable and responsive to local community needs. Investment in social infrastructure is considered to be "essential for the health, well-being and economic prosperity of communities. It plays an important role in bringing people together, developing social capital, maintaining quality of life, and developing the skills and resilience essential to strong communities"[189].

The Health Impact Assessment of the Sydney Metropolitan Strategy states that social infrastructure has a key role to play in "meeting basic community needs",

"the development of social capital" and "community capacity" as the services and facilities "provide resources and the opportunity for social interaction, cooperation and the development of 'ownership' of place or 'sense of community'"[190]. Social infrastructure has been described as the 'glue' "that can bring together and strengthen local communities"[191].

Social infrastructure was previously considered 'soft infrastructure' and not accorded the same importance as transport, water, electricity and other forms of 'hard infrastructure'. However, social infrastructure is now more recognised as an essential component of well functioning

189 Office of Urban Management. SEQ Regional Plan 2005-2026. Implementation Guideline no. 5 - Social Infrastructure Planning. Brisbane: Department of Infrastructure; 2007. http://www.dip.qld.gov.au/resources/guideline/ImplementationGuideline5.pdf

190 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

191 London Thames Gateway Social Infrastructure Framework. The Case for Social Infrastructure Planning. London: NHS Healthy Urban Development Unit; 2006. http://www.healthyurbandevelopment.nhs.uk/documents/int_social_infrastructure/The_Case_For_Social_Infrastructure_02_06_06.pdf

communities and community assets that need to be planned in the same coordinated and strategic way as other forms of infrastructure. In regard to Greater Western Sydney, it has been reported that "past experience of urban development in Greater Western Sydney has been that where social infrastructure is considered after residential development occurs, significant inequities in access to services result"[192].

Social infrastructure can provide focal points for community activity and places for people to meet and connect. These focal points are particularly important in new communities where links between neighbours have not yet been forged. It is held that "Social infrastructure has a key role to play in promoting social cohesion, bringing different socio-economic and ethnic groups together, and creating a true sense of community belongingness"[193]. While research suggests that it is very difficult to manufacture a sense of community[194], it seems that an important catalyst in enabling community to develop is to provide some of the places where friendships and neighbourhood networks can be formed.

Social infrastructure can also act as an 'attractor' in that it can encourage people to a particular area either as visitors or residents. If we accept the view that a core component of a sustainable community is diversity, then a range of quality social infrastructure can help to attract a diverse population – different ages, cultures and socio-economic backgrounds. It has been reported that "People want to live in areas that are served by good schools, good health services, high quality open spaces and recreational activities, all in accessible and convenient locations"[195].

Social infrastructure can also be a mechanism (along with a range of physical planning, design and policy approaches) that can help to create links between new and existing communities. Research on master planned communities in Western Sydney has expressed some concern about 'elite' developments that may exacerbate social divisions and inequity across the region[196]. Planning for social infrastructure should give consideration to what the area's wider needs are and provision should attempt to address existing as well as projected needs. New facilities can encourage existing, surrounding residents into a new area to assist with integration and the breaking down of physical and social barriers.

It is fundamental that, rather than an afterthought, social infrastructure is viewed strategically as a key part of creating vibrant and sustainable communities. Social infrastructure can make an important contribution as a focal point for community activity, gathering and interaction. Some key principles that support this and provide guidance for the provision of social infrastructure include:

192 See footnote 190

193 See footnote 191

194 Rosenblatt T, Cheshire L, Lawrence G. Social Interaction and Sense of Community in a Master Planned Community. Housing, Theory and Society 2009; 26(2):122-42.

195 London Thames Gateway Social Infrastructure Framework.. The Case for Social Infrastructure Planning. London: NHS Healthy Urban Development Unit; 2006. http://www.healthyurbandevelopment.nhs.uk/documents/int_social_infrastructure/The_Case_For_Social_Infrastructure_02_06_06.pdf

196 Gwyther G. Paradise Planned: Community Formation and the Master-Planned Estate. Urban Policy and Research 2005; 23(1): 57-72.

Cluster facilities with shops, schools and other activity centres to create community focal points and promote safety

Maximise the efficient use of resources, for instance through shared or co-located facilities and multiple use agreements

Social infrastructure should be as multipurpose as possible and provide for a range of services, activities and programs

Locate facilities in convenient, central locations which are accessible by public transport

Ensure flexibility in facility design and use so they can respond and change to meet evolving community needs

Whenever possible locate facilities adjacent to open space to allow for overflow activities such as children's play, festivals and markets

Facilities will ideally be buildings that are readily identified as a community space and evoke a sense of identity, pride and ownership

Promote equitable access through distribution, design and management of social infrastructure.

## 14.1. Relevance to NSW

In NSW some of the key challenges with social infrastructure provision include:

Meeting the needs of a rapidly growing population

The equity of provision of services and facilities within a region and between regions

The impact on existing services and facilities of growth in demand resulting from population growth

The provision of social infrastructure in rural areas with lower and more dispersed populations

The adequacy of services for population groups with special needs.

### 14.1.2 Key evidence and leading practice

Key issues related to the planning of social infrastructure are:

Strategic/anticipatory planning: Social infrastructure planning should not assume that provision of facilities and services will necessarily follow development. There is a need to be anticipatory and to strategically plan for social infrastructure provision. A Community Plan or Social Plan is one means to undertake a more strategic approach to social infrastructure provision. Major development plans and proposals should be accompanied by some form of community planning study that considers the social infrastructure and

human service requirements of the new population and identifies strategies for how those needs will be met. Community planning should identify what is needed, who is providing it and what is the funding model that will ensure it is delivered in a timely and efficient manner.

Integrated planning: Integration needs to occur both physically and sectorally. Social infrastructure should be considered as an important part of the community in the physical planning process. Master planning provides an opportunity to physically integrate community facilities into the proposed urban fabric of new communities and developments. Integration is also particularly important across social infrastructure providers, human service agencies and service providers. Particularly for larger developments and the planning of precincts, a high level of coordination is required among key stakeholders to ensure that all issues are considered and that key opportunities for integration to occur early in the planning process are capitalised on.

Timely provision of social infrastructure: The time lag between resident occupation and the availability of key social infrastructure has been a long term problem with urban development in both greenfield and urban renewal sites. This has partly been a consequence of the developer contribution system that ties funds to the development of housing lots and means (technically) that the required funds for the construction of a facility are not available until the last lot is developed. A strategic and integrated approach to planning for social infrastructure is important to identifying the key opportunities and potential efficiencies that may arise from identifying alternative (to standard developer contributions) approaches to the provision and timing of social infrastructure.

Consideration of cumulative impacts: The increase in demand for facilities and services as a result of the cumulative impacts of numerous small developments is a key planning challenge. Each individual development in isolation may not be significant but when considered cumulatively the impact on existing facilities and services can be an issue. This is a challenge as planning practice deals with each development in its own right without consideration of previous or future development that may affect demand for social infrastructure.

Key references including relevant standards and guidelines are included in the *Further information* section at the end of this chapter.

### 14.1.3 Key questions

How does the policy, plan or development proposal:

(SI1) Provide access to a range of facilities to attract and support a diverse population?

(SI2) Respond to existing (as well as projected) community needs and current gaps in facilities and/or services?

(SI3) Provide for early delivery of social infrastructure?

(SI4) Promote an integrated approach to social infrastructure planning?

(SI5) Maximise efficiencies in social infrastructure planning and provision?

## 14.2 Social Infrastructure checklist questions

### SI1: Provide access to a range of facilities to attract and support a diverse population

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| SI1.1 | Will the new population have access to adequate social infrastructure either within the proposed development or in the wider area? | ● | ● |
| SI1.2 | Do planned facilities respond to the demographic profile and likely needs of the future population? | ● | ● |
| SI1.3 | Does the policy, plan or proposal support access to health services including hospitals, community health centres, General Practitioners, and allied health professionals? | ● | ● |
| SI1.4 | Does the policy, plan or proposal support access to affordable and high quality child care? | ● | ● |
| SI1.5 | Does the policy, plan or proposal support access to accessible and high quality educational and training facilities? | ● | ● |
| SI1.6 | Does the policy, plan or proposal promote equitable access to services and facilities (including affordability, accessibility, responsive to the needs of a range of population groups etc.)? | ● | ● |
| SI1.7 | Are planned facilities universally accessible and designed to be inclusive? | ● | ● |
| SI1.8 | Are there strategies to attract private and non government providers of important services (such as GPs, welfare and aged care services)? | ● | ● |
| SI1.9 | **URBAN FORM**<br>For larger developments does the policy, plan or proposal include a mix of facilities including local shopping, community, health, recreational, leisure, entertainment and cultural facilities?<br>(NOTE: The local council's social planner may be able to assist with information on population standards and benchmarks for providing a range of social infrastructure.) | ● | ● |
| SI1.10 | For smaller developments will there be reasonable access to a mix of facilities including local shopping, services, community, health, recreational, leisure, entertainment and cultural facilities? | ● | ● |

### SI2: Respond to existing (as well as projected) community needs and current gaps in facilities and/or services

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| SI2.1 | For developments or plans of a larger scale, has a community planning study or social plan been developed that identifies:<br>existing service provision including gaps<br>characteristics and likely needs of the future population<br>translation of projected population needs into facility/service requirements<br>identification of facility requirements<br>possible locations and facility models? | ● | |
| SI2.2 | Have facilities been planned to recognise and complement wider, district needs as well as the needs of the immediate resident population (may not be appropriate in every case)? | ● | |

### SI3: Provide for early delivery of social infrastructure

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| SI3.1 | Are mechanisms in place to ensure early provision of social infrastructure? Do these mechanisms include funding strategies to ensure that social infrastructure is available from the earliest possible stages of planned use and/or settlement? | ● | ● |
| SI3.2 | **URBAN FORM**<br>Has land been dedicated for the provision of social infrastructure? Is this land centrally located and easily accessible? | ● | ● |

## SI4: Promote an integrated approach to social infrastructure planning

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| SI4.1 | For larger developments or regional plans or strategies, have the full range of social infrastructure providers and human service agencies been involved in a joint planning process to consider an integrated approach to social infrastructure and human service delivery? | ● | |
| SI4.2 | For larger developments or regional plans or strategies, is there a coordinating mechanism and/or agency that is responsible for a coordinated approach to planning for social infrastructure? | ● | |
| SI4.3 | Are mechanisms in place to ensure that local community members, service providers, delivery agencies and other stakeholders will have an opportunity to participate in planning and designing social infrastructure? | ● | |
| SI4.4 | Have schools, child care and other key social infrastructure been planned to encourage active transport and reduce private car use? | ● | ● |
| SI4.5 | Has social infrastructure been planned to consider needs of, and encourage use by, both new and existing communities? | ● | ● |
| SI4.6 | Is key social infrastructure planned to be part of community hubs and to create focal points for community activity? | ● | ● |
| SI4.7 | **URBAN FORM**<br>Has the planning and design of social infrastructure been integrated with the physical/master plan? | ● | ● |
| SI4.8 | Are the sites centrally located, co-located with other activity generators like shops and linked with public space? | | ● |
| SI4.9 | Are social infrastructure sites well linked with proposed public transport routes? | | ● |

### SI5: Maximise efficiencies in social infrastructure planning and provision

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| SI5.1 | Where appropriate, are facilities planned to be multipurpose – to enable a range of different user groups to use the facility for different purposes? | ● | ● |
| SI5.2 | Is social infrastructure planned to be shared, jointly used and available for maximum community access? For example, is there a process in place for discussions with local government and educational agencies regarding shared use of school facilities? | ● | ● |
| SI5.3 | **URBAN FORM**<br>Are key facilities co-located/clustered? | ● | ● |

