



Planning for Health

A study on the integration of health and planning in South Australia

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Planning Futures Pty Ltd

Prepared for SA Health



This publication has been prepared for SA Health by Stephanie Hensgen, Director, Planning Futures Pty Ltd to inform thinking and directions on enhancing health outcomes in the South Australian community through urban planning

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1 Executive Summary

This study was commissioned by SA Health to provide a systematic review of urban planning structures and processes designed to enhance health outcomes and build healthy and sustainable communities. Stephanie Hensgen, Director, Planning Futures Pty Ltd, was commissioned to report on improving the intersection between planning and health in South Australia. Stephanie is an urban and regional planner with 15 years experience in local government and private practice in South Australia.

The study provides evidence of Australian and international experiences in linking urban planning and health and wellbeing. Its intent is to identify and suggest ways to improve the intersection between planning and health in South Australia. The release of this study is timely since it coincides with the Government's commitment to developing a 30-Year Plan for Greater Adelaide in partnership with state agencies. To this end, the study provides a useful outline of the potential points of collaboration between SA Health and the Department of Planning and Local Government in developing the 30-Year Plan.

Nationally, and within SA, a significant amount of work has already been undertaken on the relationship between urban environments, physical activity and levels of obesity, particularly through such organizations as the National Heart Foundation, the Planning Institute and the Active Living Coalition. Whilst this study acknowledges much of this work, it does not seek to repeat the significant progress already undertaken. It does however aim to broaden the view of healthy urban planning beyond aspects physical activity by focusing on the links with mental health, nutrition, climate change impacts, social health and public health.

Tools such as Health Impact Assessment (HIA), research, community engagement, spatial planning and land use planning are discussed along with mechanisms for achieving healthy urban planning outcomes in the South Australian context. This study analyses some of the drivers, opportunities and mechanisms employed internationally and nationally as well as some potential structures, processes and strategies that could be employed within South Australia.

The study report can be used as a starting point for intersectoral agreements, further research, policy development and action at a State and local level. Whilst it focuses on urban planning rather than planning in remote and country environments, some of the directions can be applied more broadly to these areas.

The study concludes with 8 suggested pathways for further action to build capacity and partnerships between SA Health and the Department of Planning and Local Government.

1. Developing a framework for integrating planning and health;
2. Leadership for integrating planning and health;
3. Cross government partnership;
4. Cross agency agreement;
5. Research partnerships;
6. Pilot projects;
7. Legislative review;
8. Capacity analysis.

These are discussed in detail at Section 6.

2 The link between planning and health

THE LINK BETWEEN PLANNING AND HEALTH

1. Physical activity

Provision of facilities and design of environments to encourage good health and wellbeing

2. Good food

Availability of and access to nutritious, affordable food

3. Social and mental health

Provision and design of places, houses and neighbourhoods to encourage social interaction and supportive relationships

4. Community engagement

Involvement of communities in state and local planning, reducing community stress and increasing sense of place and belonging

5. Public health

Design and management of houses and neighbourhoods to reduce disease and health risks and manage illness, injury and disability and the factors that cause them

6. Access and geographic equity

Equitable access to services, facilities and support mechanisms that help facilitate good health and wellbeing

7. Climate change

Climate change impacts and adaptation of the urban environment

8. Perceptions and fear

Perceptions of the condition and safety of the urban environment as a barrier to health and wellbeing

2.1 Health and planning

The modern planning system, including planned neighbourhoods and separation of different land uses via zoning, originated following the industrial revolution of the 19th century as a means of reducing a city's impact on human health and providing people and workers with healthier environments. Sanitation, noise and air pollution were the main drivers but planning concepts were quickly broadened through movements such as garden cities (Howard 1902). Garden cities were to be self-sustaining with residential and industrial land uses separated and open spaces and green belts incorporated.

Today, modern planning concepts such as new urbanism, intelligent urbanism, smart growth, green growth, transit and pedestrian oriented development, all advocate the development of cities that no longer separate land uses but create employment, housing and community facilities in close proximity. All focus on healthier cities from a wide perspective. The Charter of the New Urbanism (Congress for the New Urbanism 1993) advocates “the restructuring of public policy and development practices to support the following principles: neighborhoods should be diverse in use and population; communities should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be framed by architecture and landscape design that celebrate local history, climate, ecology, and building practice.” <http://www.cnu.org/charter>

The South Australian Strategic Plan (SASP) makes it clear in all six of its objectives that health and wellbeing outcomes are of critical importance to South Australia's future. In particular, *Objective 2 - improving wellbeing*, identifies targets for smoking, healthy weight, participation in recreation, life expectancy, chronic disease levels, public safety, psychological wellbeing and work-life balance. Health-related outcomes are also inherent within the other five objectives of building communities, attaining sustainability, expanding opportunity, growing prosperity and fostering creativity and innovation. Targets relate to public participation, volunteering, climate change adaption, sustainable water supplies, public transport, education, affordable housing, socio-economic disadvantage, creativity, employment and the provision of social and physical infrastructure, all of which impact significantly on the health of our community.

The WHO Healthy Cities Movement focuses on “comprehensive and systematic policy and planning with a special emphasis on health inequalities and urban poverty, the needs of vulnerable groups, participatory governance and the social, economic and environmental determinants of health”. Whilst its base is in Europe, (over 1,200 cities and towns from over 30 countries in the WHO European Region are healthy cities), the Healthy Cities network has been established in all six WHO regions. A major focus of the WHO Healthy Cities Movement is healthy planning <http://www.euro.who.int/healthy-cities>.

The WHO Healthy Cities Network is underpinned by the Ottawa Charter for Health Promotion (WHO 1986). The Charter's strategic framework focuses on promoting healthy public policy, creating supportive environments, strengthening community participation, improving personal skills and reorienting health

services. The Adelaide Declaration (Second International Conference on Health Promotion 1988) reinforced the Ottawa Charter and elaborated on the concepts of healthy public policy, accountability for health and action areas (focused on supporting the health of women, food and nutrition, tobacco and alcohol and creating supportive environments), developing new health alliances and commitment to global public health. The Ottawa Charter, the Adelaide Declaration and associated WHO health promotion statements have formed the foundation for strategic policy objectives which have framed public health and population health actions across many nations.

In parallel with the WHO Healthy Cities Network, *Health in All Policies* is a new initiative designed to provide practical strategies for integrating health considerations into all government policies, not just within the health portfolio. The Finnish Presidency of the European Union (EU) in particular has focused on Health in All Policies as a mechanism for intersectoral cooperation. The mechanism was recommended to further progress public policy objectives by the 2007 Adelaide Thinker in Residence Professor Ilona Kickbusch.
http://www.thinkers.sa.gov.au/images/Kickbusch_Final_Report.pdf.

There is a growing body of evidence linking planning for urban environments to a range of factors associated with health and wellbeing, for example fitness, eating habits, mental health, levels of social interaction and supportive communities.

Habits and decisions made at an individual level (such as smoking, poor diet and risk-taking behaviours) have an impact on the health of individuals in our community. However, it is the community-based determinants of health that can contribute to health problems and geographic inequalities. The World Health Organisation (WHO Europe 2003) has identified ten major community-based (or social) determinants of health:

- policies to prevent people from falling into long-term disadvantage;
- the social and psychological environment;
- a good early childhood environment;
- the impact of work on health;
- employment and job security;
- friendships and social cohesion;
- social inclusion;
- the effects of alcohol and other drugs;
- access to supplies of healthy food for everyone; and
- healthy transport systems.

The WHO Commission on the Social Determinants of Health has done extensive work at the international level and following the eighth meeting of the Commission, it released an Interim Statement in 2007. The Statement, entitled *Achieving Health Equity: from Root Causes to Fair Outcomes*, focuses on the causes of health inequities in relation to early childhood development, education, the working environment and the urban living environment. Its urban living examples of social determinants include housing and living conditions, sanitation, safe water, efficient waste management, safe neighbourhoods, food

security, access to education, health services, welfare, public transport and child care.

There is growing awareness of the impact of urban planning and the physical environment on each of these determinants and increased understanding of the opportunities to significantly improve health and wellbeing outcomes at a community rather than at an individual level through improved planning processes (refer list of references).

The increasing prevalence of serious health issues, principally obesity and related diseases such as type 2 diabetes, have prompted health officials to look more closely at the built environment in many places including the United States of America (USA), Europe and Australia (Lopez and Hynes 2006). Building healthy environments that more broadly support healthy neighbourhoods has increasingly become a focus for many cities world-wide.

This section outlines some of the major links between community health and wellbeing and the physical environment. Eight main links have been identified following review and analysis of relevant research (below).

THE LINK: Physical activity

There has been shown to be a link between physical environment and urban design, with health issues ranging from depression to ischaemic heart disease.

In Australia, 2004, the health cost due to inactivity was around \$400 million.

Globally, 10% to 22% of disease is attributable to physical inactivity.

Globally, current inactivity can be reduced by 19% by re-designing our physical environment.

2.2 Physical activity

According to the World Health Organisation, physical inactivity and unhealthy eating are risk factors for a number of diseases including ischaemic heart disease, some cancers and diabetes mellitus. Globally, the estimated contribution of physical activity to these diseases varies between 10% and 22% (Pruss-Ustun and Corvalan 2006). More than half the globe does not get sufficient physical activity to protect them from related risks, which cause death, chronic morbidity and disability from a range of non-communicable diseases” (Pruss-Ustun and Corvalan 2006 p.55).

65% of the US population is obese. Inadequate levels of physical activity and poor diet are key factors in obesity rates, and are linked to other serious health issues including higher rates of stroke, cancers, diabetes and other chronic diseases (Lusk and Harris 2003). The authors of this report suggest that urban forms must be changed to incorporate physical activity into the daily routine of the community so they can achieve the recommended amount of 60 to 90 minutes of activity on most days of the week. A report from the Mailman School of Public Health (2007) reinforces this, stating that people living near the pedestrian friendly environment of New York have a lower body mass index.

In Australia the National Heart Foundation reported that in 2004 the annual health cost due to inactivity was around \$400 million, 8,000 deaths a year and an estimated 77,000 premature potential years of life lost. Australia also follows global trends with seven million adults and 1 in 4 school age children overweight (Gebel et al 2005, AIHW 2001). Over half of Australians are not getting sufficient levels of physical activity to prevent health risks.

The link between environment and physical activity can be improved by designing environments that promote and encourage physical activity in the workplace, within homes, public transport and during leisure time. Globally, the current inactivity levels of the population could be prevented by up to 19% (13-27%) by environmental intervention (Pruss-Ustun and Corvalan 2006).

THE LINK: Healthy eating

Access to good quality, healthy and well priced food depends on:

- Distance between producers, processing and point of sale
- Distribution of local centres containing quality food outlets
- Alternative land use options for food outlets (eg co-ops, markets)

2.3 Healthy eating

The food system incorporates agriculture, processing, distributing, wholesale, retail outlets, consumption and eventually waste disposal aspects. Comprehensive food system planning can incorporate ecologically sustainable, economic and public health social justice outcomes for a local community.

Access to a safe, nutritious food supply in socially acceptable ways and readily available food choices that promote healthy communities depend greatly on urban form and neighbourhood and regional planning. Planning processes enabling a mix of land uses that reduce the distances between food production, points of sale and consumers will ensure local food security and improve access to healthy food. King et al (2005) found that men and women living in disadvantaged neighbourhoods have 2.5 times the number of fast food outlets, and are 3 kilograms heavier than those in other neighbourhoods. In Adelaide, O'Dwyer et al (2006 p.240-6), used spatial mapping to "measure the availability and accessibility of supermarkets in four local government areas". Their study found significant differences in availability and accessibility of supermarkets based on geographic location and advocated a local approach to addressing inequitable distribution of food outlets.

A review authored by Raine et al (2008), commissioned by the Canadian Institute for Health Information, found that lower-income neighbourhoods were more likely to have greater access to high-calorie foods such as fast-food outlets, and lower access to supermarkets with healthy food, and may be exacerbated by limited access to recreational facilities and environments that are not conducive to walking.

The Australian Federal Government through the Australian Competition and Consumer Commission (ACCC) has undertaken an inquiry into the competitiveness of retail prices for standard groceries. Greater connections between maintaining land which is viable for agriculture, agricultural practices and food processing may help reduce the costs of locally produced and minimally processed food with waste that can be properly managed. This can be achieved through land use planning and balancing the retention of valuable agricultural land with allowance of on-site 'value-adding' activities associated with the processing, packaging and sale of healthy, appropriate core food. The impacts of climate change, water availability and availability/cost of fuel for transportation also have impacts on access to and the price of food. The 2005 Victorian Department of Human Services Population Health Survey found that almost 1 in 20 Victorians indicated that on at least one occasion in the last 12 months they ran out of food and could not afford to buy more. Similarly, the Population Research and Outcomes Studies Unit of the SA Department of Health (2007) found that 5% of South Australians reported that in the last 12 months there were times that they ran out of food and could not afford to buy more. The most commonly reported strategy for

coping with food insecurity was reducing the variety of the family's food intake. Additionally, 9% reported feeling stressed because of insufficient money for food.

