Review on Healthy Urban Planning

Prepared by the

PUBLIC HEALTH ADVISORY COMMITTEE

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Report to Minister of Health on Healthy Urban Planning

Introduction

Urban planning refers to the institutionalised process of making decisions about the future use and character of land and buildings in city regions. The discipline emerged during the 19th century largely as a result of concerns about the health and housing of populations in early industrial cities.

Much early urban development produced unsanitary conditions and contributed to the spread of infectious disease. By the middle of the 20th century good urban planning and other public health measures had largely conquered the spread of infectious disease in cities in developed societies and the involvement of public health professionals diminished accordingly.

In recent times the main public health involvement in urban health issues has been concerned with ensuring people are protected from environmental hazards associated with certain industrial practices. In the main this has been accomplished successfully with the result that today far fewer people in developed societies are exposed to hazardous industrial pollutants than was the case in previous decades.

However new concerns have emerged about the potential impact of the contemporary urban environment on population health; in particular the impact of transport, housing development and land use planning on people's lifestyles and opportunities to maintain their health and wellbeing throughout the lifecourse. This has coincided with unease about the environment, our use of scarce resources and the impact that humans may be having on the global climate.

The World Health Organization (WHO) identified the urban environment as a key area for future policy development and intersectoral collaboration when it established the *Healthy Cities* project in the 1980s. This project is now in its fourth phase and healthy urban planning is identified as one of the key activities for participant cities. This review will provide a brief introduction to the modern development of the *Healthy Cities* approach and healthy urban planning and identify the key features and methods that need to be developed to make it successful.

Background

During the 1970s people worldwide became dissatisfied with the inability of existing health services to respond to newly emerging health requirements and expectations. The resulting strategy, *Health for All by the Year 2000*, was launched at the World Health Assembly in 1979[1]. It highlighted the idea that the main areas where action was required to improve health and wellbeing lay outside the formal health sector. In 1986, the First International Conference on Health Promotion in Ottawa declared that 'the fundamental conditions and resources for health are peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity. Improvement in health requires a secure foundation in these basic prerequisites'[2].

The international *Healthy Cities* movement began in 1986 as a WHO project with the aim of taking the rhetoric of *Health for All* and the Ottawa Charter 'off the shelves and into the streets of European cities'. A healthy city has been defined as one that is continually creating and improving those physical and social environments and expanding those community resources which enable people to mutually support each other in performing all the functions of life and in developing to their maximum potential[3]. Initially the *Healthy Cities* approach sought to put health high on the political and social agenda and to build a strong movement for public health at the local level. It puts a major emphasis on intersectoral collaboration, community development and the development of city health profiles. The WHO has identified the following

1 Global Strategy for *Health for All* by the Year 2000. Geneva: World Health Organisation.
2 Ottawa charter for health promotion. 1986. Health Promotion, 4: iii–v.
3 Hancock T, Duhl. 1988. Promoting health in the urban context. Copenhagen (WHO *Healthy Cities* Papers, No.1).

11 principles of a healthy city[4]:

1. The meeting of basic needs (for food, water, shelter, income, safety and work) for all the city's people
2. A clean, safe physical environment of high quality, including housing quality
3. An ecosystem that is stable now and sustainable in the long-term
4. A diverse, vital and innovative economy
5. A strong mutually supportive and non-exploitative community
6. A high degree of participation and control by the public over the decisions affecting their lives, health and wellbeing
7. The encouragement of connectedness with the past, with the cultural and biological heritage of city-dwellers and with other groups and individuals
8. Access to a wide variety of experiences and resources with the chance for a wide variety of contact, interaction and communications
9. A form that is compatible with and enhances the preceding characteristics
10. An optimum level of appropriate public health and sick care services accessible to all
11. High health status (high levels of positive health and low levels of disease).

Agenda 21 emerged in the early 1990s as a parallel development to the *Health for All* and *Healthy Cities* approaches but it was quickly recognised that it has much in common with these approaches. Adopted by UN member states at the 1992 Rio summit, it sets out a comprehensive programme of action for sustainable development into the twenty-first century. Central tenets of sustainable development include quality of life, equity within and between generations and social justice. One chapter is specifically devoted to the protection and promotion of human health, and the whole document is concerned with issues of wellbeing, with more than 200 references to health. The centrality of health to sustainable development is illustrated by the accompanying Rio Declaration, which states as its first principle that 'Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature'.

In 1998 the WHO adopted an updated strategy for *Health for All* in the 21st century' (*Health 21*) and supported this with a World Health Declaration[5]. This strategy firmly recognised the role of agencies outside the formal health sector to tackle the wider determinants of health and the interaction between health and sustainable development. Within Europe four strategies for action were chosen to ensure scientific, economic, social and political sustainability drive the implementation of *Health 21*:

- Multisectoral strategies to tackle the determinants of health, taking into account physical, economic, social, cultural and gender perspectives and ensuring the use of health impact assessments
- Health outcome driven programmes and investments for health development and clinical care
- Integrated family and community-oriented primary health care, supported by a flexible and responsive hospital system
- A participatory health development process that involves relevant partners for health at all levels (eg, local community, workplace, school) and that promotes joint decision-making, implementation and accountability.