## 14.3 Further information

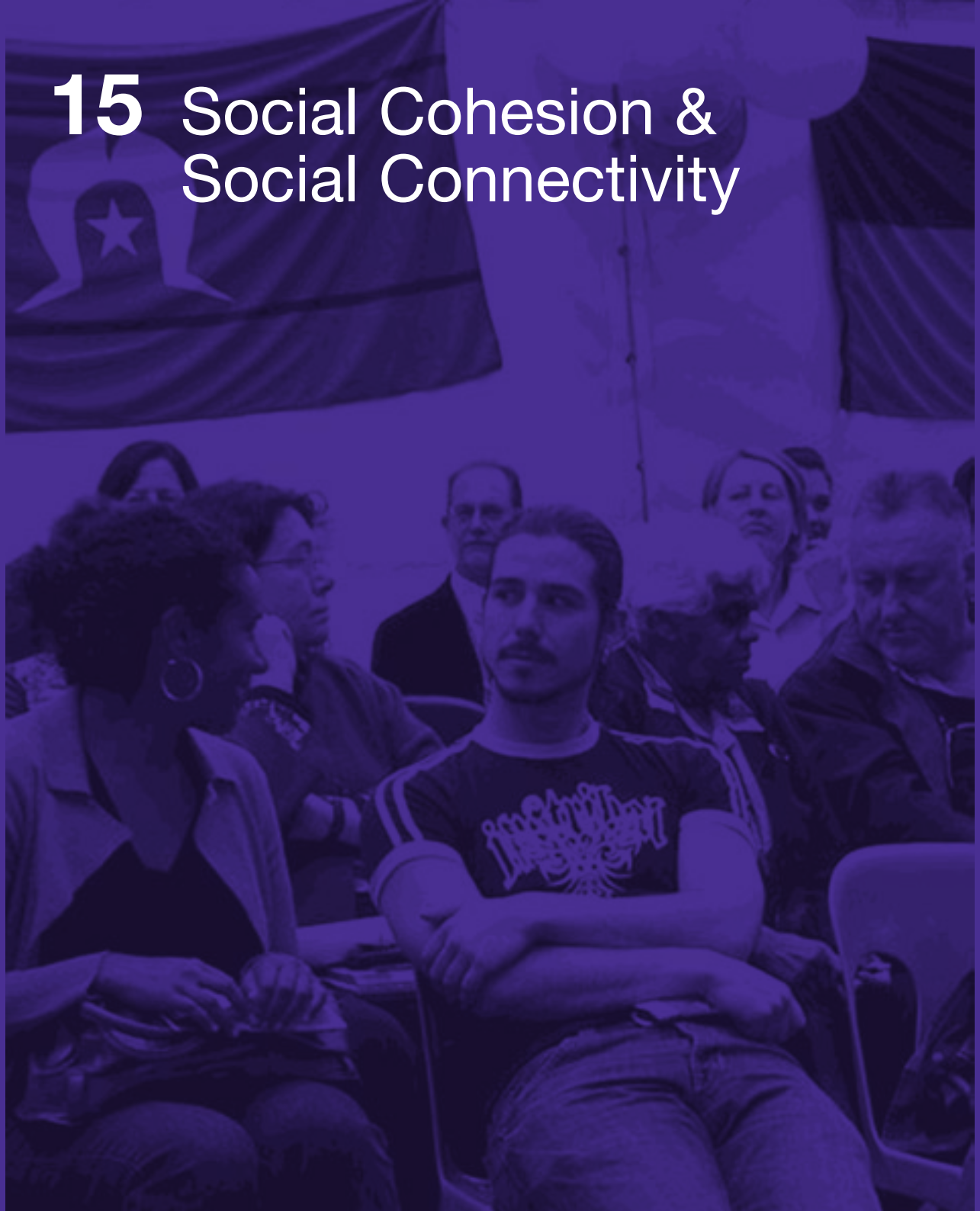
Landcom – *Community Centre Guidelines*
www.landcom.com.au/whats-new/publications-reports/the-landcom-guidelines.aspx

Queensland Government – *SEQ Regional Plan 2005 -2026 Implementation Guideline No 5: Social Infrastructure Planning*
www.sgsep.com.au/social-infrastructure-guideline-wins-national-award-may-2008

University of Queensland – *Establishing Standards for Social Infrastructure*
www.uq.edu.au/boilerhouse/docs/establishing%20standards%20web.pdf

NHS London Healthy Urban Development Unit (HUDU) – *Social Infrastructure*
www.healthyurbandevelopment.nhs.uk/pages/int_social_infra/integrating_social_infrastructure.html

# 15 Social Cohesion & Social Connectivity



# 15 Social Cohesion and Social Connectivity

## 15.1 Introduction

Urban planning alone cannot create cohesive local communities with strong social networks and high levels of community involvement. However, social cohesion can be facilitated and encouraged by some aspects of the built environment, such as attractive places where people can meet and gather. At the same time, social cohesion can be undermined by some forms of development, such as housing projects that segregate disadvantaged groups, or transport corridors that sever community links or create barriers to connectivity.

Elements of social cohesion that are related to the planning of the built environment include[197]:

Social contact and interaction among neighbours

Supportive social networks within the neighbourhood

A strong sense of community, and feelings of belonging and attachment to place

Participation in decision-making and involvement in neighbourhood activities and community organisations

Fair and equitable access to resources

Absence of social conflict, and perceptions of safety and security

Avoidance of social exclusion, segregation or division.

Social interaction can occur in formal and informal, structured and unstructured ways. Unstructured and informal ways include casual encounters with neighbours, people in parks or cafes, while out shopping or walking the dog. More structured forms of social interaction include participation in community activities, voluntary groups and civic organisations, such as playgroups or sports clubs.

While direct relationships between the urban environment and social connectedness can be difficult to establish, a number of key associations have been found in the literature.

197 Dempsey N. Does quality of the built environment affect social cohesion? Urban Design and Planning 2008; 161(3): 105-14. Dekker KK, Bolt G. Social Cohesion in heterogeneous neighbourhoods in the Netherlands: the cases of Bouwlust and Hoograven. Paper from the City Futures Conference. Chicago; 2004. http://www.eukn.org/binaries/eukn/eukn/research/2006/3/1_eukove004-pdf-uic6-uz-060320.pdf

These include[198]:

Designing walkable neighbourhoods – walking to and from local destinations creates opportunities for informal contact and casual encounters with other local residents.

Providing accessible community facilities and attractive public spaces that create opportunities for people to meet and connect with one another or participate in community events.

Proximity to employment, as long commute times between home and employment mean people have less time and energy for participation in social networks and community activities.

Geographically adjacent development patterns enable new residents to link with existing communities through using established facilities and services such as shops, cafes, neighbourhood centres, schools, libraries, sporting facilities and clubs. Geographically dispersed (leapfrog) development creates physical and social barriers with existing communities and is associated with a weakened sense of community.

Dissecting communities with busy arterial roads, railway lines or other substantial barriers can sever community networks and access to facilities.

Opportunities for social interaction and involvement in neighbourhood activities help to strengthen neighbourhood ties and build social support networks and a sense of belonging and attachment to the local area. Providing civic facilities and public spaces is also important in fostering a sense of community and local identity. Community identity can be further enhanced by designing neighbourhoods and buildings with distinctive and attractive character, often incorporating public art or design elements that reflect local cultural values.

The opportunity to participate in civic life has been identified as a core human need, and essential to the psychological health of individuals and communities[199]. Participation may be influenced by the geographic and built characteristics of a particular district, place or space, a community's demographic profile and its social and neighbourhood networks. Participation in the decisions that shape people's surroundings and affect their lives is an integral component of their being sufficiently empowered to have some influence, and is part of promoting healthier built environments.

In encouraging socially cohesive communities, an important consideration is the impact of housing markets and land use policies on different socio-economic groups and the extent to which the proposed development may exacerbate socio-economic divisions or promote social inclusion. Socio-economically divided communities

198 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report: 30. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

199 Butterworth I. The relationship between the built environment and wellbeing: a literature review. Prepared for the Victorian Health Promotion Foundation. Melbourne; 2000. www.vichealth.vic.gov.au/~/media/ProgramsandProjects/PlanningHealthyEnvironments/Attachments/built_environment

that concentrate low income or other disadvantaged groups are undesirable in that they entrench existing disadvantage, limiting people's opportunities and access to resources, resulting in stigma and segregation, and placing an unfair burden on particular schools, health and social services. New development presents opportunities to create communities where people have a range of incomes, backgrounds and demographic characteristics, and where concentration of social disadvantage or isolation of vulnerable groups is minimised. Providing fair and equitable access to the community's resources is a further way of promoting inclusive and harmonious development.

Related chapters of the checklist look more specifically at social infrastructure, public space, physical activity, employment and housing.

### 15.1.1 Relevance to NSW

Research shows that the social connectedness of individuals is related to lower mortality rates, lower rates of disease, better mental health and better self-rated health. More specific associations between social connectedness and health and well-being reported in the literature include[200]:

Faster recovery from illness

Better recovery from serious illness

Lower rates of chronic illness

Lower suicide rates

Lower rates of depression and anxiety

Lower levels of stress related problems

Less binge drinking

Less violent crime.

While it is not clear how urban environments influence mental health, it seems that contact with other people avoids the damaging impacts of isolation and loneliness on human mental and physical health. Social connections also benefit health by ensuring help in a crisis, general social support and practical assistance. Socially cohesive communities also tend to support healthy behaviours and provide a sense of belonging and sense of community. Attachment to place has a significant association with mental health, for feelings of disconnection have been associated with mental illness, and the experience of dispossession or loss of place can have significant psychological impacts[201].

200 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report: 30. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

201 Land Use Consultants in association with the Centre for Research into Environment and Health (2007). Delivering Healthier Communities In London. London; London Healthy Urban Development Unit: 2007. http://www.healthyurbandevelopment.nhs.uk/documents/integrating_health/HUDU_Delivering_Healthier_Communities.pdf

Research has also established clear links between social disadvantage and health outcomes[202]. People of lower socio-economic status suffer higher rates of physical disease, mental illness, injury and premature death, and have a higher prevalence of health damaging behaviours and obesity. Clear links have been established between disadvantaged urban environments and poor health and mental health outcomes. Where socially disadvantaged groups are concentrated in disadvantaged neighbourhoods, these health outcomes are exacerbated by barriers to accessing the conditions that support health and well-being, such as access to education, employment, health and social services, affordable housing and transport[203].

### 15.1.2 Key evidence and leading practice

Research indicates that sense of community has significant positive impacts on a range of outcomes for individuals and groups, and that lack of connections, identity and supports can lead to less positive health outcomes[204]. It reports that social epidemiologists have demonstrated that community connections, networks, and social cohesion play a significant role in the health, well-being, and mental health outcomes of a variety of populations and subgroups, including links with cardiovascular health, mental health, depression and rates of mortality and morbidity. "Sense of community can provide people with a buffer in times of stress, ill-health and uncertainty. Without meaningful social contact and positive social cohesion, both the individual and the group can flounder". The study also reports on research that has demonstrated that physical characteristics of the built environment can facilitate the development of sense of community, through design that fosters social contact between neighbours.

Research has identified several major influences on mental health, including social connectedness, freedom from discrimination and violence and economic participation[205]. It sees the presence of diverse, inclusive and tolerant communities as essential for fostering mental health. Social connectedness is promoted by fostering access to social networks, supportive environments and a variety of social and physical activities.

202 See footnote 199

203 Berry H. 'Crowded suburbs' and 'killer cities': a brief review of the relationship between urban environments and mental health. NSW Public Health Bulletin 2007; 18(11-12): 222-7. http://www.publish.csiro.au/?act=view_file&file_id=NB07024.pdf

204 Pretty G, Bishop B, Fisher A, Sonn C. Psychological sense of community and its relevance to well-being and everyday life in Australia. Melbourne: The Australian Psychological Society Ltd; 2006. http://www.groups.psychology.org.au/Assets/Files/Community-Updated-Sept061.pdf

205 Butterworth I. The relationship between the built environment and wellbeing: a literature review. Prepared for the Victorian Health Promotion Foundation. Melbourne: 2000. http://www.hiaconnect.edu.au/files/Built_Environment_&_Wellbeing.pdf

In a study examining the relationship between the built environment and social cohesion, a positive relationship has been found between sense of community / attachment to place and perceptions of the attractiveness, quality and character of the built environment. This study also established a positive relationship between levels of neighbourhood social interaction and providing a well maintained and accessible public domain that provided high levels of natural surveillance and security[206].