Enabling good connections between food production and sale (such as community markets and protection of agricultural areas close to urban centres) can increase community self-reliance and returns the economic benefits to the local community.

The *slow food movement* established in Italy in the 1980s encompasses many of these community wellbeing ideals, such as the protection of local community economies, quality food, local food variety, and locational and cost-accessible food.

More general community and consumer interest in the quality of food and its production in Australia can be seen in a number of different areas including advertising of food to children, nutritional labelling (Nutrition Australia 2008), the ability to make informed choices about the consumption of genetically modified food (Dietitians Association of Australia 2008), expansion of the organic food industry and not-for-profit food co-ops (Lyons 2001) and the importance of farmers' markets to food choices (Sweet 2007). The CSIRO (2008) acknowledged this increasing community awareness by suggesting that there is "evidence that consumers in Australia and neighbouring Asian countries are becoming more health oriented and environmentally aware in their food selection, demanding more information about both the nutritional value and safety aspects of the food supply" <http://www.csiro.au/science/ps31.html>

One of the main areas where aspects of good food choice and the planning system meet is in the allocation of properly zoned, distributed and designed spaces and buildings that offer a range of opportunities for agriculture in areas of arable land and adequate water supply, local production, manufacture and sale of food, both private and public.

The distribution of centres via the planning system (Centres Hierarchy, Planning SA 2007) is designed to enable community access to various levels of shopping facilities, including food shopping. Retail trends have seen a large growth at the regional shopping centre level as well as a downturn in local, more accessible, centres, possibly as a result of greater commercialisation of retail outlets, greater dependence on cars, changes in food retail markets and changes to retail opening times. Whilst access to food through shopping centres has increased in relation to opening times, a reduction in locational access can greatly affect people with fewer transport options.

THE LINK: Social and mental health

Public places for meeting people and encouraging interaction helps build support networks

Affordable housing close to social support structures reduces stress and anxiety

Physical activity improves resilience to stress

2.4 Social and mental health

The physical environment has been shown to have an effect on the mental health of the public. A review of recent studies by Berry (2007) shows the link between the urban environment, in particular cities, and mental health. Berry pointed out that 1 in 5 Australians meets the diagnostic criteria for a mental disorder every year. Whilst the review suggests more research is needed, it reports that cities

are potentially a powerful force in causing possible health damages and intervention needed to address the massive cost of mental disorders on the health care system and Australian society.

The form of the physical environment, including levels of accessibility, walkability, conducive and safe public and community meeting places and community facilities can have a direct impact on levels of social capital and social interaction within a neighbourhood (Australian State of the Environment Report 2006). The provision of social focal points such as open spaces, meeting spaces, community centres and recreational opportunities for physical activity also has restorative qualities, helping to reduce levels of stress, improve social interaction, and protect against mental health issues.

Levels of social capital, community connectivity and community support networks has also been linked to physical and mental health (Baum and Ziersch 2003) and a study undertaken by Flinders University (2007) showed that there appeared to be a correlation between self-reported health and levels of social capital in a study of four Adelaide postcodes.

Housing stress is currently a critical issue for Australians impacting on levels of anxiety, financial difficulties, independence and homelessness. The provision of affordable housing in appropriate locations i.e. close to services and facilities is a major challenge in planning for the built environment.

THE LINK: Community engagement

Community engagement builds confidence and leadership

Inclusive engagement helps re-connect marginalised communities

Volunteerism and involvement builds a sense of place and belonging

Community involvement builds community support and links

2.5 Community engagement

The value of community engagement is one area of significant research, exploring decision-making in facilitating good social and mental health. At the International Conference on Engaging Communities (Brisbane 2005), 2,000 delegates from 44 countries recognised that community engagement was integral to healthy communities and that:

- effective community engagement enables the free and full development of human potential, fosters relationships based on mutual understanding, trust and respect, facilitates the sharing of responsibilities, and creates more inclusive and sustainable communities;
- meaningful community engagement seeks to address barriers and build the capacity and confidence of people to participate in, and negotiate and partner with, institutions that affect their lives, in particular those previously excluded or disenfranchised and;
- inclusive engagement requires that Indigenous peoples and people who are on low incomes, socially, culturally or economically marginalised, are adequately resourced to participate meaningfully in the broader community and that they have a stake in the outcome and benefit equitably as a result of being involved.

Volunteering and involvement in neighbourhood planning builds a sense of place and belonging that helps build social connectivity and increases a sense of control over one's local environment. Both factors are important in determining mental health (Beyond Blue Aust.) <http://www.beyondblue.org.au/index.aspx?>. A study of levels of volunteerism by the Center of Social Development,

Washington University (2003) showed that volunteering in older adults significantly improved levels of self-rated wellbeing and mental health. In Canberra, Volunteering ACT (2008) noted that volunteering not only enhances social networks and social cohesion but the economic value of services provided also contributes to community wellbeing.

Participation in local projects and neighbourhood renewal has a significant impact on sense of community and levels of wellbeing. The Kurna Tappa Iri Reconciliation Agreement 2005-2008 uses teams of Kurna advisors in urban design processes to not only instil Kurna cultural awareness into the physical environment but to help build local urban design skills, achieve reconciliation objectives and provide greater opportunities for involvement in local decision making processes by Kurna people.

THE LINK: Public health and disease prevention

Conflicting land uses can exacerbate health problems via noise and pollution

The design of buildings can impact on health outcomes (access to the sun or light spill)

The location of sensitive land uses can increase risk of human injury (floods, fire or contamination)

The design of cities can influence respiratory and cardiovascular health

2.6 Public health protection and disease prevention

There is a clear relationship between urban form via the land use for agriculture, housing, industrial and other purposes, location and design of buildings, management of waste, open spaces and facilities and the occurrence of communicable disease and public health risks. These significant health risks include pest borne diseases, drug and alcohol related disease, respiratory illness, injuries, exposure to toxic substances, sanitation and general environmental health and population health issues.

The location and arrangement of land uses can ensure that a reasonable separation exists between vulnerable land uses (housing, schools, hospitals) and high-impact uses (heavy industry, main roads) in order to promote healthy communities. In addition, consideration of potential land contamination when planning for renewal sites also impacts on the health of future communities.

The appropriate design and location of buildings also assists in reducing the risk of disease and injury through use of building materials, application of safe building designs, appropriate solar access, thermal management, protection from excessive light spill and glare and protection from hazards (e.g. fire alarms and location of buildings away from flood prone land).

Heavy reliance on car use and long distance commuting caused by unsustainable urban forms, has also been shown to have a high impact on respiratory and cardiovascular diseases (Riediker et al 2004).

A broader view of public health to encompass a “state of complete physical, social and mental wellbeing, and not merely the absence of disease or infirmity” (Ustun and Jakob 2005 p.1) and traditional public health management is evolving into a wider understanding of the impact of the physical and social influences on health aspects. This also includes those issues identified in sections 3.1, 3.2 and 3.3.

THE LINK: Access and geographic equity

Locations where high proportions of lower socio economic families live are often areas that have poorer access to services

Higher socio economic populations often have greater influence over planning outcomes

Staying healthy is often more difficult for lower socio economic groups because of availability and access to services/financial issues/education/transport and other social determinants of health

2.7 Access and geographic equity

Socio-environment issues, like low-income isolation, racial segregation, fear of crime and poor social capital; time the individual and community have for aspects like community improvement, social interaction, personal recreation and other aspect that affect social bonds in the community (Centers for Disease Control and Prevention 2008) have been shown by recent studies in America to be associated with a decrease in physical activity and generally poor community wellbeing (Lopez and Hynes 2006). Poorer communities are more likely to be working multiple jobs and have less access to recreational facilities, reducing the time available to exercise.

The Social Health Atlas of Australia (1999) highlighted the “convincing body of evidence built up over a number of years in Australia on the striking disparities in health that exist between groups in the population. People of low socioeconomic status (those who are relatively socially or economically deprived) experience worse health than those of higher socioeconomic status for almost every major cause of mortality and morbidity. The challenge for policy makers, health practitioners and governments is to find ways to address these health inequities”.
<http://www.publichealth.gov.au/>

A 2007 Flinders University study of four areas in Adelaide identified a link between health and place of residence; considering the characteristics of the area and the socio-economic status of the people living there. Access to education, money and supportive relationships were associated with higher incomes and generally resulted in healthier lifestyles and greater wellbeing. The study reported a relationship between health and the area of residence. The report concluded that the social and environment-based factors affecting actual and self-reported health could include socio-economic status, number and quality of open spaces and recreational facilities, topographical characteristics, housing tenure stability, employment opportunities, educational status, and social and civic involvement. Other environmental factors affecting health included noise, pollution, housing condition, availability of services, availability of healthy food as well as neighbourhood perception. The study found that not only did the area with the greatest socioeconomic disadvantage have the poorest self-rated health but that its residents lived in an environment that compounded their disadvantage and social exclusion.

Significant research has been undertaken into the link between stress and urban form, particularly in the USA, in relation to excessive commuting time, urban sprawl and walkable environments. The ‘smart growth’ movement (www.smartgrowth.org) identifies the locational inequities affecting health including walkability, access to services and facilities, transportation and housing choice, amenity and natural beauty, and distance from employment opportunities.

THE LINK: Changing climates

Protection from the elements can reduce heat stress

Comfortable places and streets that are protected from the elements are more conducive to physical activity

Poor planning and design can result in risk to human life and injury during worsening storm or fire events

Access to affordable food can be affected by increasing temperatures and drought

The elderly and lower socio-economic groups are more vulnerable to reduced access to water and electricity caused by scarcity and rising costs

2.8 Changing climates

The health impacts of poor adaptation to climate change relate primarily to increased heat stress, increased risk of injury during storm events, impacts on water quality, cost and accessibility, and increased water and pest borne disease. Climate changes, particularly scarcity of water, can also impact on food production and availability and the costs of transporting food and other necessary consumables. The CSIRO (2006) predicts that South Australia will experience hotter weather, more heatwaves, more droughts, less annual rainfall and more intense rainfall events as a result of climate change. Indeed, the Garnaut Report (2008) has confirmed the likely impacts of climate change upon the temperatures and drying of South Australian lands. Careful consideration to the need to protect arable land for food production into the future is needed.

Whilst humans have a high capacity to cope with heat stress (Woodruff et al 2005), poor adaptation to climate change has the potential to increase the number of heat-related deaths and hospitalisations (SMEC Australia 2007). This is exacerbated in city areas due to the urban heat island effect, which intensifies the impacts of climate change through increased radiation from hard surfaces. Poor adaptation to climate change could severely impact on levels of comfort, use of public spaces and pedestrian activity, creating additional barriers to physical activity, health and wellbeing.

The recent and prolonged drought in Australia has highlighted the vulnerability of particular cities, towns and regional areas to lowered water availability. Increased water costs and decreased availability have the potential for varying levels of health-related impacts including access to and cost of good food and water. The impact upon individuals and communities will depend on socio-economic status and geographical area.

THE LINK: Perceptions and fear

Poor safety or perception of safety can reduce levels of physical activity

Perceived design and maintenance issues can affect the use of a public area as significantly as real issues

Public facilities are often more likely to be used in friendly communities (or communities that are perceived to be friendly)

2.9 Perceptions and fear

Evidence suggests that not only is the condition of the physical and social environment linked to health, but the *perception of its condition* is linked to community wellbeing.

Poortinga (2006) found that the perceived friendliness of the community was associated with self-rated health in a survey. Perceived levels of access to facilities via walking, leisure opportunities and the presence of poor social behaviour were also associated with poor self-rated health whilst a positive public perception towards the social environment was associated with high physical activity, lower levels of obesity and higher self-rated health.

Perceived standards of public place maintenance, crime activity, safety, accessibility and cost of facilities can be as significant as their reality when deterring (or otherwise) the use of public places for physical activity and social interaction.

An American study of neighbourhood crime (McGinn et al 2008) found that both real crime levels and perceived crime levels discouraged people from being

active. Using geographic information system (GIS) mapping, the study compared crime rates with levels of fear and the amount of physical activity. The study of 1,482 people revealed that those who perceived that they lived in a low-crime area were 30-50% more likely to meet recommended levels of physical activity compared to those who perceived that they lived in a high-crime neighbourhood.

CHANGE: Opportunities for change

By collating issues and applying them to the South Australian context, this study has identified seven main opportunities for change:

1. Design for physical activity
2. Changing urban form and managing land use impacts
3. Creating community focal points and social connection
4. Engaging the community in planning
5. Securing access to good food
6. Adapting urban environments to climate change, and
7. Understanding more about the health of neighbourhoods

3 Opportunities for change

The National Heart Foundation (2004 p.3) states that “planners need to incorporate healthier design into daily planning decisions”. Whilst historically some health and wellbeing elements have been incorporated into planning processes, such as separation of noxious industries and the provision of adequate open space, a more holistic approach can help address social health problems and ecological sustainability at a population and community, rather than individual level.

Healthy urban planning meets the current and future needs of the community. Putting their needs at centre of the planning process encourages decisions on the basis of the community’s health and well-being (Barton and Tsourou 2000). Gebel et al (2005) argue that we need a “comprehensive and integrated approach, with changes to social norms, improved community understanding about activity and nutrition, and also changing physical environments is needed to produce sustainable policy level changes”(p.8).

Barton and Tsourou (2000) identify 12 principles for a healthy community environment:

- Social cohesion;
- Housing quality;
- Access to employment;
- Access to social facilities;
- Access to market facilities;
- Local low impact food production and distribution;
- Community and road safety;
- Equity and reduced poverty;
- Good air quality;
- Protection from excessive noise;
- Conservation and decontamination of land;
- Climate stability;

Integrating health into daily lifestyles of a community, whether that is to be active, build supportive communities, encourage social interaction or make good food choices, needs to be convenient, easy, safe and enjoyable (National Heart Foundation 2004). Recent studies have pointed out the impact that design and planning can have on the health of the community and many of the issues can be modified or changed to have a positive impact on health. Many authors comment on the need for more research, but also note the need for an evidence based approach to improving the community health via planning and design.

A large body of research (refer reference list) consistently shows that planning and design of our communities give multiple options to modify the environment to encourage and improve community health and wellbeing. More research is needed to follow up on planning and design changes so that we can be sure about their health benefits at the neighbourhood level. However, much of the literature points to similar concepts in urban design that may benefit public health positively. We have to change our reliance on car usage and provide motivation for and convenient access to physical and incidental activity. The urban environment can be built to encourage and supply the things we know are healthy for us and not rely on the things that we know can have a negative impact on community health and wellbeing. Unhealthy environments make it essential to use cars out of necessity, have easy access to high fat and kilojoule foods and are built in a way that makes social interaction difficult. The positive is that most of these aspects are shown to be modifiable.

In undertaking this research in the South Australian context, seven main areas where planning processes and the urban environment can be modified to make more healthy communities have been identified:

- design for physical activity;
- changing urban form and managing land use impacts;
- creating community focal points and social connectedness;
- engaging the community in planning;
- securing access to good food;
- adapting urban environments to climate change; and
- understanding more about the health of neighbourhoods in order to make significant changes.

CHANGE: Design for physical activity

Modifying the design of public spaces to make it easier to be physically active

Making sure that public places are safe and pleasant

3.1 Design for physical activity

Design modification

There are many suggestions by authors and researchers in the recent literature for creating an environment that is more conducive to healthy activity and healthy lifestyles.

In general it is agreed that the environment needs to be a well-planned network of walkable and cycle friendly routes. The quality of the walking and cycle pathways needs to be adequate for safety and easily accessed, and physical activity is increased considerably if there are local destinations (i.e. shops/recreational facilities) within walking and cycling distances (National Heart Foundation 2004; Gebel et al 2005). Lusk and Harris (2003) identify examples of design modifications:

- child friendly signs and graphics;
- sidepaths for bikes, separated by moveable concrete islands;
- amenities along walkways, like integrated dog drinking bowls;
- safe routes to school marked by signs and graphics;
- stencils on roads to create pathways where there are none;

- signs showing trail and route directions;
- safety bollards that can define a pathway or separate bikes/walkers from traffic;
- dedicated weekend bike/jogger lanes created with removable fencing for high flow periods; and
- temporary barriers for seasonal riders/joggers.

Pruss-Ustun and Corvalan (2006) point out that modifiable factors in built environments can increase active lifestyles. These include pedestrian and bicycle friendly environments with footpaths, ample building setbacks, walking and cycling pathways, parks, bus shelters and streets that are easy to cross, with an aim of discouraging unnecessary car trips.

Lusk and Harris (2003) highlighted examples of street and environment design that can be modified to include pedestrians and cyclist with safety and convenience. The authors provided numerous examples and pictures from America where planning and design have influenced physical activity and health. The design features address similar principles to other authors, of aesthetics and perception, convenience and access to recreational facilities and encourage physical activity over car use.

CASE STUDY: HEALTHY BY DESIGN, VICTORIA

The Victorian Division of the Heart Foundation received an award for excellence from the Planning Institute of Australia for its 'Healthy By Design' guidelines for planners in creating environments for active living. The guidelines focus on the provision of, design and maintenance of walking and cycling routes, pedestrian friendly streets, open space, local facilities, public transport, and seating, signs, lighting, fencing and walls. They also refer to techniques for fostering community spirit and incorporate Crime Prevention through Environmental Design principles. The Heart Foundation has also facilitated a number of projects under the banner of 'Supportive Environments for Physical Activity'.

www.goforyourlife.vic.gov.au/hav/articles.nsf/pracpages/Healthy_by_Design?OpenDocument

CASE STUDY PORT ADELAIDE CENTRE VISION AND FRAMEWORK, ADELAIDE

In Port Adelaide, the local council and the South Australian Government developed a framework for the revitalisation of 'the Port' that utilised the knowledge of internationally renowned urban researcher Professor Jan Gehl. The vision and framework contains an integrated approach to planning for health that considers outcomes including comfortable walking environments, friendly lighting, disability access and well maintained public spaces in the planning process under 7 main themes: celebrate the waterfront; enhance city streets; diverse community; celebrate history; welcome to visitors; coming and going; and city for people. The report provides a detailed analysis of the way people currently use the Port and future opportunities as well as a vision and broad concept for the Port's future development.

www.portenf.sa.gov.au/site/page.cfm?u=258

Creating safe and pleasant places

Physical, mental and social health of the community can be influenced by the way a community perceives its environment, the quality of facilities, safety, crime levels, community spirit, aesthetics and access to resources. The state of a community's surroundings directly affects quality of life and general health and wellbeing.

Crime, the fear of crime and the perception of an unpleasant environment is a major barrier to physical activity and social interaction through the use of public streets, footpaths, trails and parks. Commonly, the issue is exacerbated for women and older people. The ABS Survey of Crime and Safety (2005) found that perceptions of safety in Australia varied due to gender, with 80% of males feeling safe when at home alone, compared with 64% of females. Persons aged 20 to 24 were more likely to feel safe when at home alone during the day (83%) compared with persons aged 65 and over (78%). The survey also found that 70% of people felt that there were problems from crime and/or public nuisance with the most commonly perceived problems being dangerous/noisy driving, house break-ins and vandalism/graffiti.

A United Kingdom planning bill (Passed as an Act in 2005) aimed to get rid of abandoned cars, dog fouling, loss of play areas, footpaths and antisocial behaviour, increasing public satisfaction in relation to parks and green spaces. (Department for Environment, Food and Rural Affairs 2005)

Creating safe and pleasant places that encourage social interaction and physical activity, and reduce fear and safety concerns is well enshrined in Australian Crime Prevention through Environmental Design program. Principles include the use of passive and active surveillance, lighting, access control and maintenance. In a report on the link between volunteering and levels of crime, Mayer (2003, pp 3-4) notes that although there is a lack of evidence in Australia, research in the USA indicates a strong relationship between declining levels of volunteering and sense of community with increased levels of crime.

Ensuring parks, gardens, footpaths and streets are well-maintained and kept clean and designing streets and pathways to be aesthetically pleasing and pleasant to use are also mechanisms for encouraging community use of public amenities.

CASE STUDY: BURDETT ESTATE COMMUNITY HOUSING REDEVELOPMENT, LONDON

In London, the community housing estate, Burdett Estate was redeveloped and retrofitted to meet UK Police *Secured by Design Accreditation* principally by redesigning entrances and closing long, dark alley ways. The Estate was once renowned for its high levels of crime and anti-social behaviour and, as a result of its redesign, now has dramatically reduced crime rates.

www.newmillconsultants.co.uk/Casestudies.asp?x_id=4

CHANGE: Managing land use and changing urban form

Separating land uses to reduce the impacts of conflicting land uses

Mixing land uses to avoid long commuting distances and to increase walkable access to services

Performance policies that assess health impacts on a case-by-case basis

Transit oriented development
- reducing car dependence and improving access by foot, public transport and bikes

3.2 Managing land use and changing urban form***Land use separation***

Traditional links between public health and planning are credited with the birth of land use separation as a mechanism for managing the impact of high impact activities on vulnerable land uses (dwellings, schools, hospitals), thus reducing the risk of respiratory disease and exposure to toxic substances and noise. Zoning policies remain the dominant land use tool in Australia's land use planning processes and seek to separate land use into like forms such as residential, industry, primary production, centres and commercial.

Historically, land use planning has also had a strong role in locating vulnerable land uses away from high risk area such as flood and bushfire prone land, contaminated land and land subject to increasing risk of sea level rise and storm damage.

Mixed land use

Whilst a wider view of public health has been adopted by the World Health Organisation to include health and wellbeing beyond the traditional understanding of public health, new faces to old public health problems have arisen in the form of mixed land use and the dominance of car use.

Mixed land use and the slow elimination of land use separation has arisen through a desire to improve access to a range of services (housing, shopping, employment) without the need for long commuting distances. Transit-oriented development, which seeks to create mixed use development along transport routes, is a particular focus of current planning practice in Australia. Mixed land use areas will require effective design and planning to ensure that negative health impacts caused by incompatible land uses are not generated.

CASE STUDY: PORTSMOUTH CITY COUNCIL, ENGLAND

The Portsmouth City Council's (PCC) Land Use Plan (2005) strongly promotes the creation of areas of mixed land uses, recognising that mixed use activity has the potential to reduce sprawl-related stress, including health and wellbeing stress. Policies have been drafted by the PCC to manage the impact of land uses in mixed use areas on people living and working in the area including noise, vibration, odour, light or pollution, which can be exacerbated in mixed use areas due to extended hours of operation.

The PCC Land Use Plan states that the creation of areas of mixed use activity "must not be at the cost of local amenity, and there may be some circumstances where uses are incompatible" (p.33).

For uses that are not incompatible, the Plan requires that layout and design be carefully considered at an early stage to minimise impacts. Of significance is the application of this requirement to both generating and receiving land uses where traditionally the burden of heavy design consideration has rested with the generating land use. The PCC requires that these design requirements be secured by conditions of approval or land use agreements.

www.portsmouth.gov.uk

Performance policies and design

Policies to appropriately locate and design land use can significantly improve health related outcomes such as solar access, the impacts of artificial light glare, noise and pollution. These benefits apply in managing the impact of land uses within zones, on adjoining zones or within mixed use areas. Reducing car use in general is a major focus of many Australian state and local governments. Specific attention needs to be given to the high levels of car-related pollution and noise generated along major roads, adversely impacting on the health of people living and working nearby. For mixed use zones, greater dependence on good policies and design guidelines as well as collaborative planning processes may be needed to manage these impacts.

CASE STUDY PORT ADELAIDE CENTRE VISION AND FRAMEWORK, ADELAIDE

The City of Port Adelaide and Enfield and the South Australian Government, working with Hassell architectural firm and Professor Jan Gehl, used a layered local area design approach to developing an Urban Design Framework for Port Adelaide. This incorporated an overall Master Plan, eight policy area plans (to guide future Development Plan amendments), and concept plans for selected sites. The multi-layered approach provides clear direction with flexibility to meet changing circumstances.

www.portenf.sa.gov.au/site/page.cfm?u=258

City form

The form of a city, and in particular its walkability, can greatly influence the health of its population. The State of the evidence review by Raine et al (2008) found that walkability is positively influenced by increased residential density, mixed use zoning and street connectivity and conversely affected negatively by urban sprawl, low intersection density, low residential density and low land use mix. These negative factors were exacerbated in lower socio-economic areas.

The 'grain' of a city, its intersection density, or its road network, can also be designed or tailored to improve walkability. Good connections with direct and convenient routes lead to more walkable areas and higher levels of physical activity. Jacobs (1993) analysed street networks around the world and found that the most walkable cities had between 400 to 1,000 intersections every square mile (eg London, Rome, Tokyo). Travel survey research in Portland and Atlanta, America (Smartraq, Goldberg 2007) assessed residential density, land use mix and connectivity and showed that people in the most walkable areas were up to 2.4 times as likely to exercise for 30 minutes a day. When compared with the difficulties in negotiating winding roads and cul-de-sacs, the multiple opportunities to vary routes in grid networks was seen to be a major factor in an area's walkability as was mixed land uses, which provide multiple destinations.

CASE STUDY SMART GROWTH MOVEMENT, USA

The Smart Growth Movement, based in the US, is shaped around reforming cities to improve environmental performance, reduce ecological footprints and reduce the sprawl of American cities. A major component of the

movement is to facilitate physical, social and mental health and wellbeing in communities through design ordinances, city planning and projects. Smart Growth Online provides resources, research and information about smart growth at a site, neighbourhood and city level.

www.smartgrowth.org

Growth management - managing urban sprawl and encouraging cities to be more conducive to healthy lifestyles, - is a theme encompassed by a number of government and non-government entities throughout the world and in particular the Smart Growth movement. Whilst the growth management concept originated in an attempt to reduce environmental impacts and pollution caused by car-dominated cities, it has been used more widely to improve environmental, social and economic outcomes in growth areas. Smart growth is often used interchangeably with mixed use, transit oriented development and pedestrian oriented development.