Links between development that encourages walking and high levels of neighbourhood social interaction and sense of community have also been demonstrated in recent Queensland research[207]. Those living in mixed use walkable neighbourhoods were also found to have higher levels of social capital in a study in Ireland[208].

Research has identified links between different forms of development and social cohesion. It has been found that there is more social capital in mixed-use communities than in single land use communities[209] and there is a greater sense of community in the traditional neighbourhood than in the modern suburb[210]. The most powerful explanatory variable was "perception of walking" – the better that people felt about walking in the neighbourhood, the higher their sense of community.

Research indicates that physical change in communities such as a new freeway or a rail line has a significant effect on the social fabric of a community[211].

Research has shown getting out and meeting people and establishing social contacts reduces the risk of stroke and depression and can help people live longer and be healthier physically and mentally[212].

206 Dempsey N. Does quality of the built environment affect social cohesion? Urban Design and Planning 2008; 161(3): 105-14.

207 Rosenblatt T, Cheshire L, Lawrence G. Social Interaction and Sense of Community in a Master Planned Community. Housing, Theory and Society 2009; 26(2): 122-42.

208 Sustainable Development Coalition. Health, place and nature. How outdoor environments influence health and well-being: a knowledge base. London: Sustainable Development Coalition; 2008. www.sd-commission.org.uk/publications/downloads/Outdoor_environments_and_health.pdf

209 Nasar J. The Psychological Sense of Community in the Neighbourhood. Journal of the American Planning Association 1995; 61(2): 178-84.

210 Lund H. Pedestrian Environments and Sense of Community. Journal of Planning Education and Research 2002; 21(3): 301-12.

211 Ellickson R, Been V. Land Use Controls and Materials. 3rd Ed. New York: Aspen; 2005.

212 Sustainable Development Coalition. Health, place and nature. How outdoor environments influence health and well-being: a knowledge base. London: Sustainable Development Coalition; 2008. www.sd-commission.org.uk/publications/downloads/Outdoor_environments_and_health.pdf

Living in areas of concentrated social disadvantage results in physical and psychological deprivation, poor access to facilities and opportunities, higher disease rates and premature death. Mixed income neighbourhoods are linked to health benefits for disadvantaged groups[213]. A Canadian study found in neighbourhoods of mixed income, the less affluent residents had better health and quality of life compared to those of similar income living in neighbourhoods with a concentration of less affluent people[214].

Several studies have found an association between characteristics of neighbourhoods and the built environment and mental health and depression[215]. In a London study people living in disadvantaged neighbourhoods were more likely to report depression than peers living in less disadvantaged areas (identified in terms of substandard housing, crime, noise, poor amenity, and poor access to services and opportunities)[216]. Neighbourhood features such as lack of resources, disorder and violence, inadequate housing and lack of green space may function as stressors, while other physical features affect social connections and levels of social support experienced by residents. Social support may in turn affect residents' vulnerability to stress and depressive symptoms[217].

Sense of community has been found to be enhanced by urban planning that encourages visually diverse and attractive buildings, sufficient privacy, easy access to amenities and to town or neighbourhood centres, pedestrian friendly spaces, and streetscapes with houses that have views of the surrounding neighbourhood, open verandas and low fences in order to encourage social interaction[218].

In new developments where everyone is a stranger, it can take some time for social networks to develop and for community activities and organisations to be established. Leading practice recognises the need to stimulate and support "community building" in new neighbourhoods, by providing resources for community development workers and community development programs, in addition to providing facilities and public spaces for social interaction and community activities. Community development programs commonly provide welcome initiatives for new residents, set up community activities and support groups, establish local organisations and support community events that draw a range

213 Dekker K, Bolt G. Social cohesion in heterogeneous neighbourhoods in the Netherlands: the cases of Bouwlust and Hoograven. Paper from the City Futures Conference. Chicago; 2004. http://www.eukn.org/binaries/eukn/eukn/research/2006/3/1_eukove004-pdf-uic6-uz-060320.pdf

214 See footnote 210

215 Mair C, Diez Roux AV, Galea S. Are Neighbourhood Characteristics Associated with Depressive Symptoms? A review of evidence. Journal of Epidemiology and Community Health 2008; 62 (11): 940-6.

216 Berry H. 'Crowded suburbs' and 'killer cities': a brief review of the relationship between urban environments and mental health. NSW Public Health Bulletin 2007; 18(11-12): 222-7. http://www.publish.csiro.au/?act=view_file&file_id=NB07024.pdf

217 See footnote 216

218 Dempsey N. Does quality of the built environment affect social cohesion? Urban Design and Planning 2008; 161(3): 105-14.

of people together. Resources for community development may be provided by developers, local councils or government funding programs.

A fundamental principle of healthy communities is that residents have an opportunity to participate in decision-making, and to influence the planning and development of their community. Applying this principle means setting up mechanisms not only for new residents of the development to become involved, but also providing opportunities for the broader community to participate in the planning process. Community engagement processes may include public consultation at key milestones in the preparation of the planning proposal or policy, involvement in the design of important community resources such as community centres or parks, involvement in the creation of the public domain, such as tree planting, and involvement in running community events and organisations.

Creating a sense of place and identity for a new community that promotes civic pride and sense of belonging can be enhanced by cultural development and place-making initiatives, discussed in chapter 13 on public open space. Cultural development strategies can be an important tool for community participation and engagement.

The location of community services and facilities in ways that provide equitable access to all users and benefit a wide area, rather than just a local development, can promote integration with surrounding communities and enhance inclusion and social cohesion. Social integration and inclusion may be a challenge for Community Title developments if they do not allow public access through the site or to key facilities.

To minimise concentrations of disadvantaged groups, to promote more equitable access to resources and to enable essential service workers to live close to work, increasing the supply of housing which is affordable for low and moderate income households in areas with good access to employment, education and services is an important priority. Leading practice aims to increase the stock of affordable housing in new developments to help ensure communities contain some social mix. Current common practice in NSW is for 10-15% of dwellings in large new developments to be "affordable housing", including social (public and community) housing, affordable rental housing and housing for purchase by low and moderate income households.

Key references including relevant standards and guidelines are included in the *Further information* section at the end of this chapter.

### 15.1.3 Key questions

How does the policy, plan or development proposal:

(SC1) Provide environments that will encourage social interaction and connection amongst people?

(SC2) Promote a sense of community and attachment to place?

(SC3) Encourage local involvement in planning and community life?

(SC4) Minimise social disadvantage and promote equitable access to resources?

(SC5) Avoid community severance, division or dislocation?

## 15.2 Social cohesion and social connectivity checklist questions

### SC1: Provide environments that will encourage social interaction and connection amongst people

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| SC1.1 | Does the policy, plan or proposal promote the creation of active mixed use centres or hubs that will provide a focal point for community interaction and identity (e.g. co-location of retail, commercial, civic and community uses)? | ● | ● |
| SC1.2 | Does the policy, plan or proposal promote the creation of small scale neighbourhoods that facilitate social interaction and local identity? | ● | ● |
| SC1.3 | Are arrangements in place for the timely provision of key community facilities that build social networks and support services, such as a community centre and primary school? (see chapter 14 on social infrastructure) | ● | ● |
| SC1.4 | Will the policy, plan or proposal provide venues for community and cultural events and activities that are conveniently located, accessible and easily reached by public transport? (refer to chapter 14 on social infrastructure) | ● | ● |

## SC1 continued

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| SC1.5 | Are attractive public spaces provided where people can meet, gather and socialise informally, such as parks with playgrounds or barbecue areas, plazas, cafes? (see chapter 13 on public space) | ● | ● |
| SC1.6 | Are shopping centres designed and placed to provide opportunities for social interaction and maximize neighbourhood activity? | ● | ● |
| SC1.7 | Does the policy, plan or proposal encourage walking, through neighbourhood design and location of key destinations? (see chapter 8 on physical activity and chapter 10 on transport and connectivity) | ● | ● |
| SC1.8 | Are resources provided for community development strategies that will initiate community activities and events and develop social support groups and community organisations? | ● | ● |
| SC1.9 | **URBAN FORM**<br>Are communal areas provided within large housing developments? | | ● |
| SC1.10 | Does the policy, plan or proposal provide for local employment options to enable people to work in their local communities and so minimise commuting times? (see chapter 11 on access to employment) | | ● |

### SC2: Promote a sense of community and attachment to place

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| SC2.1 | Does the policy, plan or proposal promote neighbourhoods and/or buildings with distinctive character that are likely to be perceived as attractive, quality development? (see chapter 13 on public space) | ● | ● |
| SC2.2 | Does the policy, plan or proposal recognise and build on the site's natural and cultural heritage? (see chapter 13 on public space) | ● | ● |
| SC2.3 | Are public art or design features proposed that will encourage a sense of place? (see chapter 13 on public space) | ● | |
| SC2.4 | Is support provided for community or cultural development initiatives that will encourage a sense of belonging (such as a welcome program for new residents)? | ● | ● |

### SC3: Encourage local involvement in planning and community life

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| SC3.1 | Have local communities been consulted about the policy, plan or proposal? | ● | ● |
| SC3.2 | Are there opportunities for community involvement in the implementation of the plan or delivery of the strategy (such as through community cultural development processes, involvement in design of public spaces)? | ● | ● |
| SC3.3 | Does the policy, plan or proposal encourage opportunities for local involvement in community and civic life? | ● | ● |
| SC3.4 | Has provision been made for community based projects such as community gardens or community involvement in running local services? | ● | ● |

## SC4: Minimise social disadvantage and promote equitable access to resources

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| SC4.1 | Does the policy, plan or proposal provide opportunities for improving levels of health equity within the area? Are existing health inequalities likely to be reduced? (refer to the 'understanding the community' section in chapter 6) | ● | |
| SC4.2 | Does the policy, plan or proposal exacerbate socio-economic divisions and is it likely to result in concentrations of socio-economically disadvantaged people? | ● | ● |
| SC4.3 | Is social mix encouraged through housing diversity? (Refer to chapter 9 on housing) Does the plan or policy encourage inclusion and integration of a wide range of local demographic groups (e.g. lower socio-economic groups, culturally and linguistically diverse communities and Aboriginal and Torres Strait Islanders)? | ● | ● |
| SC4.4 | Do vulnerable and disadvantaged groups (such as low income households, single parent families, unemployed people, recently arrived immigrants and refugees, Aboriginal and Torres Strait Islanders, people with a disability, older people) have fair and equitable access to services and facilities, employment opportunities and transport? | ● | ● |

## SC5: Avoid community severance, division or dislocation

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| SC5.1 | Are vulnerable or disadvantaged groups likely to be displaced or disadvantaged by the plan or proposal? If so, what strategies are proposed to minimise impacts and support individuals and groups? | ● | ● |
| SC5.2 | **URBAN FORM**<br>Does the policy, plan or proposal promote physical integration with adjacent areas and existing development (through road connections, layout, open space network)? | | ● |

SC5 continued

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| SC5.3 | Are there any physical structures such as main roads, rail lines or industrial estates that will create barriers to movement and sever connectivity between communities? | ● | ● |
| SC5.4 | Does the policy, plan or proposal encourage social integration across communities, for instance through provision of community facilities that can also benefit adjacent areas? | ● | ● |

## 15.3 Further information

PCAL – *Building Stronger Communities through Physical Activity: A Practitioner's Resource*
www.pcal.nsw.gov.au/__data/assets/pdf_file/0016/32317/Building_stronger_communities_through_physical_activity_a_practitioners_resource.pdf

PCAL – *Community Development Guidelines*
www.pcal.nsw.gov.au/community_development_guidelines

Landcom – *Social Sustainability Policy*
www.ncoss.org.au/bookshelf/housing/Anna-Petersen-Landcom-Presentation.pdf

CommunityBuilders NSW
www.communitybuilders.nsw.gov.au

VicHealth – *Social Connections*
www.vichealth.vic.gov.au/en/Programs-and-Projects/Mental-Health-and-Wellbeing/Social-Connection.aspx

Social Connections Complete Health Picture
www.cfah.org/hbns/news/social04-29-04.cfm

Road to Well-Being: City of Social Connection
www.roadtowellbeing.ca/connection.html

CommunityNet
www.cnet.ngo.net.au

# 16 Environment & Health

# 16 Environment and Health

## 16.1 Introduction

Health is inextricably linked to the quality and form of the environment where we live. Our health depends on the quality of our environment (natural, built, social and cultural)[219]. For people to be healthy, the environment should be health enhancing and provide opportunities to live a healthy life. Urban planning and development affects environmental health and has the capacity to increase the liveability of urban environments or damage the environment and our health. To improve health and reduce health inequalities, it is vital to ensure that the natural environment is protected and managed and that communities are built and maintained to be sustainable. The urban planning and development process, as well as a number of other processes, has a role to play in creating healthy and sustainable communities.