CASE STUDY SOUTH EAST QUEENSLAND REGIONAL PLAN, AUSTRALIA

South East Queensland is Australia's fastest growing region, reaching from Noosa in the north to Coolangatta in the south. By 2026, its population is expected to increase by more than one million to around four million people. In 2004, the impacts of such major population growth were recognised formally and the *Planning Act* (1997) was changed to facilitate a regional planning approach that has precedence over other local planning directions. The new planning legislation was designed to manage growth, land use, the needs of a growing population and protect natural environments.

www.dip.qld.gov.au/seq

Transit oriented development

Transit-oriented design (TOD) and smart growth are just two terms used to describe locations that are characterised by integrated public transport, mixed use development, fewer facilities for cars and walkable environments. In the North American context, this form of urban environment is used to counter the unhealthy effects of urban sprawl, including commuting stress, pollution, traffic, obesity and poor social connectedness.

CASE STUDY: CHINA GREEN REDEVELOPMENT, SUBIACO, WESTERN AUSTRALIA

The 4.2 hectare China Green redevelopment, situated in Subiaco Western Australia and managed by the Subiaco Redevelopment Authority is located on the former site of the Australian Fine China Factory. The redevelopment is a good example of Australian transit oriented development. The plans for redevelopment include 56 sustainability criteria and a range of health objectives.

The China Green redevelopment is designed to locate housing and places of employment close to public transport. It includes open spaces, safe community design, linear street patterns and connections that are designed to encourage walking and cycling and use of alternative modes of transport.

A variety of housing types for all ages and all stages of life are provided, together with 10-15% affordable housing and will cater for 600 residents.

A central area including a boulevard and open space provides a range of experiences designed to create a sense of place, provide a community focal point and encourage physical activity opportunities, with the aim of achieving positive mental and physical health impacts.

www.chinagreen.com.au

Transit-oriented development can be applied to greenacre developments but is seen to be more effective in areas ready for redevelopment where better use can be made of existing infrastructure. Siegman (2003) identifies a number of factors that characterise Transit Oriented Development:

- Location within a five to 10-minute walk of the transit stop;
- A balanced mix of uses that generates all-day transit use and places to work, to live, to learn, to relax and to shop;
- Place-based zoning that encourages buildings that define memorable streets, squares, and plazas, while allowing uses to change easily over time;
- A fine-grained network of streets with small blocks, dispersing traffic and allowing for the creation of quiet and intimate thoroughfares;
- No minimum parking requirements and maximum parking requirements to limit the number of spaces;
- Full market rate charges for all parking spaces, possibly excepting parking for shoppers;
- Availability of bike facilities such as free attended bicycle parking, repairs, and rentals at major stops. Provision of secure and fully enclosed bicycle parking at minor stops;
- Fast, frequent, reliable, and comfortable Transit services, every 15 minutes or less;
- Allocation of roadway space and traffic signals timing primarily for the convenience of walkers and cyclists;
- Meeting automobile level-of-service standards through congestion pricing measures, or disregarded entirely; and
- Calmed traffic, with low speed designed roads.

In a study of 17 Transit Oriented Developments in America (2004), the American Transit Cooperative Research Program found that Transit Oriented Developments reduced the number of car trips by as much as 50% as a result of easy walking distances, public transport availability and mixed use development.

CASE STUDY: ORENCO STATION, PORTLAND, OREGON

Well recognised for its achievements in transit oriented development, Portland designated the Orenco Station as a town centre in its 2040 Community Plan. Its redevelopment centres around the light rail system and mixed use town centre and also features walkable streets, a main pedestrian boulevard, a central park and traffic arrangements that are designed to slow cars and make cycling and walking more desirable.

The developers of Orenco Station, Costa Pacific Communities seek to “create communities with a pedestrian-friendly scale” and prioritise mass transit,

walking and biking which helps to create “safer, socially connected neighborhoods with healthier residents” www.terrain.org/unsprawl/10/

CHANGE: Community focal points and place making

Community focal points encourage social interaction at a neighbourhood level

Improving access to services and facilities support the community and provide connection opportunities

Well-designed buildings reduce barriers and improve opportunities to interact with neighbours

Effective policies can encourage the establishment of focal points and community gathering places

Good policies can reduce barriers to the introduction of land uses that provide spiritual and social support

3.3 Community focal points and social connectedness

Community focal points and place making

Providing community focal points for local neighbourhoods can provide pleasant public gathering spaces, which encourage human interaction and social connectedness. The theory of ‘place making’, ‘creating places for people’ and ‘community focal points’ involves designing public spaces that not only look pleasant and achieve architectural merit but also meet the needs of the people who use, or potentially use, the space. The New York Project for Public Spaces (2008) reports that parks that are “guided by the belief that design alone can produce a great place” are unhealthy and one-dimensional. Greater thought about how people use public spaces can tailor a design that fosters social as well as aesthetic benefits. (Madden and Fried 2008)

The research of Jan Gehl has helped document Copenhagen’s 30-year experience in creating places for people by applying people-based outcomes to the design of public places, showing that places can be purpose designed to provide successful, well used community focal points and places for social interaction.

Cultural hubs, places of spirituality and heritage sites also form important places for social connectivity and spiritual and cultural health. Planning for these facilities can present issues associated with traditional land use conflicts such as traffic, parking and noise but their importance to community health may require consideration of both location and design so that links to local neighbourhoods are maintained.

CASE STUDY: CITY OF MITCHAM COMMUNITY HUBS PROJECT, ADELAIDE

A City of Mitcham study (2004) into the importance of community focal points showed that accessible, community-based focal points for community interaction, meeting places and services was important to creating a sense of place and social connectedness. The resulting Council-endorsed action currently being implemented will develop three community hubs in three geographic communities, one of which is outside the Council’s boundaries. This indicates the willingness of the Council to extend its planning across traditional governance boundaries.

www.mitchamcouncil.sa.gov.au/site/page.cfm?u=883

Building design

The design of buildings can also assist in creating a sense of social connectedness and wellbeing. Porches, smaller front setbacks and fence-less front gardens can increase social interaction at the street level and replacing blank walls and garage fronts with windows and verandahs can be less threatening for pedestrians walking along the street, thus reducing barriers to social interaction at a neighbourhood level.

CASE STUDY: BELMONT DAIRY, PORTLAND, OREGON

The Belmont Dairy, a large abandoned contaminated site, was redeveloped in the late 1990s as a mixed use development including housing, retail, food outlets and affordable housing. Design of the redevelopment encompasses social elements that extend to the design of the buildings themselves. Dwellings are designed to be accessed from the rear so that balconies, bay windows and front porches face the street instead of garage walls, thus increasing opportunities for neighbourly interaction and more comfortable, pedestrian-oriented streets.

www.smartgrowth.org/library/articles.asp?art=1812&res=1280

Access to facilities

Providing good physical access to treatment and support facilities as well as community services, support groups and community centres can improve a neighbourhood's social capital and increase interaction. Analysing and responding to areas with poor access to facilities may also be able to reduce geographic inequities.

Policies that encourage community focal points

Policies that provide the spatial context for community focal points also need to be supplemented by the right type of zoning and land use policies. Land use separation policies can be a disincentive to creating community focal points close to residential communities as they are designed to keep residential land uses separate from other activities. Focal points such as community centres, church facilities, kindergartens and cafes can be accompanied by impacts such as car parking, noise and generally more intensive activity. Perceptions that shops, community buildings and public spaces in residential areas may attract undesirable anti-social behaviour can be a significant barrier to developing community focal points in established areas. As a result, some local authorities have faced public opposition to the establishment of facilities close to houses. Effective policies that encourage well-designed community focal points at a neighbourhood level, and that are prepared in collaboration with the community, may help resolve some of these issues.

CASE STUDY: BLOUNT STREET, RALEIGH, NORTH CAROLINA

Blount Street is an inner city historic neighbourhood with a large proportion of state-owned land. An early decision was made in its redevelopment process to create a mixed use development rather than use solely as office space.

Redevelopment guidelines were prepared to provide direction to potential developers. These were based on real estate and market research and community and developer roundtables. A specific focus of the redevelopment project was to foster "a healthier, more sociable" place. (City of Raleigh 2004 Guidelines focused on public spaces and creating lively community places as much as the building design.

www.raleighnc.gov/portal/server.pt/gateway/PTARGS_0_2_306_200_0_43/ht tp%3B/pt03/DIG_Web_Content/project/public/livable_streets/blount.htm

CHANGE: Community engagement

Involving communities at the neighbourhood level reduces community uncertainty and stress

Engaging at the right time ensures that engagement is 'real' and not token

Being clear about the right level of engagement makes sure that communities are certain about the level of influence they have

Supporting volunteerism in planning for urban places increases sense of pride and responsibility

3.4 Engaging the community in planning***Involving communities in neighbourhood planning***

Effective community engagement has multiple effects on community health and wellbeing. Engaging local residents and businesses in planning for and designing neighbourhoods can aid the mental and social health of a community by:

- increasing opportunities for socialisation and networking and creating communities that support each other in times of need;
- creating a sense of place/connection to their neighbourhood, strengthening pride and responsibility;
- reducing social isolation and break down cultural and socio-economic barriers;
- improving design outcomes so that they meet the needs of local users;
- empowering communities and providing them with greater control over their environment.

CASE STUDY: TAPPA IRI REGIONAL AGREEMENT, ADELAIDE

In Adelaide, the Tappa Iri Regional Agreement 2005-2008, signed by the Kurna Heritage Board and four southern Adelaide Councils (Onkaparinga, Holdfast Bay, Marion and Yankalilla) has facilitated a program of greater engagement of Kurna people on Kurna land. Several urban design and planning projects, including those at Christies Beach, Warriparinga, Port Willunga and Kingston Park, have engaged Kurna cultural specialists in the collaborative design of public spaces. Anecdotal outcomes have included greater empowerment of Kurna people, greater cultural awareness and improved sense of place - all contributing to community wellbeing and social health. The four Councils and the Board have been awarded at the National level for the process.

www.onkaparingacity.com/tappairi/page?pg=79

Timely engagement

In Canberra, community participation has been identified as being a key aspect in the maintenance of a healthy community in the consultation document *Your Canberra, Your Say* (ACT Government 2003). Nine neighbourhood planning processes were subsequently used as the vehicle for encouraging public participation in planning. Participation in this early planning phase enables greater empowerment and opportunity to shape neighbourhoods than 'end-of-the line' consultation at the development control phase.

Adopting the right level of engagement

Ensuring that the right level of engagement is adopted for a particular consultation exercise is critical according to the International Association of Public Participation (IAP2), which advocates for differing levels of participation "based on goals, time frames, resources and levels of concern or interest in the decision to be made" (2007, p.1). Being clear about the level of engagement ensures that the expectations and promises made are clear and do not result in disillusionment. The IAP2 Public Participation Spectrum identifies five levels of participation: inform, consult, involve, collaborate and empower.



CASE STUDY: CITIZEN PLANNING STEERING COMMITTEES, PORTLAND, OREGON

Portland is internationally recognised for its participative planning processes that seek to empower its residents at all levels of the planning system. Punter (1999) reports that Portland has a history of an “extremely high level of involvement and devolved resources” (p.197) which includes funding of lobby groups, early notification of development, citizen participation in pre-development discussions with developers and volunteer citizen steering committees for planning projects. Punter notes that the volunteer citizen steering committees and very large public participation budgets could have been linked to the fact that there were “no citizen revolts over the 1988 Downtown Plan in Portland as there was in Seattle and San Francisco” (p.197). Ozawa (2004) reports that the Portland Metro Council’s “signature growth management planning effort would never have happened without the participation of a wide range of interests” (p.55) as it was the citizen steering committee that called for the creation of the Region 2040 Growth Concept.

The current light rail project, which is proposed to link Portland and Milwaukie, is also overseen by a Project Steering Committee which reports to the Metro Council. On that steering committee is the chair of the Citizen Advisory Committee. A range of other participation mechanisms are employed including open houses, hearings, meetings, workshops and presentation to community groups. Portland’s planning processes, including its participative approach, is thought by some to have influenced its position in America’s quality of life standings.

www.oregonmetro.gov/index.cfm/go/by.web/id=223

Volunteering and community building

Levels of volunteerism are also well recognised as an indicator of community wellbeing and social connectedness. Volunteerism is particularly strong in the fields of environmental management (eg. Landcare, Coastcare) and community services (eg libraries, community buses). Many local authorities invite volunteers to be a part of the implementation phases of urban planning projects to increase sense of place, empowerment, responsibility and social connection. Examples of this include school-based planting projects and working bees.

CASE STUDY: PIAZZA DELLA VALLE, ADELAIDE

In McLaren Vale, the Piazza Della Valle Italian Heritage Committee is planning to design and construct a town square that celebrates the Italian contribution to the growth of McLaren Vale, creates a focal point and meeting space for locals and provides space for community activities. Volunteers, who have run their own community engagement process and funding drive, manage the project. Whilst the Committee plans to involve the local council in funding,

approvals and land donation, it intends to make use of volunteer donations and time in the design and building process to ensure that the Piazza is created by locals for locals.