Direct health impacts of unhealthy environments include the link between urban air quality and respiratory problems, as well as the effects of water pollution on human health. Pollution of the environment (whether it be air, water, noise or odour) can have significant health impacts, including on mental health.

NSW Health defines 'environmental health' as "the interaction between the environment and the health of populations of people" and "those aspects of human health determined by physical, biological, and social

factors in the environment"[220]. Among the issues that fall within the broad banner of environmental health are air quality, safe drinking water, recreational use of water, noise, odour, light and microbial control, and the management and avoidance of pests.

It is important to note that many of the issues that fall under the banner of 'environmental health' are already covered under existing legislation, regulations or policies. It is, therefore, not necessary for these issues to be covered in depth by this checklist. Examples of relevant legislation, regulations or policies include:

219 Moodie R. Introductory comments – from the CEO. VicHealth letter 2006; 26: 3. http://www.vichealth.vic.gov.au/~/media/ResourceCentre/PublicationsandResources/Letter/VicHealthLetter%2026.ashx

220 NSW Department of Health. Environmental Health. http://www.health.nsw.gov.au/publichealth/environment/index.asp

The Protection of the Environment Operations Act 1997[221] (POEO) is the key environmental protection legislation in NSW and allows for "explicit protection of the environment" and the adoption of innovative approaches to the reduction of pollution. POEO regulates water, air and noise pollution in NSW with responsibility for implementation shared between local government and the Environment Protection Authority (EPA).

The NSW Government's Building Sustainability Index (BASIX)[222] is a measure which looks at improving the energy efficiency of buildings and aims for a 40% reduction in energy use and potable water consumption.

Water Sensitive Urban Design (WSUD) is a planning and engineering approach which focuses on minimising the impacts of development on the natural water cycle by protecting natural systems and water quality, integrating stormwater into the landscape, and reducing run off, peak flows and demand for potable water.

Issues such as reducing energy use and reducing impacts of development on the water cycle are obviously major environmental issues to be considered within the planning and development process. While they have a relationship to health, they are covered extensively by other policies and jurisdictions, so are not covered in depth by this checklist. Tools such as POEO, BASIX and WSUD are important when considering environmental effects and should be referred to by the relevant agencies or organisations in the provision of advice or assessment of urban development policies, plans and proposals.

This chapter of the checklist focuses on urban development factors that can influence environment and health. Key among these are air quality, water quality, pollution in the form of noise, odour and light and pest management. Other important issues where health (including safety) and the environment interact include the consideration of the potential for hazards (both natural and man made) and how they can be avoided.

Other chapters of the checklist explore in greater detail related dimensions of health and urban development that impact on, and are affected by, the environment. These include transport, public space, access to healthy food, physical activity and housing.

### 16.1.1 Relevance to NSW

Within Sydney the main sources of air pollution are industrial emissions, motor vehicle emissions, domestic wood burning, coal burning for electricity generation and burning of native vegetation (either from bushfires or hazard reduction burns)[223].

221 NSW Department of Environment, Climate Change and Water. Protection of the Environment Operation Act 1997. http://www.environment.nsw.gov.au/legislation/aboutpoeo.htm

222 NSW Department of Planning. Building Sustainability Index. http://www.basix.nsw.gov.au/information/index.jsp

223 Western Sydney Regional Organisation of Councils Ltd (WSROC) and Anni Gethin (AGA Consulting P/L). Greater Western Sydney Urban Development Health Impact Assessment: Final Report: 50. Western Sydney Regional Organisation of Councils Ltd; 2007. http://www.wsroc.com.au/page.aspx?pid=287&vid=5

The air pollutants of most concern to health are particulate matter (PM), carbon monoxide, oxides of nitrogen, ozone, and sulphur dioxide, which exacerbate existing respiratory and cardiovascular conditions and can cause infection and general irritation[224].

In Sydney, ozone is the key pollutant of concern during summer months. Ozone standards are exceeded most commonly in southwest and western Sydney, with emissions from throughout the Sydney region contributing. In the winter, particle pollution is of greatest concern[225].

Drinking water and water that comes into contact with people should be safe to use. Access to good quality drinking water is fundamental to good health. The most common health risk associated with drinking water is contamination by disease causing microorganisms from human or animal excreta. Unsewered villages have been identified by Sydney Water as major risks for faecal contamination from septic tanks[226].

Two of the biggest concerns with water borne disease in NSW, and many other places are, Cryptosporidium and Giardia. Cryptosporidium is a parasite that causes Cryptosporidiosis, with symptoms including severe diarrhoea, dehydration, weight loss, fever and vomiting. Giardia is a parasite that can live in the human bowel and causes a form of gastroenteritis.

Noise pollution can be defined as unwanted noise that unreasonably intrudes on daily activities. There are many sources of noise pollution including road, rail and air transport, industrial noise, neighbourhood and recreational noise[227]. Noise can be a serious annoyance. It can interfere with communication, disrupt sleep and interrupt work. Prolonged exposure to noise can result in increased heart rate, anxiety, hearing loss and other health effects[228].

Like noise, odour can negatively impact on quality of life and health and needs to be considered in planning. The latest published NSW State of the Environment Report 2006, shows that odour complaints are the highest source of complaints to the Department of Environment and Climate Change[229]. The majority of complaints received in NSW are from areas on the urban-rural interface and from regional centres across the state.

Odour impacts often arise from inappropriate land use decisions that allow residential areas to grow around established rural odour-generating activities, or in

224 Air Pollution Economics: Health Costs of Air Pollution In The Greater Sydney Metropolitan Region. Sydney: NSW Department of Environment and Conservation; 2005.

225 Department of Infrastructure, Planning and Natural Resources (DIPNR). Regional Air Quality and Greenhouse Issues Affecting Development of North West And South West Sectors. www.metrostrategy.nsw.gov.au/uploads/Air_Quality_Summary_Report_NW&SW.pdf

226 Sydney Water. Five-Year Water Quality Management Plan 2005-2010. Sydney: Sydney Water; 2005. http://www.sydneywater.com.au/Publications/PlansStrategies/FiveYearDrinkingWaterQualityManagementPlan20052010.pdf#Page=1

227 NSW Department of Environment, Climate Change and Water. State of the Environment Report 2006. Sydney: NSW Department of Environment and Conservation; 2006. www.environment.nsw.gov.au/soe/index.htm

228 NSW Department of Environment, Climate Change and Water. Noise. www.environment.nsw.gov.au/noise

229 NSW Department of Environment, Climate Change and Water. State of the Environment Report 2006. Sydney: NSW Department of Environment and Conservation; 2006. www.environment.nsw.gov.au/soe/index.htm

the reverse, that allow odour generating uses to be established near existing residential areas. The NSW State of the Environment Report 2006 identifies the following as potentially odour-generating uses: abattoirs, piggeries, cattle feedlots, poultry farms, sewage treatment plants, landfills, charcoal chicken shops and smash repairers[230]. The Report adds: "Noise and/or odour problems can often be prevented or minimised by avoiding the location of sensitive land uses, such as residential areas, schools, hospitals, nursing homes or places of worship, near noisy or odour-generating premises. Land use planning processes and careful site selection play critical roles in avoiding conflict between neighbouring land uses. In cases where inappropriate land use decisions have caused noise or odour in residential and other sensitive areas, it is often difficult to find an agreeable compromise between the residents' rights to amenity and industries' pre-existing rights to operate under planning laws"[231].

As the pressure for greater land supply to meet projected population growth and to address concerns about housing affordability in NSW increases, both greenfield and urban renewal sites are being investigated for their potential as development sites. Most of the best situated and unconstrained land has already been developed. Much of what remains is land that is either formerly rural (in the case of many greenfield development sites), formerly used for industrial purposes (in the case of many renewal sites in more urban areas) or is currently lower density residential that has the potential to be redeveloped. The Sydney Metropolitan Strategy promotes infill development in existing lower density suburbs especially in locations with good access to public transport. All scenarios, and particularly the first two, create a need to carefully consider environmental health. Greenfield sites may require considerable buffering and physical separation from existing uses that may generate noise and odour, for example. They may also be considerable distances from employment and services and lack public transport which means air quality may be worsened by creating a new car dependent population in the area. Brownfield sites need to consider the health consequences of introducing a residential population into an area where industrial type uses not only once existed (creating a need to consider contamination), but also may continue to exist as neighbours, with their associated noise, odour and other impacts.

### 16.1.2 Key evidence and leading practice

The health effects caused by air pollutants may range from subtle biochemical and physiological changes to difficulty in breathing, wheezing, coughing and aggravation of existing respiratory and cardiac conditions[232].

230 See footnote 227

231 NSW Department of Environment, Climate Change and Water. State of the Environment Report 2006. Sydney: NSW Department of Environment and Conservation; 2006. www.environment.nsw.gov.au/soe/index.htm

232 World Health Organization. Air Quality and Health Effects. www.who.int/mediacentre/factsheets/fs313/en/index.html

Research suggests that air pollution is responsible for 2.3% of all deaths in Australia. In the Greater Sydney Metropolitan area it is estimated that between 640 and 1400 people die prematurely and almost 2000 people a year are hospitalised as a result of air pollution[233].

Ozone is one of the major constituents of photochemical smog. It is formed by the photochemical reaction of sunlight with pollutants such as nitrogen oxides (NOx) from vehicle and industry emissions and volatile organic compounds (VOCs) emitted by vehicles, solvents and industry. The highest levels of ozone pollution occur during periods of sunny weather. Excessive ozone in the air can have a marked effect on human health. It can cause breathing problems, trigger asthma, reduce lung function and cause lung diseases[234].

The contamination of recreational waters can result in disease outbreaks and illness in the community. The greatest potential risk is posed by microbial contamination of the waters by bacteria, viruses and algae[235]. In addition, water borne parasites such as Cryptosporidium and Giardia Lamblia, viruses such as Hepatitis A and bacteria such as Shigella can all be transmitted via inadequately disinfected swimming pool water[236].

Noise can be annoying, interfere with speech, disturb sleep or interfere with work. Prolonged exposure to loud noise can also result in increased heart rate, anxiety, hearing loss and other health effects. The impacts of noise depend both on the noise level and its characteristics and how it is perceived by the person affected[237].

Odours can affect public amenity and the community's quality of life. While undesirable odours do not directly damage health, toxic causes of odour may cause ill health or respiratory problems. Secondary effects may include nausea, insomnia and discomfort[238].

A common practice for reducing conflicts between incompatible land uses is to provide a physical separation or buffer zone between the land uses. Local councils should establish buffer areas for a variety of land uses (including agriculture, industries, public utilities and environmentally sensitive areas) based on state requirements and local conditions[239].

Public lighting is an important contributor to a safe, secure and attractive visual environment for pedestrian and vehicular traffic. However, when

233 NSW Department of Health. Air Pollution. http://www.health.nsw.gov.au/publichealth/environment/air/air_pollution.asp

234 See footnote 227

235 NSW Department of Health. Swimming Pools and Spa Pools.

236 Benenson A. Control of Communicable Diseases Manual (16th Ed). Washington: American Public Health Association; 1995.

237 Wood L. California's Brownfields Initiative: The Toxic Crisis. Berkeley Citizen; 1996. www.berkeleycitizen.org/soil/soil5.html

238 Central Pollution Control Board. Report of expert Committee on Odour Pollution and its Control. Delhi: Ministry of Environment and Forests, Government of India; 2007. www.cpcb.nic.in/latest/draft-odour-report.pdf

239 Lismore City Council. Lismore Development Control Plan. Chapter 11 Buffer Areas. Lismore: Lismore City Council; 2007. www.lismore.nsw.gov.au/cmst/lcc002/view_doc.asp?id=4524&cat=104

poorly placed, lighting can disturb sleep patterns and cast obtrusive light onto residents' properties, spill light to the night sky and cause excessive glare[240].

There are a number of pests, particularly insect pests, active in NSW that can transmit diseases to humans. These include pest diseases caused by parasites that are passed from human to human (such as head lice and scabies) and diseases caught by the bite of an insect, such as Ross River virus and Dengue Fever[241]. Certain species of mosquitoes carry diseases such as Ross River virus, and midges and mosquitoes can cause significant nuisance. The location, design and management of water bodies can influence the level of contact between humans and midges and mosquitoes. Terrestrial vegetation planted around a water body can reduce wind-assisted dispersion of insects, particularly towards lighting[242].

Failing to clean up brownfield sites (contaminated properties – typically former industrial sites) can greatly increase public health risks for surrounding communities. Before a brownfield site can be redeveloped (typically for residential, recreational and/or commercial purposes), it is necessary to establish what the contaminants are on the site and how best to proceed with remediation.

Exposure to ultraviolet radiation (UVR), particularly in the first 18 years of life, can contribute to the development of skin cancers when older[243]. Shade, whether natural or built, can be protective against UVR, although shade only reduces the level of direct exposure to UVR and does not offer 100% protection[244].

Key references including relevant standards and guidelines are included in the *Further information* section at the end of this chapter.

### 16.1.3 Key questions

How does the policy, plan or proposal:

(EH1) Contribute to enhancing air quality?

(EH2) Contribute to enhancing water quality, safety and supply?

(EH3) Minimise disturbance and health effects associated with noise, odour and light pollution?

(EH4) Consider the potential for hazards (both natural and man made) and address their mitigation?

(EH5) Avoid locating urban development in vector catchments?

240 NSW Department of Energy, Utilities and Sustainability. NSW Public Lighting Code. NSW Department of Energy, Utilities and Sustainability; 2006. www.deus.nsw.gov.au/publications/NSW%20Public%20Lighting%20Code%20-%20140KB.pdf

241 NSW Department of Health. Pests. www.health.nsw.gov.au/publichealth/environment/pests.asp

242 Department of Health. Chironomid Midge and Mosquitoes Risk Assessment Guide for Constructed Water Bodies. Perth: Department of Health; 2007. http://www.public.health.wa.gov.au/cproot/1402/2/10233_mosquito.pdf

243 Armstrong B, Kricker A. How Much Melanoma Is Caused By Sun Exposure? Melanoma Research 1993; 3(6): 395-401.

244 Parsons P, Neale R, Wolski P, Green A. The Shady Side of Solar Protection. Medical Journal of Australia 1998; 168(7): 327-30.

## 16.2 Environment and health checklist questions

### EH1: Contribute to enhancing air quality

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| EH1.1 | Is the policy, plan or proposal located in an area that allows for good access and integration with existing or proposed public transport networks, either bus or rail? | ● | ● |
| EH1.2 | Does the policy, plan or proposal include the early provision of public transport infrastructure? | ● | ● |
| EH1.3 | Does the policy, plan or proposal include any strategies for encouraging greater use of public transport? (see chapter 10 on transport and connectivity) | ● | ● |
| EH1.4 | **URBAN FORM**<br>Does the policy, plan or proposal promote non-car based transport by encouraging development to be focused around defined centres that are served by public transport, include areas for both housing and jobs, consider walking catchments of 400-500 metres as a basic neighbourhood unit (so that most people can comfortably walk to a shop, school, park or bus stop), and include a range of services and facilities? (see chapter 10 on transport and connectivity)<br>(NOTE: Not all services and facilities are practical for a small scale development.) | ● | ● |
| EH1.5 | Are public transport, walking and cycling networks integrated into the design of the plan or proposal? (see chapter 10 on transport and connectivity) | ● | ● |
| EH1.6 | Is residential development planned to be buffered or located away from major roads with heavy vehicle traffic? | ● | ● |
| EH1.7 | Are there green spaces to reduce exposure to dust? Is native vegetation being retained in green spaces and buffer zones? | ● | ● |

## EH2: Contribute to enhancing water quality, safety and supply

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| EH2.1 | Are measures in place to prevent the contamination of water and the potential outbreak of parasites such as Giardia and Cryptosporidium? | ● | ● |
| EH2.2 | Does the plan, policy or proposal protect the natural water cycle through the incorporation of water sensitive urban design (WSUD) principles? | ● | ● |
| EH2.3 | Has consideration been given in planning to ways to reduce potable water demand? | ● | ● |
| EH2.4 | Is wastewater treated in a way that protects health (may require input from Environmental Health branch of NSW Health)? | ● | ● |
| EH2.5 | Have the health and safety risks of any recreational water body been considered? | ● | ● |
| EH2.6 | Are there sustainable water management practices in place for any areas of the proposed development that may require watering? | ● | ● |

## EH3: Minimise disturbance and health effects associated with noise, odour and light pollution

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| EH3.1 | Does the plan, policy or proposal demonstrate an awareness of noise, odour and light pollution issues and address these through the location and/or separation of land uses? | ● | ● |
| EH3.2 | If residential activities are being located in established commercial or industrial areas, is there a requirement for the new residential use to insulate itself from noise rather than expect existing commercial uses to comply with acceptable residential noise levels? | ● | |
| EH3.3 | Similarly, if residential activities are being located in established rural use areas, does the residential area introduce appropriate buffers to rural uses and are new residents alerted to any 'right to farm' in the area? (see chapter 7 on healthy food) | ● | |

## EH3 continued

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| EH3.4 | If industrial or other potentially noise, odour or light producing uses are being located adjacent to established residential areas have the appropriate studies been undertaken and have the relevant mitigation measures been introduced to prevent harmful impacts? | ● | |
| EH3.5 | Does the policy, plan or proposal encourage barriers to control or reduce noise (such as insulation and double glazing)? Note that vegetation is not considered an effective noise barrier. | ● | ● |
| EH3.6 | Does the policy, plan or development proposal specify how noise will be managed during construction and operational phases of projects? | ● | ● |
| EH3.7 | Does the plan, policy or proposal indicate compliance with the allowable noise limits for residential locations (often around 45-55 dBA)? | ● | ● |
| EH3.8 | **URBAN FORM**<br>Are noise-sensitive land uses (such as residential activities) separated from commercial areas, industrial uses, rural uses or major infrastructure such as ports or airports? | ● | ● |
| EH3.9 | Are adequate buffer zones provided between residential areas and uses that generate noise, odour and light pollution such as industrial areas, waste management facilities, or aircraft facilities? | ● | ● |
| EH3.10 | For specific noise emitting facilities, are the biggest sources of noise (such as loading bays, doors and windows) orientated to face away from noise sensitive areas? | | ● |
| EH3.11 | Similarly, are noise emitting building devices (such as air conditioning units and industrial fans) orientated away from public and private areas where such noises could be a nuisance (such as parks, beaches or places of work or residence)? | | ● |
| EH3.12 | Are public areas that will be lit at night planned so as to minimise impacts on adjacent uses including residential? | | ● |

**EH4: Consider the potential for hazards (both natural and man made) and address their mitigation**

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| EH4.1 | Has the policy, plan or proposal addressed potential hazards such as flooding and bushfire? Have the relevant legislative requirements and regulations regarding flooding and bushfire prevention been addressed? | ● | ● |
| EH4.2 | Does the plan or policy identify and respond to all the natural and non-natural hazards that may impact on the local community? | ● | |
| EH4.3 | Have evacuation routes and safe marshalling/gathering areas been identified in case of natural disaster or other hazard? | ● | ● |
| EH4.4 | Has site contamination been considered? What studies have been conducted to examine the potential for site contamination? Has the Environmental Health Unit of NSW Health been involved? | ● | ● |
| EH4.5 | Does the plan, policy or development proposal encourage efforts to minimise the health impacts of possible electromagnetic field sources on local residents? Sources include high voltage power lines, some energy sources in light industry and commercial radio towers but not mobile telephone towers. | ● | ● |
| EH4.6 | Are there any features of the policy, plan or proposal that pose a potential threat to environmental sustainability? If so, is there an appropriate management or mitigation plan in place? | ● | ● |

**EH5: Avoid locating urban development in vector catchments**

| Code | Question | Planning Policies and Strategies | Development Proposal |
|---|---|---|---|
| EH5.1 | Has the proposed development site been investigated for pest infestation and application of effective control measures when necessary? | ● | ● |
| EH5.2 | **URBAN FORM**<br>Is residential development appropriately separated from water bodies and other areas that may be potential pest habitats? | | ● |
| EH5.3 | If there is a water body, has there been consideration of health and safety issues including water circulation and native species use as a deterrent for predators? Has run off been controlled? | | ● |

## 16.3 Further Information

NSW Government – Department of Environment and Climate Change (DECC)
www.environment.nsw.gov.au

Australian Government – Department of the Environment, Water, Heritage and the Arts
www.environment.gov.au/about/publications/annual-report/07-08/outcome1-climate-change.html

Air Pollution Economics – *Health Costs of Air Pollution in the Greater Sydney Metropolitan Region*
www.environment.nsw.gov.au/resources/air/airpollution05623.pdf

The NSW State Disaster Plan (Displan)
www.emergency.nsw.gov.au/media/309.pdf

Australian Government – *Your Home Technical Manual*
www.yourhome.gov.au/technical/index.html

Overview of Brownfield Development in Australia
www.infolink.com.au/n/Overview-of-brownfield-redevelopment-in-Australia-n757503

Water Sensitive Urban Design (WSUD) in the Sydney Region
www.wsud.org

Building Sustainability Index (BASIX)
www.basix.nsw.gov.au/information/index.jsp

Green Building Council of Australia (GBCA)
www.gbca.org.au

Energy Australia – *Renewable Resources*
www.renewableenergy.energyaustralia.com.au/reducingemissions.html

NSW Arbovirus Surveillance & Vector Monitoring Program
http://medent.usyd.edu.au/arbovirus

Rodent-Proof Construction
www.extension.org/pages/Rodent-Proof_Construction

NSW Public Lighting Code
www.deus.nsw.gov.au/publications/NSW%20Public%20Lighting%20Code%20-%20140KB.pdf

Sydney Water, *Five Year Water Quality Management Plan 2005-2010*,
www.sydneywater.com.au/publications

NSW Health – *Wastewater and Sewage*
www.health.nsw.gov.au/PublicHealth/environment/water/wastewater.asp

Australian Government – *Drinking Water Guidelines*
www.nhmrc.gov.au/publications/synopses/eh19syn.htm

NSW Health – *Recreational Waters*
www.health.nsw.gov.au/PublicHealth/environment/water/water_spa.asp

WHO – *Electromagnetic Fields*
www.who.int/peh-emf/publications/en/

U. S. Environmental Protection Agency (EPA) – *Climate Change – Health and Environmental Effects*
www.epa.gov/climatechange/effects/health.html

Shaw, R., Colley, M., and Connell, R. (2007), *Climate change adaptation by design: A guide for sustainable communities*, TCPA, London,
http://www.tcpa.org.uk/downloads/20070523_CCA_lowres.pdf

# 17 Specific Contexts

# 17 Specific Contexts

This chapter deals with some of the specific considerations related to each of the three primary development contexts that this checklist is intended to cover. Those development contexts are urban renewal and infill, greenfield development including both conventional suburban and Growth Centres development, and semi rural and rural.