CHANGE: Securing access to good food

Protecting food production and processing close to points of sale and consumers improves access

Distributing centres for local access to quality and unprocessed food improves equity

Policies can encourage good food access and reduce barriers for the establishment of food outlets

Equity issues and relative availability of good food choices can be managed for disadvantaged locations

Opportunities for the establishment of alternative and community food outlets such as food co-ops and farmers' markets can be improved through planning

3.5 Securing access to food

Protecting food production

Managing population growth, particularly in relation to the encroachment of urban areas on farmland is a major issue for a number of American and Australian cities. The American Smart Growth Network actively seeks to protect farmland and manage urban sprawl. One of its aims is to protect sources of food production and to enable food production in close proximity to population centres in an effort to make good food more accessible and manage the cost of transportation. Urban Growth Boundaries and transit-oriented development are two methods particularly advocated by the Network.

In many land use plans, controls that manage the impacts of primary production are strictly applied, particularly in peri-urban areas where urban development has encroached into farmland and on the edges of towns. Commonly, the burden of managing spray drift, noise, pest control and weeds falls on the farmer and can significantly impact on viability. Shared responsibilities for managing interfaces between land uses in planning phases can assist in reducing this burden and protect the viability of food production areas close to the city.

Opportunities for food production within urban landscapes, including community farming, backyard food production and permaculture can also be protected by planning policies, which historically can be limiting, particularly in relation to the keeping of animals. Projects that encourage edible landscapes and streetscapes, such as the Arts Eco Village in Aldinga, South Australia, can improve access to food.

Centres policy

Geographical access to healthy food has diminished with the significant reduction in the number of corner shops in Australia's neighbourhoods resulting from changing retail and car use trends. In South Australia, the number of local centres is also diminishing. Not all local centres are protected by zoning provisions and the pressure for residential development has seen their rapid conversion to housing. Even where local centres are protected by zoning, local governments are under increasing pressure from land owners and the community to rezone local centres, which may have experienced years of neglect, vandalism and unstable tenancies. For those food retail outlets in local centres, prices are often higher and choice is usually smaller when compared with larger centres.

Policies to encourage good food access

In some land use plans, policies and controls can present a barrier, creating environments where it is difficult to access healthy food. Controls over the use of roadsides and footpaths for food kiosks and fruit and vegetable stalls can be prohibitive for local producers to sell produce locally whilst some limitations on building scales or floor areas can limit the establishment of grocery stores, which

require a certain amount of space to be viable. The design of town squares and open spaces can also encourage the physical space for growers' markets, stalls and community gardens in local communities.

The use of high-quality farmland for primary production can be enhanced greatly through the adding of processing, packing and sales activities (often termed 'value-add' activities, or ancillary industries). Such activities can enhance the viability of a primary industry, reduce transport costs and create flow-on tourism benefits. Some successful examples of this include King Island, Tasmania and Kangaroo Island, where good quality gourmet foods are farmed, processed and packaged in local areas. Planning policies have traditionally preserved land zoned for primary production for farming activities alone and there is potential for primary production zones to adopt a more mixed use approach whilst still maintaining high value agricultural land.

CASE STUDY: MARIN COUNTY, CALIFORNIA

In Marin County, changes to its land use plan to facilitate access to healthy food and remove barriers to healthy food access have been undertaken. Promotion of denser development made more accessible to transport, protection of agriculture and open space, support for good food sources like farmers' markets and local outlets.

<http://icma.org/sgn/newsdetail.cfm?nfid=2666&id>

Equity of access

The availability of healthy food varies geographically according to a family's socio-economic status, access to private or public transportation and environment-specific design. The relative availability of fast food options also combines to create pockets of inequitable access to food. Planning for new and retrofitting for existing areas to address food availability will require a good understanding where these pockets are.

CASE STUDY: SCOTTISH FOOD AND DRINK PLAN, SCOTLAND

The Scottish Food and Drink Plan (2007) was developed in response to the desire to maintain Scotland's reputation as a major economic contributor to the region as well as acknowledge supply chain issues and coordination issues between fishers and farmers, processors and points of sale. Its focus is to be globally competitive by meeting consumer demands and to add value to existing producers by providing a coordinated approach to managing the supply chain from growing to processing and consuming, thus reactivating the connection from farmer to table.

www.scottishfoodanddrink.com

Access to alternative food outlets

The quality of food is an increasingly important factor in Australia's food choices. Lyons (2001) indicates that consumer health concerns and the disconnection of industrialised farming have led to the need to rethink systems of food production as a result. Access to alternative food outlets that offer more affordable, organic

or 'direct from the farmer' produce can however be constrained by land use requirements and access to appropriate and affordable buildings or places in which to locate.

Food cooperatives, farmers' markets, specialty shops, and on-road kiosks can find difficulty finding a place in urban environments as they may not neatly fit into established zoning patterns and requirements. Such outlets are usually conceived and run by local community groups and thus require nearby accommodation in order to be successful. Their volunteer base may be restricted by planning issues like building availability (e.g. community houses) or places (e.g. town squares), even if the zoning patterns allow such uses. Retail trends such as declining corner-delis and local centres may also reduce opportunities for alternative food outlets.

CHANGE: Adapting to climate change

Protecting people from the elements reduces barriers to social interaction and physical activity

Water proofing secures access (including financial access) to quality water

Design and planning can manage and reduce the risk of human injury or infirmity due to climate associated risks such as flood, fire and heat stress

Focusing on disadvantaged communities can help manage the equity and health issues associated with climate change including the expense of water and power

3.6 Adapting urban environments to climate change

Protection from the elements

The urban heat island effect is the additional heat caused by radiation from 'hard' surfaces. This increases heat stress and is a barrier to physical activity and outdoor social interaction. A National University of Singapore study identified that introducing more green surfaces, including green roofs, walls and landscaping, could reduce the additional heat generated by city areas. The mitigation of wind tunnels through street layout design was also identified as a strategy for adapting urban environments to improve levels of user comfort.

Protection from the elements in areas of high pedestrian traffic including footpaths, open spaces, meeting spaces, bus and tram stops, train stations, taxi ranks, pedestrian crossings and the entrances to buildings, is an important mechanism for reducing heat stress, improving levels of walkability and comfort and reducing reliance on air conditioned cars and buildings for relief.

CASE STUDY: NEW YORK CITY REGIONAL HEAT ISLAND INITIATIVE

In New York, the City Regional Heat Island Initiative found that on summer days, the temperature of the city was on average four degrees centigrade higher than in surrounding suburban areas having significant impacts on public health and comfort levels. Major health risks were identified including heat stress and respiratory illness cause by increased pollution and the health impacts of resulting power outages. Flow on impacts include lower levels of physical activity due to discomfort.

New York is a city well-recognised for its walkability and climate change impacts are a potential barrier to maintaining this reputation if walking becomes a less desirable option because of health and comfort levels. The initiative concluded that urban forestry and living roofs had the greatest potential to mitigate the urban heat island effect, thus reducing the impacts of heat stress, pollution and avoidance of physical activity.

www.google.com.au/search?hl=en&q=new+york+regional+heat+island+initiative&btnG=Google+Search&meta=

Water proofing

Accessibility of clean and well-priced water is also a major consideration in the face of climate change, particularly for Adelaide. The Federal Government has identified that Adelaide is especially vulnerable to the impact of drought caused by climate change (SMEC 2007). Planning for new areas and redevelopment of old will need to consider secure access to water and promotion of alternative water supplies that are accessible to all communities.

Risk management planning

Design and location of infrastructure will also become more critical to planning processes to minimise risk to the public in fierce weather and in the face of sea level rise and increased flooding risk. Further integration of these elements into planning policy assists a community to adapt to climate change through the design and location of land uses.

Land use capability

The capability of land to meet the demands of a particular land use can be affected by climate change through impacts such as reduced access to water, salinity, inundation or topsoil loss. The impact of these changes on land capability most readily affects food production and can result in reduced productivity and/or less land available for production. Incorporation of land use capability mapping and analysis can assist in planning for primary production and protecting long term availability of productive land.

Equitable access to services affected by climate change

It is likely that climate change impacts on the community will vary by geographic location, with pockets of compounding disadvantage and equity issues. Families of lower socio-economic status are particularly vulnerable to the impacts of climate change as they generally lack the resources to secure access to increasingly scarce and/or expensive food, consumables, water and power. In addition, the elderly and the very young are likely to feel the impacts of heat stress resulting from climate change.

CASE STUDY: PORT ADELAIDE ENFIELD PUBLIC AND ENVIRONMENTAL HEALTH PLAN

The Port Adelaide Enfield Public and Environmental Health Plan 2007-2012 responds to issues beyond the scope of legislation, including the impacts of climate change on its population. Sustainable management of the natural and built environment is one of its five major goals for the next five years. Climate change is seen as a particular threat to the Port Adelaide Enfield community due to its higher proportion of low-income families and aging population. The Plan contains 40 strategies for sustainable management of the natural and built environment as part of its vision to protect and enhance public and environmental health.

www.portenf.sa.gov.au/site/page.cfm?u=198

CHANGE: Understanding health

‘People’ research in urban environments helps us understand more about health impacts and status

Mapping and research helps us understand more about geographical inequities so we can tackle them in a meaningful way

Understanding the impact of projects and proposals on health outcomes helps build healthier cities

3.7 Understanding more about the health of neighbourhoods**‘People’ research**

Understanding the health and wellbeing status of a place and its relationship to the urban environment, information about people, how they use spaces, modes of travel and barriers to healthy living can assist in identifying actions and changes in urban form. Jan Gehl is particularly supportive of social research in planning and urban design as it provides supportive evidence for change.

Reporting on health outcomes at a local and state level can assist in understanding health status and links between health and urban form. Some local governments in South Australia are also adopting wider approaches to reporting through ‘triple-bottom-line reporting’ or ‘strategic indicators’ that may include self-reported health status and health statistics.

It is important to note that the intent of improved understanding of people and health would be to improve outcomes and the effectiveness of implemented actions. Therefore, action-oriented and ‘road-testing’ research may provide the key to implementing a long term action plan.

CASE STUDY: COPENHAGEN, DENMARK

Copenhagen is internationally recognised for its 30-year transformation from a car-dominated to a people-dominated city by making the city more bike and people friendly, reducing traffic and facilitating a café culture and public meeting places.

Jan Gehl’s (2004) research on people patterns in Copenhagen, how people use spaces and act within them, and the choices people make in relation to transport is considered instrumental in the city’s transformation. In a 2002 interview, Gehl stated, “In Copenhagen we’ve pioneered this as a working method: study what’s going on, look at the problems and potentials, improve it, and check it again, so that you can follow the development ... The politicians and city planners became confident because we had all the data measuring the success in hard facts, which in turn they could show to fellow politicians and businessmen”. (Gehl 2003) Jan Gehl is an advocate for studying of people (observational) with as much intensity as most cities study vehicle patterns and use.

www.metropolismag.com/html/content_0802/ped/index_b.html

CASE STUDY PORT ADELAIDE CENTRE VISION AND FRAMEWORK, ADELAIDE

The City of Port Adelaide and Enfield and the South Australian Government adopted Jan Gehl’s approach to the study of people by integrating a detailed study of the Port in its Vision and Framework document (2006). In developing an understanding of Port Adelaide, the Vision and Framework document details functional and spatial relationships, movement patterns, gateways and views, built form, public domain, open space and links, legibility, heritage and culture, and economic vitality in order to build a picture of the ‘people’ and other influences on its future revitalisation. The analysis forms a fundamental component of the master plan, policy area plans and concept plans that will guide future development of the Port.

www.portenf.sa.gov.au/site/page.cfm?u=258

Geographical inequities

Studying and understanding geographic disparities in health and wellbeing can help influence place-specific strategies and align local funding into areas of need. The Social Health Atlas of SA (2008) is an example of a good resource, providing information on morbidity, mortality and stress on a geographic level.

Understanding how much the physical environment influences health and wellbeing builds on this type of reporting by linking environmental factors to geographical differences. A greater understanding of how these links manifest in the local area can again assist in tailoring specific strategies and ideas.

CASE STUDY: STUDY OF FOUR POSTCODES, ADELAIDE

Four Adelaide postcode areas were studied by Flinders University (2007) to better understand the geographic and socio-economic disparities in health. The study found that areas of socio-economic disadvantage were less likely to be healthy than areas of higher socio-economic status but that this was influenced by the infrastructure and services provided in the local area.

<http://som.flinders.edu.au/FUSA/SACHRU/Staff/FB.htm>

CASE STUDY: REGIONAL EQUITY ATLAS, PORTLAND, OREGON

Portland's Regional Equity Atlas (2007) is an online tool for planners, communities and businesses to provide information about geographical inequities. It maps employee access to affordable housing in proximity to jobs, communities with good and poor access to parks, grocery stores, transport and other facilities. The resource will be used to design growth management strategies to understand more about and reduce geographical inequities.

www.equityatlas.org

4 Mechanisms for integrating health and planning

In researching the potential mechanisms for integrating health and planning, a number of opportunities have been identified. There is potential for a number of these mechanisms to be integrated.

- Governance, leadership and partnerships;
- Culture change and capacity building;
- Legislative change;
- Project management and infrastructure;
- Strategic and corporate planning;
- Local area planning;
- Health Impact Assessment;
- Planning policies and the Development Plan;
- Community engagement programs;
- Research and incremental improvement.