While the checklist itself is intended to be general enough to be applied across a number of different development contexts, there will be a need for some interpretation and analysis depending on what type of development is being proposed and in what setting.

This chapter is intended to provide some additional guidance to assist users understand some of the specific issues that may be encountered in the three development contexts covered.

## 17.1 Urban renewal and infill

Specific issues that may require additional consideration for urban renewal and infill development sites include:

**Private open space** can be more restricted in more urban environments. One of the possible impacts of this is less land available for growing fresh food and vegetables. The presence of community gardens in urban renewal schemes is one measure to help to overcome this.

The lack of private open space can mean less opportunity for physical activity and outdoor play. Consideration should be given to the extent to which available **public spaces, services and facilities** (such as playgrounds, open space, recreation facilities and quality public domain areas) compensate for the lack of private open space.

Amount and availability of **public open space** is a key issue in all development contexts. Traditional standards for the provision of open space are often impractical in more densely populated urban settings where land can be scarce and expensive. Quality of open space, as well as the amount provided, is a key issue. Linkages and accessibility to open space networks for both active and passive recreation are important in urban areas.

**Housing choice and affordability** is a key issue in all development contexts. While urban renewal sites often provide an opportunity for greater numbers of apartments and other smaller dwelling types, some consideration needs to be given to the availability of housing for families and the availability of schools, parks etc. The segregation of families to the larger houses on the fringe and smaller (single occupancy

and no children) households to the smaller dwellings in the more urban areas is not socially sustainable.

Urban renewal sites often provide the potential for greater linkages with the **existing transport network.** Capacity of the existing network requires input from NSW Roads & Traffic Authority, City Rail and others. There may be opportunities for reduced car parking in some locations to encourage greater use of public transport.

Urban renewal sites can also provide the opportunity for greater **access to employment.** Just as in greenfield locations, the diversity of those employment options requires consideration.

The higher density housing forms that are characteristics of urban renewal and infill developments provide both opportunities and challenges from a **community safety** perspective. Higher density housing, when appropriately designed, provides the opportunity for more 'eyes on the street'. Like other areas one of the best ways to promote safety is to encourage use and activity at various times of the day.

**Social infrastructure**, such as a community centre, cultural centre or library, can act as an important anchor and attractor for urban renewal sites. As integration with existing communities is one of the challenges of urban renewal, ensuring that social infrastructure is planned to address the needs of, and is accessible to, the wider community is important.

**Social cohesion and connectivity** issues for urban renewal and infill sites include the importance of integration between new and existing communities. Urban renewal sites can often include a degree of gentrification. Consideration needs to be given to the provision of affordable housing and how existing residents can access and utilise the spaces, facilities and services of the new development.

Key environmental considerations for urban renewal and infill sites include issues related to site **contamination and remediation.**

## 17.2 Greenfield

Specific issues that may require additional consideration for greenfield sites include:

A key issue related to food access is the encroachment of greenfield development on viable **agricultural land.** These decisions are often made at the regional strategy or metropolitan strategy level.

Greenfield locations that do not have sufficient population density to support a wide range of shops and services can sometimes be dominated by food outlets that are less healthy. The predominance of **fast food outlets** is an important health issue, but is difficult to address through the planning system.

While **suburban backyards** can be health promoting, the trend towards increasingly smaller backyards (as a result of smaller lots and bigger houses) may limit the ability of people in greenfield environments to

grow their own food and to have their own private open space for exercise and outdoor play. This trend reinforces the importance of incorporating quality public spaces into new communities.

**Physical activity** can be discouraged in environments where land uses are separated (such as locating housing away from employment areas), where there are poor public transport services and where the environment has not been designed, nor the infrastructure provided, to encourage active transport (walking and cycling). Greenfield development does not have to be defined by these characteristics, but these attributes are still relatively common in suburban, greenfield locations.

Although the approach to housing provision has evolved, providing for a range of housing types and levels of affordability within greenfield areas remains a challenge. As mentioned, to ensure the social sustainability of a city or region as a whole, it is important to ensure that there is a **mix of housing types** to cater for a diversity of households distributed throughout all areas of our cities and regions.

A key challenge for greenfield sites is planning new communities not to be car dependent. Access to public transport in lower density areas where population numbers may not support a service for some time is a real obstacle to encouraging active transport behaviour in newly established greenfield areas. Early provision of **public transport** infrastructure is important to behaviour change but may have to be heavily subsidised initially. The inclusion of local destinations such as shops, schools, employment, recreation and entertainment in greenfield areas is important to containing travel demand and supporting active transport.

Recent trends in greenfield development have seen an emphasis on **master planned communities.** Some concerns have been raised regarding the extent to which some of these master planned communities are integrated with, and connected to, the surrounding, existing communities[245]. One aspect of this is physical connectivity with roads, trails and pathways. Connectivity can also relate to the availability and accessibility of facilities and services. Concerns also relate to social differentiation with new development being of a very different socio-economic, and perhaps cultural, character than the existing communities. This differentiation is exacerbated if the new development is, or is seen to be, created as an enclave that is physically and socially separated from its neighbours. Providing access to facilities and services and planning for inclusive community and cultural events are some ways to overcome some of the negative impacts of this differentiation.

## 17.3 Semi rural and rural

While this tool is recognised as having general applicability to a number of different development contexts, it is recognised that semi-rural and rural areas require some

245 Gwyther G. Paradise planned: Socio-economic differentiation and the master planned community on Sydney's urban fringe. Paper presented at State of Australian Cities Conference. Parramatta; 2003. www.uws.edu.au/download.php?file_id=5140&filename=10.2_FINAL_G.Gwyther.pdf&mimetype=application/pdf

special consideration and evaluation of their unique circumstances. Semi-rural and rural communities generally have less access to: public transport; diverse employment opportunities; social infrastructure; and a wide range of human services such as health care.

Specific issues that may require additional consideration for semi-rural and rural sites include:

The importance of identifying **land for agricultural uses** and to prevent the inappropriate fragmentation of that land. Also important is the identification of unproductive lands and their preferred alternative use.

The need to ensure appropriate **buffering** between rural land and other uses, particularly residential.

Ensuring that land use policies and plans provide sufficient land around existing townships and other settlements to accommodate any future **projected growth.**

Given the importance of issues related to small town viability, there may need to be a greater emphasis on the **economic development** outcomes of land development policies, plans and proposals in semi-rural and rural communities.

Depending on the type of development being proposed, it may not always be practical to recommend the provision of an extensive **footpath network** in semi-rural and rural locations. While footpaths are critical infrastructure for the promotion of active transport and physical activity, they are of limited value if not connected to a broader network and linked to local destinations.

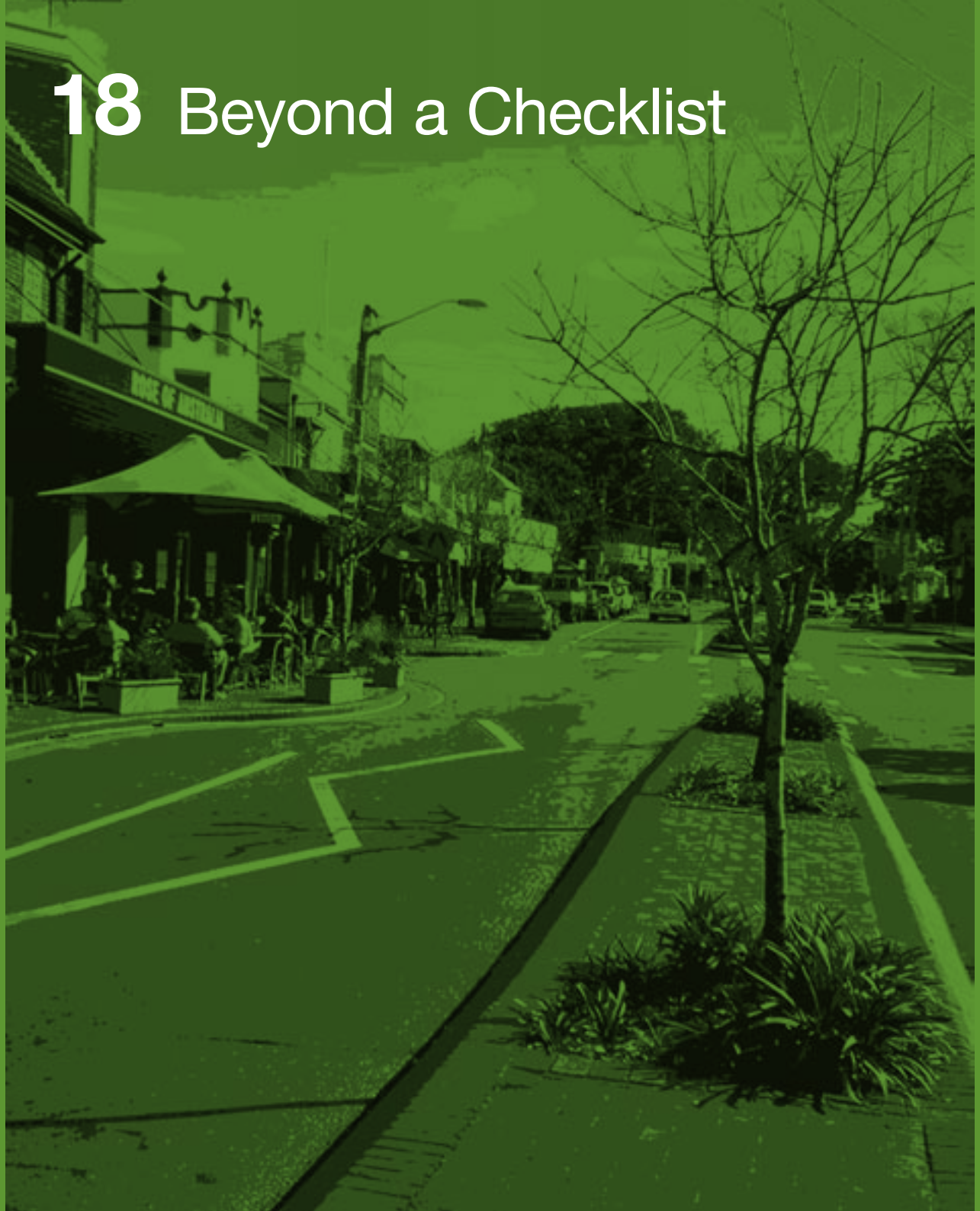
Rural development may be small scale and dispersed in nature. This creates issues related to **isolation and distance from services**. Unless necessary population thresholds are reached, the limited availability of **public transport** is also a common issue.

Remote and isolated semi-rural and rural development is unlikely to be able to address many of the key considerations of this checklist such as public transport, employment and access to community facilities. Some **flexibility** is required in applying this checklist to the more remote and isolated forms of development in semi-rural and rural areas.

The Quick Guide in chapter 6 can be used as an initial filter when considering policies, plans or proposals in semi-rural and rural areas. While some of the key considerations are not applicable, many are still relevant but require some flexibility in their application and need consideration of the context of the policy, plan or proposal.

Given these issues, and the challenges associated with isolated and dispersed development in semi-rural and rural communities, one of the fundamental questions to consider is whether the policy, plan or proposal **encourages growth in existing towns and villages**, and utilises, or builds on, the **existing networks of infrastructure, services, facilities and people.**

# 18 Beyond a Checklist



# 18 Beyond a Checklist

## 18.1 Health and sustainability

There are a number of common elements between health and sustainability. These include consideration of economic, environmental, social and cultural issues, a focus on people, quality of life, concerns about equity and a commitment to public participation.

Sustainability is the dominant paradigm that is influencing contemporary urban planning and development. Health is increasingly being seen as a core component of sustainability and also as a key consideration in urban planning and development.

As part of understanding how this checklist can best be implemented, some consideration may need to be given to the 'positioning' of health. Some questions to consider include:

> Is the planning profession more likely to embrace health issues as they affect urban planning and development if they are seen to be an integral part of the sustainability agenda?
>
> If health is seen as part of the broader sustainability network, is there a risk that it will lose some of its influence or its importance will be somehow diminished? Is there a danger in health issues becoming 'lost' in the broader, and sometimes ill-defined, sustainability debate?

> Is health seen by planning professionals as a distinct and separate field and another of the many additional factors that they are required to consider? (i.e. is it seen as integral to planning or as an 'add on' – another item on the long list of things to consider?)

This checklist, and others like it, may also have a role to play in how some of these questions are answered. If health is to be viewed as a key consideration in the planning and development process, and therefore an important factor in the work of urban planners, then how this checklist is used, and the usefulness of its advice for planners, may play an important role in planning and health being seen as inter-related and somewhat dependent. A key part of this will be determined by how this checklist is implemented, as discussed in the next section.

## 18.2 Implementation strategy

While a helpful resource to assist health workers provide comment on development policies, plans and proposals, it is recognised that the development of a comprehensive checklist is only part of the solution. Consideration of an implementation strategy to accompany and support the use of checklist type tools is also required. There is a need to develop a process of implementation, a need to develop the relationships and partnerships that will ensure the checklist is well used, and a need to develop skills (within both the health and planning fields) to reaffirm the many links and synergies that exist.

Education and ongoing cross sectoral collaboration are two aspects of an implementation strategy that appear to be of importance. The building of relationships between health professionals and planners and developers (both public and private sector) will be critical to the effectiveness of this checklist or any other form of health contribution to the development process.

While the focus of this project has been on the development of a tool, SSWAHS and NSW Health recognise the need for a range of initiatives to support the implementation of this checklist. These include capacity building, education and relationship building.

Chapter 5 on how to use this checklist included the advice to talk with the person you are providing advice or comments to. Several chapters have stressed the importance of establishing relationships between health and planning professionals. Generally, the communication and relationship building components of implementing this checklist are vitally important in encouraging healthier urban development.

This is not to diminish the importance of the specific content of the checklist, because it is likely that the essence of building stronger relationships between health and planning professionals will be a mutual recognition and respect for what each can contribute to the objective of creating healthier, more sustainable and more liveable urban environments. It is hoped that this checklist provides a tool that can contribute to ensuring that the advice and feedback provided by health workers to planning professionals is comprehensive, relevant and high quality, and recognised as valuable by planners.

# 19 Glossary

# 19 Glossary

**Accessibility** – refers to the requirement that places that members of the public use should be able to be entered and used by all people including those with a disability. The Disability Discrimination Act includes in its definition of public places: public footpaths and walkways, parks, hospitals, libraries, government services, educational institutions, shops including cafes, restaurants and banks, and places of entertainment.

**Accessory dwelling units (ADUs)** – appear under many aliases, including granny flats, garage apartments, carriage houses and ancillary units. The basic amenities in most ADUs include a bedroom, a bathroom, and a small kitchen. ADUs provide the potential for extra income from renting out the unit, extra space that can be used as lodging for teenage children or elderly family members and an additional housing option, providing affordable units that can attract people from diverse age and income groups. Another benefit of ADUs is safer laneways and neighbourhoods, providing more "eyes on the street" through increased densities and based on how ADUs are orientated[246].

**Active transport** – relates to physical activity undertaken as a means of transport. This includes travel by foot, bicycle and other non-motorised vehicles. Use of public transport is also included in the definition as it often involves some walking or cycling to pick-up and from drop-off points. Active transport does not include walking, cycling or other physical activity that is undertaken for recreation.

**Air pollutant** – a substance in the air that can cause harm to humans and the environment. Pollutants can be in the form of solid particles, liquid droplets, or gases. They may be natural or man-made.

**Australian Standards** – technical documents relating to a broad range of topics. They are developed by committees with extensive expertise and interests relating to the subject of each standard, and are published by Standards Australia, an independent non-government body. Australian Standards are not legal documents. However, many Australian Standards become mandatory under state and federal law. The Building Code of Australia (BCA), which is mandatory in all states and territories, also refers to technical requirements outlined in Australian Standards.

246 Granny flats add flexibility and affordability. New Urban News 2001. www.newurbannews.com/accessory.html

**BASIX (The Building Sustainability Index)** – introduced by the NSW Government, BASIX ensures homes are designed to use less potable water and be responsible for fewer greenhouse gas emissions by setting energy and water reduction targets for houses and units. BASIX is one of the most robust sustainable planning measures in Australia, delivering equitable and effective water and greenhouse gas reductions across NSW[247].

**Brownfield development** – development that occurs on land which has already been developed, and generally was previously used for industrial or commercial purposes. These sites are often contaminated and need to be remediated or treated for contaminants. Brownfield sites can include hazardous waste, including extremely harmful chemicals and heavy metals. However, the development can be part of the remediation process. Examples of redevelopment on brownfield sites include Melbourne Docklands and the Sydney Olympic site at Homebush.

**Buffer area or zone** – an area of prescribed width between adjoining land uses or developments that is created for the purpose of mitigating the impacts of one or more of those land uses. A buffer zone is often an area of open space that is used to separate incompatible land uses (also see transitional zone).

**Building Code of Australia (BCA)** – produced and maintained by the Australian Building Codes Board (ABCB) on behalf of the Australian Government and State and Territory Governments. The BCA has been given the status of building regulations by all States and Territories. The BCA contains technical provisions for the design and construction of buildings and other structures, covering such matters as structure, fire resistance, access and egress, services and equipment, and certain aspects of health and amenity. The goals of the BCA are to enable the achievement and maintenance of acceptable standards of structural sufficiency, safety (including safety from fire), health and amenity for the benefit of the community now and in the future[248].

**Built environment** – the human-made physical structures and infrastructure of communities.

**Community title** – a form of land subdivision that enables shared property to be created within conventional Torrens title subdivisions. Joint ownership of communal property is held by property owners within a community title scheme. Community title is often used to establish and maintain a level of amenity and services that is higher than what is usually provided by a council. Community title includes features such as parks, walkways and community and recreational facilities that are maintained by a community association funded by the owners.

247 NSW Department of Planning. Building Sustainability Index. www.basix.nsw.gov.au

248 State and Territory Governments of Australia. Building Codes Board. www.abcb.gov.au

**Dual occupancy development** – the use of a block originally subdivided for a single dwelling development for the purpose of two dwellings. They provide housing opportunities in familiar locations, in locations with good accessibility to entertainment, shopping and other opportunities and the choice of less maintenance while still providing direct access to a private open space.

**Edible landscaping** – recognises that an aesthetically pleasing landscape and the production of healthy food can go hand-in-hand. Edible landscaping follows many of the same principles of conventional landscape design such as creating balance, unity, rhythm, interconnection, and pattern in the landscape while integrating a host of food producing plants into the design. The range of edible plants available for use in the landscape is vast and goes far beyond common vegetables[249].

**Exercise** – a subset of physical activity defined as planned, structured and repetitive bodily movement done to improve or maintain one or more components of physical fitness. Exercise has specific objectives of improving fitness, performance and health and providing a means of social interaction.

**Food security** – refers to the availability of healthy food and one's access to it. A household is considered food secure when its occupants do not live in hunger or fear of hunger.

**Greenfield development** – development on land where no previous development has occurred.

**Inclusive design** – allow all to recreate, regardless of ability, levels of mobility etc. Inclusive design encourages multiple use of space by a wide range of groups as opposed to exclusive use by certain groups[250].

**Incidental physical activity** – includes forms of physical activity done at work and home, and activity in which people take part as they go about their day to day lives, generally using large skeletal muscle groups. Examples include using stairs and completing domestic tasks.

**Infill development** – development in areas where development has already occurred, filling gaps and increasing densities.

**Kerb cut or ramp** – ramps at intersections that allow someone in a wheelchair or pushing a pram or riding a bicycle to cross more easily.

**Local area** – the wider area surrounding where a policy, plan or proposal applies. A discussion with the referring planner, or Council's social planner, may be required to understand what is an appropriate catchment area for services, facilities, transport, etc.

249 The Urban Farmer. Edible Landscaping. www.theurbanfarmer.ca/edible_landscaping.html

250 National Recreation and Park Association. www.nrpa.org

**Local government area (LGA)** – refer to areas controlled by individual local governments or Councils.

**Physical activity** – is all movements in everyday life, including work, recreation, exercise and sporting activities. It can be structured or unstructured, planned or incidental.

**Social capital** – refers to the value created by the social networks that form between members of a community and the inclination of those people to collaborate and do things for each other. It has been referred to as the informal bonds that make up a sense of community.

**Target area** – the area covered by the policy, plan or proposal. Equivalent to site area when referring to development proposals.

**Transitional zone** – a type of buffer zone where an intermediate land use is used between two incompatible land uses. An example is locating commercial uses between residential and industrial uses.

**Universally accessible** – barrier-free urban design aimed at ensuring access and safe travel for everyone including people with disabilities. Examples include kerb ramps (for people with disabilities, cyclists and people with prams) and ramped entrances to buildings that compliment stair entrances rather than being separate and hence stigmatising "barrier free" solutions to accessibility concerns.

**Universal design** – the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. The intent of universal design is to simplify life for everyone by making products, communications, and the built environment more usable by as many people as possible at little or no extra cost. Universal design benefits people of all ages and abilities.

**Urban planning, design and development** – these expressions are used fairly interchangeably in this document to describe interventions to the built environment, and the term "urban" should be understood to refer to any built environment, regardless of locality (urban or rural).

**Urban renewal** – involves the redevelopment of land that was formerly used for another purpose. The redeveloped land is often in more urban locations and is often former industrial land. Urban renewal can also occur with residential land, and in these cases usually involves redevelopment of lower density residential to higher density and mixed land uses. Green Square, the former Carlton United Brewery site on Broadway (in the City of Sydney) and the Bonnyrigg housing estate (in the City of Fairfield) are NSW examples of urban renewal projects.

**Walking/cycling "bus"** – a group of people who walk or cycle together following a set route and timetable. It is called a "bus" because there is a set route and timetable so it can pick up more "passengers" along the way. Such buses can teach people new routes as well as help people feel safer walking and cycling.

**Walking distance** – a distance of 400-500m (or approximately 5 minutes of walking) between destinations is a generally accepted measure for a "comfortable walking distance" for most people[251]. However, the quality of urban design can influence and extend the distances that people are willing to walk between destinations[252]. (Whilst current NSW guidance recommends that 400 metres is considered to be a reasonable walking distance to a bus stop, it says that for metropolitan railway stations households should be within 800-1000 metres[253]).

**Water Sensitive Urban Design (WSUD)** – the integration of water cycle management into urban planning and design. Water cycle management includes managing drinking water, stormwater run-off, waterway health, sewage treatment and water recycling.