MECHANISMS:
**Governance, leadership
 and partnership**

Health in all policies
 Cross-sector partnerships and
 agreements
 Round-tables and discussions
 Place based alliances
 Redevelopment authorities

4.1 Governance, leadership and partnerships

Partnerships across all levels and portfolios of government assist in fast-tracking culture change, ironing out inconsistencies in approach and improving levels of awareness. Opportunities to add value to existing programs and projects and realign resources can also be identified.

CASE STUDY: HORIZONTAL POLICIES: HEALTH IN ALL POLICIES

In Finland, strengthening the link between health and all other policies is a major government direction that intends to push the consideration of health beyond the traditional boundaries of the health sector and across multiple government departments. Following a recommendation by Adelaide Thinker in Residence, Ilona Kickbusch, South Australia has also proceeded down this path. A major aspect of the Health in All Policies approach is the partnership building between government departments and levels to ensure a consistent approach to the achievement of strategic goals.

www.thinkers.sa.gov.au/ikickbusch_reports.html

The 2003 Adelaide Thinker in Residence Charles Landry discussed the issue of leadership in relation to transforming Adelaide in 2003 and suggested that Adelaide needed leaders at all levels who were willing to “move from strategists that command and demand, to visionaries that excite and entice”
http://www.adelaidereview.com.au/archives/2004_01/issuesandopinion_story1.shtml Opportunities to seek leadership opportunities along these lines within the health and planning professions may improve culture change success.

CASE STUDY: ALLIANCES: SOUTHERN SOCIAL PLANNING ALLIANCE, ADELAIDE

In response to a number of identified social planning issues and the large number of government and non-government service providers across southern Adelaide, the Southern Social Planning Alliance was formed in 2000. The Alliance gives a mechanism for managing cross sectoral and multi-level government issues associated with planning for and implementation of social services. The alliance oversaw the implementation of the Southern Social Planning Study (1999) and a number of round tables on specific focus areas such as housing.

www.onkaparingacity.com/web/page?pg=1228

Other governance mechanisms employed to facilitate an integrated approach to area-based revitalisation include redevelopment authorities and joint ventures, which can assist in breaking down barriers between traditional government portfolios as well as provide a more integrated approach for areas facing intensive change.

CASE STUDY: REDEVELOPMENT AUTHORITY: MELBOURNE DOCKLANDS

In Melbourne, the Docklands Authority was established in 1991 with a mandate to redevelop and revitalise the docklands. It was a separate entity that reported to the VicUrban Board. A docklands protocol agreement was

developed to clearly outline the roles and responsibilities of the various authorities involved in managing the area. Transition arrangements following the implementation of the project are now in place to return the governance of the area to the City of Melbourne Council.

www.melbourne.vic.gov.au/info.cfm?top=317&pg=3953

MECHANISMS: Culture change and capacity building

Booklets and flyers

Guidelines and toolkits

Seminars, professional development and training

Online resources with links

Ongoing news and support, possibly through a professional body

Financial incentives and grants

4.2 Culture change and capacity building

The capacity for health and planning professionals to implement changes to the urban environment to facilitate health outcomes is limited by awareness as well as knowledge of the issues and appropriate actions. To improve levels of awareness, tools including guidelines, seminars, training and ongoing support can be employed.

Partnerships with organisations across government levels and portfolios and building on existing mechanisms are likely to improve chances of successful culture change.

CASE STUDY: PROFESSIONAL GUIDELINES: HEALTHY BY DESIGN, VICTORIA

The Victorian Division of the Heart Foundation *Healthy by Design* guidelines is an example of capacity building for planners and provides a toolkit for how to integrate urban design outcomes into planning decisions to achieve health and wellbeing outcomes. In addition, a program of workshops and training opportunities have been integrated across Victoria, aimed at the local government planner and council decision makers. A review of the program, including a survey of planning professionals, has found that it has been very successful in raising awareness of the link between the urban environment and health. One of the main features of the *Healthy by Design* program is its partnership approach between government, not-for-profit and professional groups and organisations.

www.goforyourlife.vic.gov.au/hav/articles.nsf/pracpages/Healthy_by_Design?OpenDocument

Financial incentives and grants can be used to encourage desired outcomes as in the city of Portland, USA. In Portland, large grants and subsidies are used extensively to encourage the private sector to deliver the city's goals. The capacity to leverage change with financial incentives is also influenced by resource availability. In South Australia, the capacity of local government as well as the capacity of the profession to respond to what may be perceived as an additional responsibility may be a significant barrier.

MECHANISMS: Legislation

Merging of portfolios via Acts

Greater focus in Development Acts

legislative backing for change mechanisms

mandated design standards

mandated planning processes

4.3 Legislation

Legislative change to require greater consideration of health issues can be effective in more strongly linking portfolios. In New South Wales, the planning and environment portfolios are governed by one Act and as a result, the New South Wales planning system is recognised as being strong in the area of environmental conservation.

The extent that legislation is used to implement health outcomes varies considerably in scope and breadth and there is no consistent or general approach. Legislation can be used to mandate specific service standards in planning processes (such as standard open space requirements) or used to mandate required planning processes and reviews. In Victoria, public health plans with a broad health focus are mandated by legislation and a review of this approach has shown that Victoria has been successful in integrating health into strategic planning processes as a result.

However, the use of legislative mechanisms as a way of enforcing change may be perceived as heavy handed when compared to a 'softer' approach involving cultural change and capacity building.

MECHANISMS: projects and infrastructure

Urban design standards and guidelines

Partnerships between levels of government to contribute to projects that deliver multiple outcomes

Pilot projects

Asset management plans and specifications

4.4 Projects and infrastructure

The majority of projects and upgrades to public infrastructure, community buildings, public spaces, parks, town squares and other public spaces are managed and financed by local government, sometimes with grants from State or Federal Government. Opportunities to influence outcomes and possibly develop partnership opportunities could help integrate healthy design objectives.

The provision of roads, footpaths, trails, open spaces, reserves, linear parks, and community services are often governed by asset management plans, design specifications and/or maintenance specifications, which meet Australian Standard requirements but will otherwise vary from council to council.

For the State Government, the urban design charter, which applies to all government departments, helps guide design outcomes whilst local government may have their own urban design strategy or set of urban design guidelines.

Governments are also involved in private enterprises or joint ventures where their level of influence is greater than a wholly private development. Opportunities to influence healthy design outcomes, particularly for large-scale multi-land use projects, are potentially very significant.

MECHANISMS: Strategic and corporate planning

State Strategic Plan

State Infrastructure Plan

Planning Strategy

Issue-based strategies

Council Community Plans

Neighbourhood plans

4.5 Strategic and corporate planning

The South Australian State Planning Strategy provides direction to all local government Development Plans under the Development Act 1993. In addition, local governments must prepare a community plan under the Local Government Act. The two processes are often reviewed together to ensure consistency.

In addition to a community plan and Development Plan, many councils will prepare issue-specific strategies aligned to their financial and resource allocation processes. Public and Environmental Health Plans are examples of this type of plan.

Neighbourhood planning or Integrated Local Area Planning (ILAP) is considered an effective method of engaging local communities in the future development of their neighbourhood. ILAP will commonly involve collaboration with local communities, hands-on workshopping and development of future direction plans that will then be used to guide planning policies and redevelopment programs.

CASE STUDY: CROSS-SECTOR PLANNING: PORT ADELAIDE ENFIELD PUBLIC AND ENVIRONMENTAL HEALTH PLAN

The Port Adelaide Enfield Public and Environmental Health Plan responds to issues beyond the scope of legislation in a strategic manner, integrating cross-sector issues and developing strategies and actions for their implementation. www.portenf.sa.gov.au/site/page.cfm?u=198

CASE STUDY: BOLTON HOUSING NEIGHBOURHOOD PLANS, UK

The Bolton Housing authority in the UK has undertaken an extensive process of neighbourhood planning in collaboration with local communities. www.boltonathome.org.uk/content/Neighbourhood_planning.htm

The 2003 Adelaide Thinker in Residence Charles Landry discussed the process of transforming Adelaide and suggested that a “strategy of smaller steps and occasional imaginative leaps should be the approach” (Landry 2003, p.2), acknowledging that transformation of Adelaide is a long-term process with initiatives building on each other and harnessing support across vested interests.

MECHANISMS: Health impact assessment

4.6 Health Impact Assessment

Studying and predicting the impact (positive and negative) of projects and proposals on health can assist in determining opportunities for further aligning health and physical planning or mitigating the impacts of poor proposals. Such assessment is commonly termed ‘Health Impact Assessment’ (HIA) and is advocated by the WHO as a means of providing decision makers with necessary information about how programs, policies, projects or proposals will impact on health and wellbeing matters.

The WHO (2008) outlines a procedure for the use of Health Impact Assessment:

- Screening - establishes health relevance of the policy or project. Is an assessment required?;
- Scoping - identified key health issues and public concerns, establishes terms of reference and sets boundaries;
- Appraisal - rapid or in depth assessment of health impacts using available evidence. Who will be affected, baselines, prediction, significance, mitigation;
- Reporting - conclusions and recommendations to remove/mitigate negative impacts on health or to enhance positive impacts;

- Monitoring - action, where appropriate to monitor actual impacts on health to enhance existing evidence base.

CASE STUDY HEALTH IMPACT ASSESSMENT: CAMBRIDGESHIRE AND PETERBOROUGH STRUCTURE PLAN HEALTH IMPACT REVIEW, UK

The Cambridgeshire & Peterborough Structure Plan Health Impact Review was undertaken in 2002 to assess its potential impact on the health and wellbeing of the local community. The Review had three directions: to ensure a planning framework for the delivery of healthcare facilities; to provide a pattern of development that supports public health objectives; and to ensure that development provides a safe, attractive living and working environment that contributes to a sense of wellbeing. The Review focussed on reducing inequality across the area and included a toolkit to use in the development of plans at the local level. The need for the Review was identified by Cambridgeshire's Health Improvement and Modernisation Plan, an aim of which was to have health criteria embedded into the Review of the Structure Plan.

www.who.int/hia/examples/development/whohia116/en/index.html

HIA is also integrated into the principles of environmental impact assessment (e.g. Environmental Impact Statements, Public Environment Reports, Development Reports) for major projects under the Federal Environment Protection and Biodiversity Conservation Act, 1999 and/or the South Australian Development Act, 1993.

HIA is of benefit for assessing the potential impact of planning policies as well as projects at all levels. In addition, opportunities may exist to build the concept into development assessment processes (see below).

MECHANISMS: Planning policy

Zoning and land use separation

Performance based policies

Health impact assessment in development assessment

Health impact assessment in Development Plan Reviews

4.7 Planning policies and the Development Plan

In SA, Development Plans are the principle documents used by councils for assessing proposed developments. Development Plans contain two major components: land use zones, which specify what land uses may be undertaken in which locations, and objectives and principles of development control to be applied when assessing the appropriateness of a proposed use.

Planning policies contained within the Development Plan cannot be applied retrospectively (i.e. they only apply to new development) and can therefore be a limited tool for delivering wholesale or short term changes to the urban environment. However, Development Plans can be successful in directing the location and/or design of new development and implementing the strategic directions of a local area.

Opportunities may exist to embed the concept of HIA into the development assessment process by modifying Development Plans and improving awareness and professional capacity. Development Plan reviews, which must be undertaken

regularly by each council can also provide a mechanism for integrating health outcomes.

MECHANISMS: **Community engagement**

Legislative-based requirements
Toolkits and guides
Community engagement strategies
Surveys and questionnaires
Workshops and hands-on seminars
Information distribution
Community-based steering committees and groups

4.8 Community engagement programs

Community engagement programs, consultation, neighbourhood planning and community-based projects can help improve planning decisions and their outcomes (IAP2, <http://www.iap2.org>).

A common mechanism for applying engagement tools that are tailored to specific communities and projects is the Community Engagement Strategy, which identifies goals, the level of engagement required to deliver desired outcomes and mechanisms for achieving those goals.

Extensive work has been done world-wide on different approaches to Community Engagement.

In some cities such as Portland, more intense community participation is evident that extends to community-based steering committees and reference groups that oversee and have a high level of influence and/or control over the outcomes. This approach has attracted praise for the high degree of community control this approach provides as well as criticism for creating an over-governed and cumbersome system.

CASE STUDY: COMMUNITY ENGAGEMENT: PORT ADELAIDE VISION AND FRAMEWORK, ADELAIDE

The Port Adelaide Vision and Framework document was produced following a major engagement process that encompassed building on significant past engagement, regular and timely distribution of information about the project, questionnaires distributed early in the project's life, engagement of local schools, workshops with the council and a Community Futures Forum. The Community Futures Forum in particular provided a hands-on opportunity to help shape the Port's future development.

www.portenf.sa.gov.au/site/page.cfm?u=258

MECHANISMS: Research and incremental improvement

Pilot projects and experiments
Research and review
Value adding and multiple outcomes
Spatial mapping and scenario building
Strategic indicators and benchmarking

4.9 Research and incremental improvement

Understanding more about an area and its community and making incremental changes is a mechanism successfully employed by Copenhagen, Denmark and involves intensive research and observation followed by experimental changes and review. As a mechanism it helps to not only change the physical landscape but also people's attitudes, culture and how they use public spaces.

In 2003, Adelaide Thinker in Residence Charles Landry prepared a report into rethinking Adelaide as a creative city and noted that the transformation of Adelaide is “a long-term process with initiatives building on each other and harnessed support across vested interests” (SMH December 2001 p.1). His observations aligned with those of Jan Gehl in his assessment of Copenhagen.

Research and observational mechanisms are also instrumental in applying policies that address geographically-based issues and inequities, particularly spatial mapping, scenario building and presentation of statistics and measures in atlas form.

CASE STUDY: PEOPLE RESEARCH: COPENHAGEN, DENMARK

Copenhagen is internationally recognised for its 30-year transformation from a car-dominated to a people-dominated city by making the city more bike and people friendly, reducing traffic and facilitating a café culture and public meeting places. After 30 years, 36% of City residents now bike to work and the city has the longest pedestrian street in the world.

Jan Gehl, in his various books including *Public Spaces Public Life*, *Life Between Buildings* and *New City Spaces*, has studied how Copenhagen managed to transform itself so well. He cites the research-based approach as “instrumental in the slow and steady transformation of Copenhagen”. This ‘try it and review’ approach has worked for Copenhagen by changing the culture of its people as well as the quality of its spaces.

www.metropolismag.com/html/content_0802/ped/index_b.html

CASE STUDY: SPATIAL MAPPING: BRITISH COLUMBIA ATLAS OF WELLNESS

The British Columbia Atlas of Wellness provides spatially mapped indicators of wellness that focus on determinants of health including the geographies of smoke free environments and behaviours, nutrition and food security, physical activity, wellness assets and determinants, healthy weights, healthy pregnancy and wellness outcomes. A feature of the atlas is its focus on the geography of healthy environments in contrast to traditional focus on the geography of unhealthy environments.

www.geog.ubc.ca/wellness/

Tracking progress against goals to allow for fine-tuning and/or major change is embedded in the concept of strategic indicators that measure success on a regular basis.

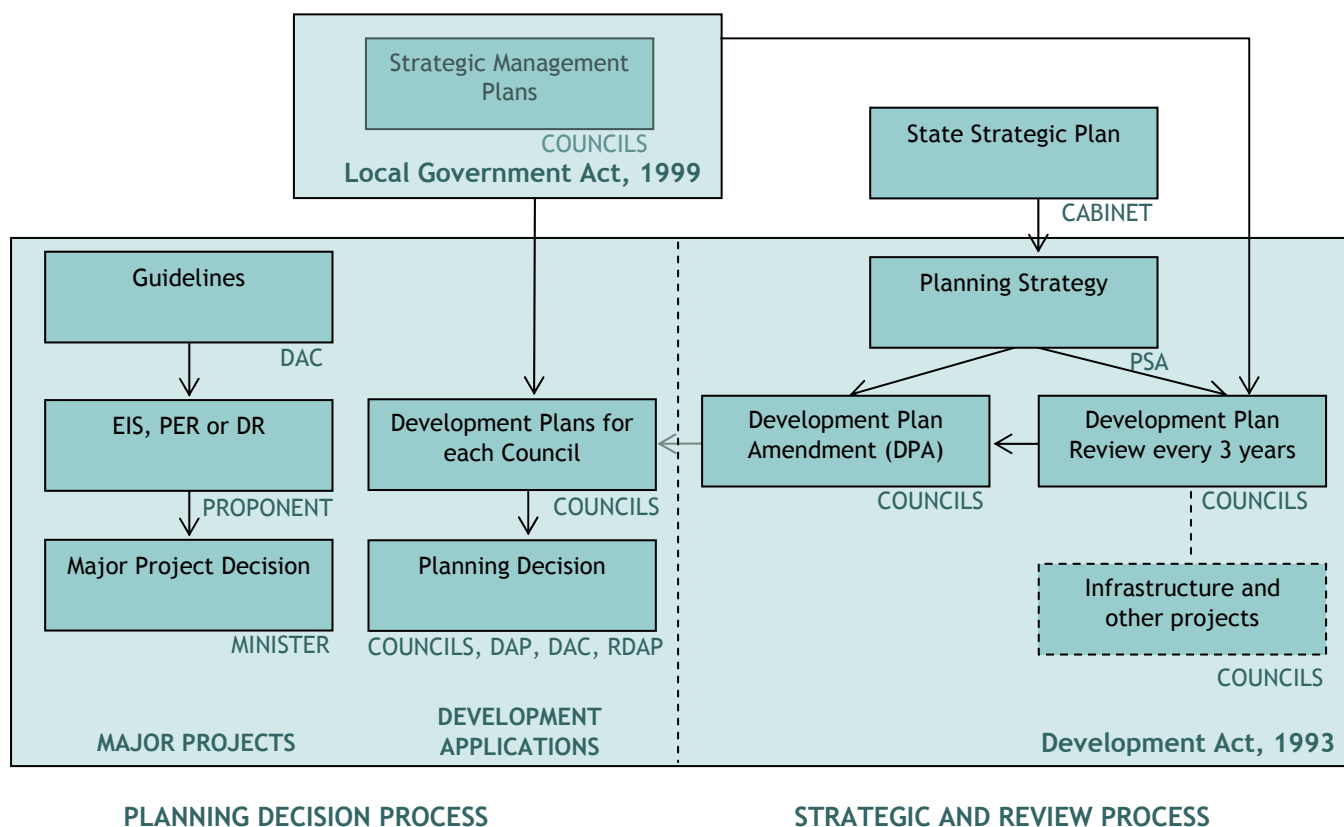
CASE STUDY: STRATEGIC INDICATORS PROJECT, ADELAIDE

The Strategic Indicators Project was undertaken by 13 metropolitan Adelaide Councils to provide research into the value of applying strategic indicators as a mechanism for tracking progress against strategic goals. The project provided a suite of indicators that could be selected and/or tailored to suit an organisation’s needs.

www.aisr.adelaide.edu.au/cio/guide/

5 The SA planning system

The South Australian planning system is governed principally by the Development Act and the Local Government Act. A large component of the planning system is implemented at the local government level but the State Government has a coordination role, particularly at the strategic end. The figure below shows the complexity of the planning system under the two acts and the major components are discussed below.



SA SYSTEM: Strategic Planning

State Strategic Plan
 State Planning Strategy
 Local Strategic Management Plans
 Spatial planning
 Public and Environmental Health Plans
 Regional plans

5.1 Strategic planning

In South Australia, strategic planning is shared at the state and local government levels. The South Australian Strategic Plan is the overall guiding document for South Australia and sits with the Department of Premier and Cabinet. The Planning Strategy, is prepared under the Development Act 1993 and must respond to the targets in the South Australian Strategic Plan.

At the local level, each council must prepare a Strategic Management Plan under the *Local Government Act 1999*. It must contain financial, corporate and strategic goals for the organisation. Regular review of councils' Strategic Management Plans must be undertaken and can occur in unison with the Development Act's requirement for regular review of Development Plans. The Local Government Act also requires that councils (amongst other things):

- plan at the local and regional level for the development and future requirements of their area;
- provide services and facilities that benefit their area, ratepayers and residents, and visitors to that area;
- provide for the welfare, wellbeing and interests of individuals and groups within their communities;
- provide infrastructure for their communities and for development within their area; and
- establish or support organisations or programs that benefit people in their areas or local government generally.

Beyond the requirements of the Acts, councils invest time and resources in spatial and land use planning for their areas to varying degrees. Growth management, urban form frameworks, structure plans and concept plans are all used as mechanisms for expressing and implementing strategic planning directions at the local government level. Some South Australian examples include the City of Marion's Urban form and Neighbourhood character study, the City of West Torrens' structure planning as part of its Strategic Directions Report 2025 and the City of Onkaparinga Growth Scenarios project and the City of Port Adelaide design guidelines.

The State Government also pursues additional strategic planning at the regional level in collaboration with local governments. Examples include the South Coast Master Plan and Yorke Peninsula Regional Land Use Framework.

The Public and Environmental Health Act, 1997 requires that each local council prepares a report to the Public and Environmental Health Council every financial year. These reports must detail the standard of public and environmental health in each council area together with the actions that the council has taken to protect public health in the areas of sanitation, waste management, drainage and pollution. Some councils have taken a broader view of health in their preparation of reports by reporting on some of the social determinants of health. The City of Port Adelaide Enfield is a good example of a council that has broadened its environmental and public health reports to include urban planning, economic and environmental determinants of health.

Neighbourhood planning and Integrated Local Area Planning (ILAP) are powerful tools for undertaking strategic planning at the local level. Some councils in South Australia prepare neighbourhood plans on a selected or systematic basis. Recent changes to the Development Act have seen increasing emphasis in protecting and enhancing neighbourhood character, which has required councils to undertake neighbourhood planning at a more intensive level with significant community engagement processes.

Opportunities for linking health and planning in strategic planning:

- Spatial planning to build the link between 'physical' planning and strategic planning;
- Broader Public and Environmental Health plans;
- Assessment of health outcomes of state, regional and local plans;

- Supporting neighbourhood planning at the local level to deliver local healthy neighbourhood outcomes as well as improved character and aesthetics.

5.2 Planning Review 2008

A comprehensive review of the South Australian Planning System was released in June 2008 and the Deputy Premier announced that the reforms will include:

- A 30-year plan for managing Adelaide's growth and development;
- Investment in Adelaide's transport corridors, including the development of transit-focused neighbourhoods;
- A 25-year rolling supply of broadacre land;
- Efficiency improvements to the development assessment process, and
- Five regional plans to help guide the development of the State outside of Adelaide.

In relation to healthy planning, the reforms provide significant opportunities to integrate health outcomes and assessment into the planning system at the strategic level, particularly with the focus on Adelaide's 30 year plan, retrofitting of neighbourhoods to be more transit focused and regional plans.

Significant opportunities include:

- Greater integration of health outcomes in Adelaide's 30-year plan and regional plans through partnerships with the Department of Planning and Local Government;
- Integration of health outcomes in structure planning exercises through partnerships with the Department of Planning and Local Government;
- Integration of health outcomes in the proposed transit-oriented developments and growth precincts through partnerships with the Department of Planning and Local Government.

SA SYSTEM: Open space planning

Open space legislation
MOSS and ROSES
Regional Open Space and Recreation Plans
Local Open Space Plans
Council Open Space Funds
State Open Space Contributions Fund

5.3 Open space planning

Open space planning is specifically provided for within the *Development Act 1993*. The Act requires that up to 12.5% of a land division proposal over 20 allotments in size be allocated to open space. The decision-making authority (usually individual councils but sometimes the State Development Assessment Commission [DAC]) can use discretion in allowing money in lieu of open space, especially if there is an abundance of open space already provided close by. Negotiations with developers in relation to land and/or monetary contributions must be in accordance with the relevant Development Plan. Contributions are made into a council-held open space fund or, where the relevant decision-maker is the state DAC, into the State open space contribution fund.

For land divisions under 20 allotments, strata titles or community titles, financial contributions are made directly into the State Open Space Contribution Fund instead of providing land. Council open space funds are applied to open space projects at councils' discretion, either for the purchase or enhancement of open space assets. The State Open Space Contribution Fund is managed by the Department of Planning and Local Government and grants for metropolitan (MOSS) or regional (ROSES) open space are provided to local government.

With anticipated growth in urban infill, and transit and pedestrian oriented development, there is likely to be an increase in populations per square hectare in areas historically lacking in open space. Alternative open space requirements may be needed where strata titles or community titles dominate and/or where land-division based open space contributions may not meet increased population densities. Increasing land prices may also decrease the capacity for open space purchase from funds limited by standard contributions set by the Act.

Councils, with the assistance and collaboration of the Department of Planning and Local Government and the Office of Recreation and Sport, also prepared open space and recreation plans. Open space outcomes are generally well linked to councils' development planning processes.

Opportunities for linking health and planning in open space planning:

- Review of open space requirements for infill and regeneration projects and where population densities are substantially higher and/or land prices limit open space purchase;
- Embedding health goals into open space grants and projects;
- Assessment of health outcomes of state, regional and local open space plans.

SA SYSTEM: Major developments

Development guidelines
Environmental Impact Statements
Public Environment Reports
Development Reports
State Significant Development Powers (Planning Reforms 2008)

5.4 Major developments

The South Australian major developments system is enabled by the Development Act (1993). The Act allows the Minister for Urban Development and Planning to declare a major development where it is of major environmental, social or economic importance or where the declaration is appropriate or necessary for the proper assessment of the proposal.

Major projects are assessed against a specific set of guidelines for each development prepared by the State DAC. The DAC also determines the level of assessment required: Environmental Impact Statement, Public Environment Report or Development Report. An assessment report is prepared by the proponent and assessed by the Minister against the guidelines.

Current major developments in the system include the Olympic Dam expansion, the Highway Inn site at North Plympton and the Port Stanvac Desalination Plant.

A significant component of the actions in the new planning reforms include new state powers relating to transit-corridors. Whilst the details are yet to be released, it is likely that this will result in greater investment in structure

planning, policy planning and implementation of higher densities and improved access to public transport for a greater number of people in neighbourhoods along transport corridors.