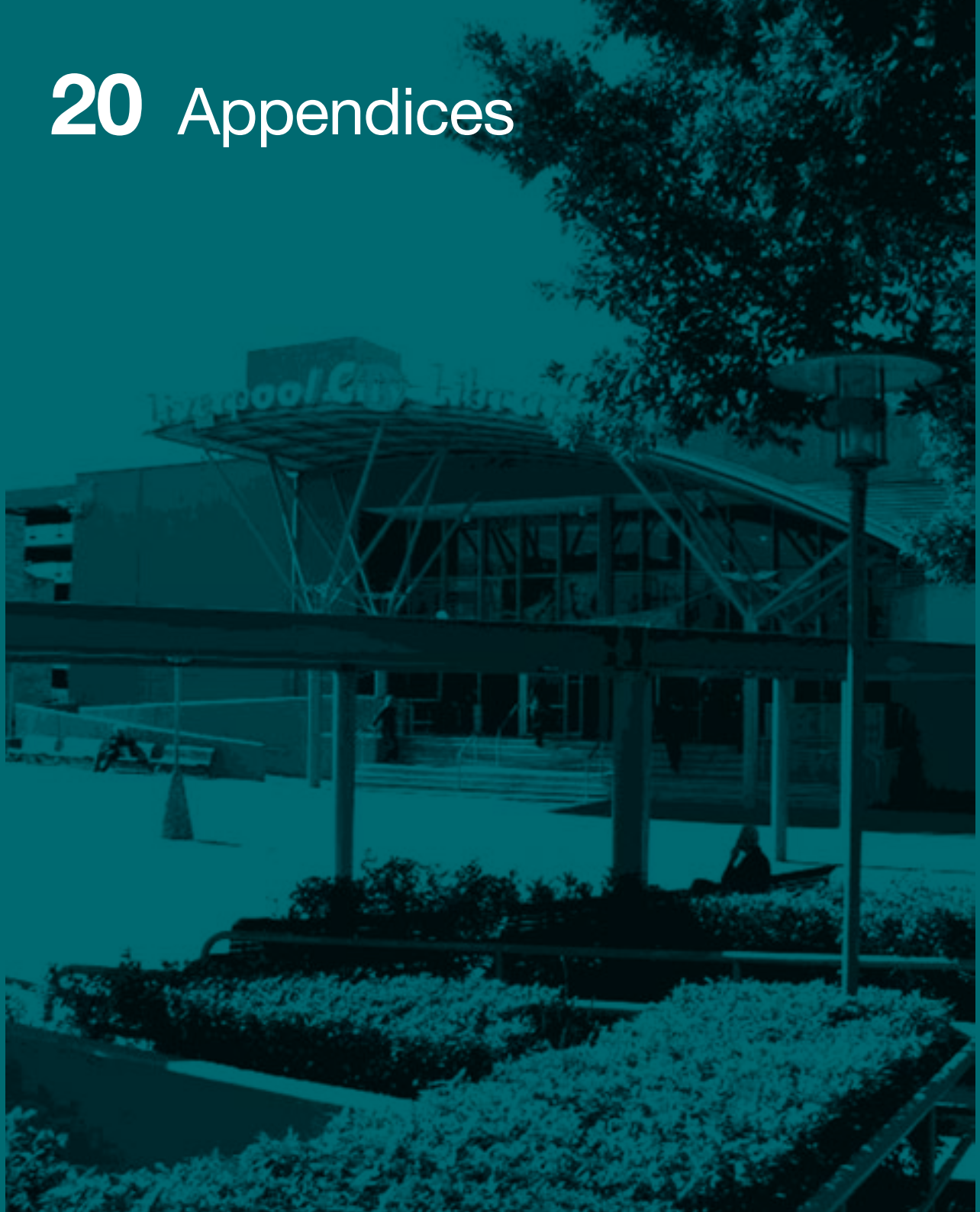
**Zoning** – a system of land use regulation involving designating uses of land based on mapped zones which separate one set of land uses from another. Zoning may be use-based or may simply regulate aspects of development such as building height and lot coverage.

251 Western Australian Planning Commission. Liveable Neighbourhoods. Perth: State of Western Australia; 2000. www.wapc.wa.gov.au/Publications/LN_ed2.pdf?id=597

252 Wilkinson WC, Eddy N, MacFadden G, Burgess B. Increasing Physical Activity Through Community Design: A Guide for Public Health Practitioners. Washington: National Center for Bicycling & Walking; 2002.

253 NSW Department of Urban Affairs and Planning. Improving Transport Choice – Guidelines for Planning and Development. NSW Department of Urban Affairs and Planning; 2001. http://www.planning.nsw.gov.au/programservices/pdf/prg_transport.pdf

# 20 Appendices



# Appendix 1: Checklist Summary Form

| Understanding the community | Development context: Is the plan, policy or proposal: |
|---|---|
| Key issues<br>1.<br>2.<br>3.<br>4.<br>5. | 1. Urban renewal/infill<br>2. Greenfield/suburban<br>3. Semi rural/rural |

| Health characteristic | Health promoting attributes | Attributes that do not promote health | Significant issues | Recommendations/ suggestions |
|---|---|---|---|---|
| 7. Healthy food | | | | |
| 8. Physical activity | | | | |
| 9. Housing | | | | |
| 10. Transport and physical connectivity | | | | |
| 11. Quality employment | | | | |

| Health Characteristics | Health promoting attributes | Attributes that do not promote health | Significant issues | Recommendations/ suggestions |
|---|---|---|---|---|
| 12. Community safety and security | | | | |
| 13. Public open space | | | | |
| 14. Social infrastructure | | | | |
| 15. Social cohesion and social connectivity | | | | |
| 16. Environment and health | | | | |

| Specific contexts<br>Urban renewal/infill | Greenfield | Semi rural/rural |
|---|---|---|
| • | • | • |
| • | • | • |
| • | • | • |
| • | • | • |

# Appendix 2: Healthy Urban Development Advice

Use the information you have recorded on the Checklist Summary Form to assist you to complete this written advice.
This HUD Advice form is intended to help with both organising your thoughts and providing some structure to written comments.
The extent to which this format is followed is dependent on the type of policy, plan or proposal being reviewed and the preferences of the user.

1. Based on your analysis, from a health perspective, would the community be better or worse off if this policy, plan or proposal were to proceed?

2. What do you see as the key health effects (positive and negative) of the policy, plan or proposal?

| Positive | Negative |
|---|---|
| | |
| | |
| | |
| | |

3. Are there groups that are more disadvantaged or advantaged than others by this policy, plan or proposal?

4. What are the priority health issues, key recommendations and supporting evidence? Use the table over the page if necessary.

| Key health issues | Recommendations | Supporting evidence | Level of evidence[254] |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

5. Are there broader issues or cumulative impacts that this policy, plan or proposal raises that should be brought to the attention of planning authorities so they can be considered in future policy making?

254 See Table 1 on page 6 of National Health and Medical Research Council, NHMRC Additional Levels of Evidence and Grades for Recommendations for Developers of Guidelines: Stage 2 Consultation Early 2008 – end June 2009, http://www.nhmrc.gov.au/guidelines/_files/Stage%202%20Consultation%20Levels%20and%20Grades.pdf

# Appendix 3: Checklist Feedback Form

### Sydney South West Area Health Service and NSW Health – Healthy Urban Development Checklist

Although this Checklist has been developed with a NSW focus, we hope that it will prove useful to people working anywhere in Australia or even overseas. Nothing will make us happier than that people use it. You don't need to ask our permission first but to help us improve the Checklist we are very interested to receive your feedback after you have used it. Please answer the following questions each time you use the Checklist and return this form to us at the address below.

1. Your details

   Name: . . . . . .

   Position: . . . . . .

   Organisation: . . . . . .

   Email: . . . . . .

2. Your purpose for using the checklist:

   To provide comments on a draft local government plan
   (e.g. master plan, environmental plan or development plan)

   To provide comments on a draft state or regional development plan

   To provide comments on a draft plan for a community or urban regeneration or renewal project

   To provide comments on a draft private sector plan (e.g. master plan or development plan)

   To provide comments on a draft state or regional planning-related policy

   To provide input into a planning policy or process

   To inform others about the range of factors that need to be considered in healthy urban developments

   Other (please specify)

   If the draft plan or policy is available on the web, please provide the web address.

   .....

3. Who used the checklist?

   You used it on your own

   You used it with other people in your organisation

   You used it with people from other organisations (Council, developer, etc)

4. Approximately what length of time (total person hours of all people involved) did you spend on using the checklist on this occasion?

   a) going through the checklist:

      less than 2 hours
      2-4 hours
      4-10 hours
      more than 10 hours

   b) writing a report or response:

      less than 2 hours
      2-4 hours
      4-10 hours
      more than 10 hours

5. We'd like to know how useful you found various aspects of the checklist. Please rate each of the following features in terms of their helpfulness to you during your assessment of the policy, plan or proposal.

| | Very helpful | OK | Not helpful |
|---|---|---|---|
| The introductory chapters (1-3) | | | |
| The planning system (ch. 4) | | | |
| How to use this checklist (ch. 5) | | | |
| Pre-checklist activities (ch. 6) | | | |
| In the checklist chapters (7-16): | | | |
| 'Relevance to NSW' | | | |
| 'Key evidence and leading practice' | | | |
| Dividing the questions into principle based (unshaded) and urban form (shaded) groups | | | |
| The specific questions | | | |
| 'Further information' | | | |
| Specific contexts (ch. 17) | | | |
| Beyond a checklist (ch. 18) | | | |
| Glossary (ch 19) | | | |
| Checklist Summary Form (App. 1) | | | |
| Healthy Urban Development Advice (App. 2) | | | |

6. What did you particularly like about the checklist? (e.g. what influenced your answers to question 5?)

7. What did you particularly dislike about the checklist? (again, please consider your answers to question 5)

8. In comparison to other methods you have used in the past to assess policies, plans or proposals, how does the checklist compare?

| | |
|---|---|
| Improves the process | Improves the outcomes |
| No change to process | No change to outcomes |
| Worsens the process | Worsens the outcomes |

Comments

9. Would you use the checklist again?

Yes

No

If no, why not?

10. Please list any suggestions you have for improving the usefulness of the checklist

11. Do you have any further comments about the Healthy Urban Development Checklist?

*Many thanks. Please return form to*: SSWAHS Population Health, Locked Mail Bag 7008, Liverpool BC 1871, NSW, Australia. Or email **Mark.Thornell@sswahs.nsw.gov.au**

# Appendix 4: Members of the Healthy Urban Development Checklist Reference Group

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NSW Health Department

Glenis Lloyd, Centre for Health Protection,
NSW Health Department

Peter Hamilton, Strategies and Land Supply,
Department of Planning

Lou-Anne Blunden, Health Service Planning,
Sydney South West Area Health Service

Stephen Corbet, Population Health,
Sydney West Area Health Service

Susan Thompson, Faculty of the Built Environment,
UNSW

Maggie Jamieson, Population Health, Planning,
Research and Performance,
Greater Southern Area Health Service

Kim Browne, Population Health, Planning and
Performance, Hunter New England Area Health Service

Milly Licata, Population Health,
Hunter New England Area Health Service

Karen Gillham, Population Health,
Hunter New England Area Health Service

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Elizabeth Harris, CHETRE, UNSW

Patrick Harris, CHETRE, UNSW

## PLANNING INSTITUTE OF AUSTRALIA AWARD

The Checklist has been acknowledged by the Planning Institute of Australia (PIA) by taking their Planning Excellence 2009 New South Wales award in the category for planning for healthy urban environments.

The PIA said that the Checklist:

> *"…represents a timely collaboration between health authorities and social planners… [which will]…raise planners' awareness of the potential impacts of planning decisions on the health of communities….[and] assist in building the desired relationships, partnerships and communication between health and planning professionals that are critically important.*
>
> *The Checklist is an exceptionally practical tool which represents an important step in an ongoing process of health and planning professionals working closely together to encourage the creation of healthier communities across NSW."*

SHPN: (CER) 090161