Opportunities for linking health and planning in the major development process:

- Integrating HIA more formally into the assessment guidelines and assessment report and including health impact professionals in the decision-making process;
- Supporting, promoting and assisting the achievement of health-related outcomes associated with the new State Significant Development Powers, adding value to proposed transit-focused neighbourhoods and growth precincts.

SA SYSTEM: Development Assessment

The Development Plan
State Development
Assessment Commission
Council Development
Assessment Panels
Regional Development
Assessment Panels

5.5 Development Assessment

Development Assessment is a major component of the South Australian Planning System. The Act requires that proposed building works or land use changes that meet the definition of ‘development’ be assessed by a relevant authority. In most circumstances, the relevant authority is the local council, but the State Development Assessment Commission also acts as a relevant authority where projects are located in particular areas, have major impacts or where the land is publicly owned.

Local government development decisions can be made either by the council’s Development Assessment Panel (DAP), delegated to a Regional DAP or delegated to council’s administration. Council Development Assessment Panels are mandatory and must include three independent members, three councillors and one independent chair. Regional Development Assessment Panels are enabled by the Act but no Regional Development Assessment Panels currently exist.

All decisions must be made in accordance with the Development Plan relevant to the area. All councils have their own Development Plan, which outlines objectives, principles of development control, structure plans, zoning maps and concept plans.

The State Government has released its review of the Development Act with a view towards improving the efficiency of development assessment processes.

Opportunities for linking health and planning in the development assessment process include improving the capacity of decision-makers to understand and consider the impact of developments on healthy environments.

SA SYSTEM: Development policy

The Development Plan
Development Plan Reviews
Development Policy Advisory Committee

5.6 Development policy

Each council's Development Plans must be reviewed by each local government authority every three years. That review must address the applicability of the Plan to the area it serves, assess its consistency of the plan with the Planning Strategy, and be subject to community discussion. Upcoming changes to the Development Act will increase the focus of the periodic review to also address orderly and efficient development, options for integrating transport and land use and physical and social infrastructure needs. These have been endorsed by Cabinet but are yet to be implemented.

The Development Policy Advisory Committee (DPAC) provides advice to the Minister on state and local development policy, changes to the Development Act or Regulations or any other matter assigned to it by the Minister. Membership must include people with experience in urban and regional planning, local government, building design and construction, environmental conservation, commerce and industry, agricultural development, housing and urban development, providing community services and infrastructure utilities.

Opportunities for linking health and planning into development policy include:

- integrating HIA and healthy environment goals into development plan reviews; and
- improving the capacity of policy-makers, including local governments and DPAC, to understand and consider the impact of city form and design on healthy environments.

SA SYSTEM: Urban renewal

State infrastructure and renewal projects
Local government infrastructure and renewal projects
Private
Consortiums and steering committees

5.7 Urban renewal

Renewal of suburbs, major projects, urban developments and significant upgrades to infrastructure can be opportunities to introduce healthy outcomes into the revitalisation of established areas. In South Australia, urban renewal and major upgrade projects are undertaken by a mixture of state government, local government, not-for-profit and private groups or a combination of any or all. Some examples include the Port redevelopment, South Road upgrading, coast park, town centre upgrades and SA Housing Trust redevelopments. Some, but not all of these types of redevelopments require approvals either through the development assessment or major developments processes and integrating health outcomes can be incorporated via the Development Act and associated systems. Where projects are on a larger scale, with opportunities for broader structural changes, opportunities can be improved via integration with specific committee structures and/or partnerships with other bodies.

Significant opportunities exist with regard to the recently released planning reforms, particularly in relation to the new requirements for structure planning for identified transit oriented developments, transit focused neighbourhoods and growth precincts. Building health outcomes into these identified urban renewal areas can be achieved through partnerships with local governments and the Department of Planning and Local Government, which will have significantly increased strategic planning powers in relation to these types of developments.

For infrastructure upgrades that do not require approvals through the Development Act, partnerships or agreements with infrastructure delivery bodies including utilities, local governments and state government departments may be required. A recent South Australian example of cross-government agreement is the urban design charter, which commits each department to achieving good urban design outcomes.

FRAMEWORK: Recurring themes from the case studies

Leadership
Cross sector partnerships
Intergovernmental partnerships
Multi-level planning
Research support
Capacity
Practicality
Legislative support

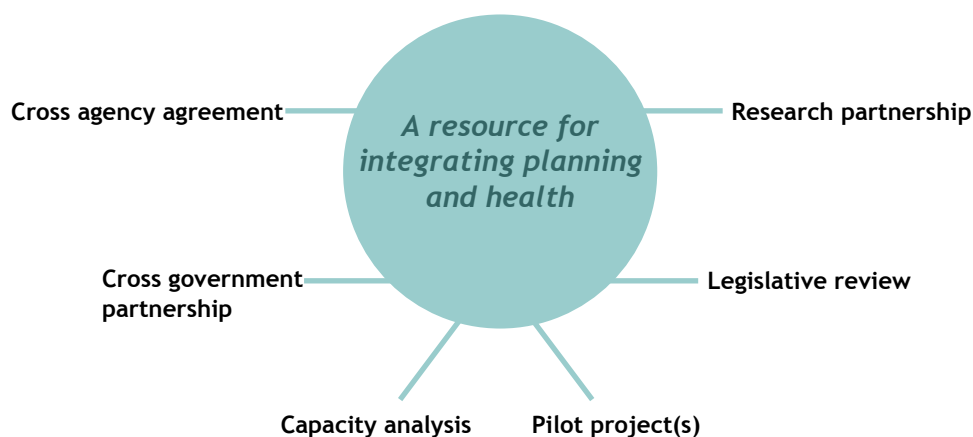
6 Pathways for action

The key themes emerging from this review offer multiple strategies to build planning and health capacity and strengthen integration. In synthesising these themes, “Health In Planning” proposes linked pathways for action as the basis for collaboration into the future.

6.1 Developing a framework for integrating planning and health

The establishment of a framework for integrating planning and health.

This framework should be based on successful approaches and strategies employed by a number of case studies together with the review of South Australia’s Planning system. The figure below depicts the proposed framework, which centres on the establishment of a resource for planning and health in response to the currently low levels of engagement between the health and planning professions and awareness of the impact of planning policies on health outcomes.



6.2 Leadership for integrating planning and health

Establishment of a joint facility between SA Health and the Department of Planning and Local Government to:

1. lead the integration of planning and health;
2. build capacity across planning and health for integrated, innovative action.

Most of the case studies have created or evolved a body or foundation group that has taken on the leadership role of integrating health and planning. Five of the major examples are:

- London: Healthy Urban Development Unit (NHS)

- Toronto: Toronto Public Health (local government Health Division)
- Portland: Healthy Portland (local government Health Division)
- Scotland: Local Government Health Improvement Programme (Council and Health Scotland partnership)
- Victoria: Healthy by Design (National Heart Foundation and Planning Institute partnership)

The UK National Health Services' (NHS) approach in 2004 was in response to the Finnermore report (2004), which found that the NHS did not have the skills or the capacity to engage in urban planning. The level of partnership between health and urban planning in the UK was undeveloped and the NHS, London Development Agency and London Primary Care Trusts funded the Healthy Urban Development Unit (HUDU). The primary purpose of the HUDU is to help the NHS engage in urban planning and to support health promotion professionals. One of the HUDU's key outcomes is the health and urban planning engagement toolkit.

The circumstances surrounding the set up of the HUDU were similar to those now facing South Australia: low levels of engagement between health and planning portfolios, strong population and economic growth and low levels of skill and capacity in the integration of planning and health.

It is further recommended that such a resource be equally positioned to assist planning professionals as well as health professionals, acknowledging that skills and capacity deficits exist in both professional areas. Such an approach would follow the success of the National Heart Foundation's Supportive Environments for Physical Activity project by having dedicated project staff who are not placed wholly within a single portfolio.

The key focus of this recommendation would be to raise the awareness of health and planning integration and to support health promotion and planning professionals. It is anticipated that the resource would focus on a number of areas:

- Providing leadership to the planning and health professions in the integration of planning and health;
- Forging partnerships with research institutions, local government and other agencies;
- Legislative change and review of opportunities to increase health representation on committees and advisory bodies;
- Implementation of selected pilot projects that integrate healthy planning actions;
- Review of capacity of professionals and decision-makers;
- Secondments between the Department of Health, the Department of Urban Development and Planning and local government;
- Shared reporting arrangements between the Minister for Health and the Minister for Urban Development and Planning;
- Regular review and monitoring of actions and achievement of goals.

Of importance is the recently released SA government 'Planning Reforms 2008', which seeks to increase the focus on strategic and structure planning, particularly for growth areas and transit oriented developments. Such a direction offers a unique opportunity for health outcomes to be integrated more fully into the planning system at the strategic level.

6.3 Cross government partnership

Pursue partnerships with local government through the Local Government Association and councils together with professional bodies and not-for-profit organisations.

Baum et al (2006) reviewed the Healthy Cities Noarlunga project and state that the transferral of the European-based Healthy Cities to Australia suggests that health promotion programs be placed at the State Government rather than local governmental levels. Baum et al credit some of the success of the project to this focus at the state level. However, planning in South Australia is shared at both the state and local levels, with the majority of its implementation being at the local level. This would suggest that, when taking a wider view of planning and health, investment at the local level as well as the state level is required.

6.4 Cross agency agreement

Implementation of a cross agency agreement between SA Health and the Department of Planning and Local Government that focuses on building health outcomes into planning projects and systems.

Cross agency agreement will be a critical component of the framework for integrating health and planning. With the new planning reforms 2008, a significant investment is now being made in strategic and structure planning for South Australia at the state level. This highlights the need to secure a strong partnership between SA Health and the Department of Planning and Local Government to ensure that health outcomes are achieved on the ground.

Given the large number of agencies involved in planning infrastructure and urban projects a wider focus beyond the Department of Planning and Local Government and SA Health is also recommended.

SA Health is already implementing cross agency agreements through its Health in All Policies program and following 2007 Adelaide Thinker in Residence, Professor Ilona Kickbusch's recommendations. Professor Kickbusch's approach to intersectoral partnerships encourages health outcomes as a shared goal of government.

6.5 Research partnership

That Planning and Health forge a research partnership with relevant institutions to continually research and measure the success of projects and action and issues specific to South Australia, particularly spatial equity.

Jan Gehl (2002), in his assessment of the successful transformation of Copenhagen, credits much of its success to the study and research of people and places and documentation of data to support policy change. It is recommended that a similar approach be adopted as part of this framework.

6.6 Pilot project(s)

The implementation of one or more pilot projects under this framework.

Currently a significant number of infrastructure upgrades and redevelopment opportunities are under scrutiny by both State and local government. This is partly in response to the population and other targets in the SASP and also in response to current and future resource booms. Projects such as the Port Adelaide redevelopment, South Road upgrade, the new Oaklands train station all present opportunities to integrate health and planning to demonstrate practical application on ground. Analysis and critique of projects would also assist in continual improvement and successful implementation would assist in raising awareness.

The significant investment in planning for growth areas and transit corridors as announced by the planning reforms 2008 provides a unique opportunity to investigate pilot projects and measure on-ground success in more fully integrating health into planning.

6.7 Legislative review

A legislative review of the Local Government, Development and Public and Environmental Health Acts.

This report identifies some opportunities for improving legislation but not a comprehensive analysis of the legislative environment. It is therefore recommended that a legislative review of the Local Government, Development and Public and Environmental Health Acts be undertaken. This review should seek to build the links between health and planning between the three Acts in a similar manner to the changes that built the strategic planning links between the Local Government and Development Acts in 2001.

Particular opportunities exist in upcoming changes to the Development Plan Review process that will expand its role to include infrastructure planning, integration of transport and planning and community services needs. The

regulations that support the upcoming changes are yet to be released and HIA could become a key component of all Development Plan Reviews.

6.8 Capacity analysis

Analysis of the current capacity and understanding of the links between health and planning.

Capacity analysis should comprise a major component of the framework. The analysis should scope gaps, suggest strategies and engagement opportunities at strategic, operational and community levels. It should focus equally on the planning and health portfolios and be undertaken at the professional, local government and state levels. However, given the recently released Planning Reforms 2008, which will significantly increase the strategic and structure planning focus, and planning powers at the State Government level, it is recommended that this approach first focus on practitioners at the state level.

7 Conclusion

This study has focused on providing an evidenced-based documentation of the links between urban planning and health outcomes, examples and case studies of how the urban environment may be adapted to improve health outcomes and approaches used both nationally and internationally to forge those links. The aim of the study has been to identify opportunities to broaden the understanding of the health impacts of planning decisions beyond those of chronic disease and physical activity to include a holistic view of health and wellbeing.

In response to South Australia's planning system, which is currently subject to extensive change, this study recommends that a leadership group be established to focus on cross-agency partnerships and agreements, research gaps and requirements, capacity analysis of both professionals and decision-makers, pilot project opportunities and legislative review.

It is anticipated that this report will form the first step towards bringing the health and urban planning portfolios closer and in recognising the health impacts of planning strategy, policy and decision-making.

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