Healthy Cities today

The *Healthy Cities* project is now into its fourth five-year phase in Europe and has three main themes which participating cities are expected to work on: healthy ageing, healthy urban planning and health impact assessment. In addition, all participating cities focus on the topic of physical activity and active living. More than 1000 towns and cities from more than 30 countries of the WHO European Region have signed up to the principles of *Healthy Cities*. The *Healthy Cities* approach was adopted by the WHO Western Pacific Region

4 Goldstein G. 2000. *Healthy Cities*: Overview of a WHO international program. Rev. Environ Health; 15(1-2): 207-14.
5 Health21- the *Health for All* policy framework for the WHO European Region. Copenhagen, WHO Regional Office for Europe.

in the early 1990s with around 100 cities now participating from this region. By becoming a healthy city, local government organisations commit themselves to a new way of working which has four key operational elements that together provide the basis for the transition to a healthy city, as illustrated below:

The *Healthy Cities* approach – four ways of working	
A Explicit **political commitment** at the highest level to the principles and strategies of the *Healthy Cities* project	**B** Establishment of new **organisational structures** to manage change
C Commitment to developing a **shared vision** for the city, with a health plan and work on specific themes	**D** Investment in formal and informal **networking** and cooperation

A- Political commitment: Reorienting urban decision-making processes towards health and sustainable development requires changing how decisions are made and how different sectors implement these decisions. This requires political support at the highest level, because change needs to disseminate throughout the entire city and not just in one department or area of work. It requires political endorsement of the principles and strategies of *Health for All Health 21*, *Agenda 21* and the *Healthy Cities* approach.

B- Organisational structures: The principle of intersectoral collaboration is critical to the development of healthy and sustainable cities. Cities which participate in the WHO initiative are expected to establish an intersectoral steering group that oversees initiatives and the work of the project. There is also a need for city-wide partnerships for health to be established which should be extended beyond health and local government to include representatives from business, community groups and NGOs.

C- Realising a shared vision: The shared vision for the healthy city is usually expressed through a city health development plan (see below) which addresses how the different sectors within the city will work towards improving health and wellbeing. This is likely to include aspects of urban environment planning which support good health such as housing management, transport and parks. A wide range of people should be involved in the development of a city health plan such as local politicians, planners, representatives from public sector organisations, voluntary sector organisations/interest groups, healthcare professionals and community representatives.

D- **Networking:** Regional, national and international networking is an important component of *Healthy Cities* work. In addition thematic networks have been a successful approach to support work in specific topic areas.

City Health Development Plans

The development of a City Health Development Plan requires a comprehensive understanding of the health and social needs of the population and is therefore likely to be preceded by the development of a health profile which is a public health report that uses information to identify the health status of the local population and identifies the areas where change and action is most needed. The City Health Development Plan should identify the role of different partner organisations in improving health and set out some of the actions that will be undertaken. The creation of supportive environments for health is an important component of city health development plans so urban planners should have a significant role to play.

Intersectoral Collaboration/Action for Health

From the outset of *Healthy Cities* there was a strong emphasis on intersectoral collaboration, i.e., the

need for health agencies to develop links and working relationships with other key agencies, especially local government. Today the emphasis is on intersectoral action for health to ensure that collaboration brings about changes in policies and programmes.[6] This is driven by the recognition that, with increasing complexity in society and in governance, there is a need to build strong coalitions in order to drive change[7].

Intersectoral action for health has been defined by the WHO as 'a recognised relationship between part or parts of the health sector with part or parts of another sector which has been formed to take action on an issue to achieve health outcomes (or intermediate health outcomes) in a way that is more effective, efficient or sustainable than could be achieved by the health sector acting alone'[8].

In 2001 a New Zealand Ministry of Health report carried out a literature review of intersectoral initiatives for improving the health of local communities[9]. Recently the Canadian Public Health Agency has produced a report identifying experiences, methods and achievements in intersectoral action, public policy and health which is an important contribution to this literature and provides guidelines for effective intersectoral action[10].

Community Participation

Engagement and empowerment of the community has been a key feature of the *Healthy Cities* approach since the outset. Active community involvement is a necessary condition not only to identify the real health needs of the population and to establish the priority interventions but also to strengthen the social cohesion and individual self-determination, both very important especially for mental health. More recently an even greater importance has been attached to community participation and there is now an expectation that cities should 'demonstrate increased public participation in the decision-making processes that affect health in the city, thereby contributing to the empowerment of local people'[11] [12].

From *Healthy Cities* to Healthy Urban Planning

The major causes of death and injury in the urban environment today include alcohol, tobacco, drugs, environmental toxins, motor vehicles and weapons such as guns and knives[13]. These are all areas where the formal health sector has relatively little impact. In addition, public health research suggests disease occurs more frequently among those who have fewer meaningful social relationships, are in lower hierarchical positions and are disconnected from their biological and cultural heritages[14]. Both the literature and statistical trends reveal the complex and interconnected nature of modern ills and demand a broader perspective in urban health policy than the conventional approach – one that moves away from the traditional health concerns of urban planning and into a comprehensive realm which links the functions of urban planning and the creation of strong, healthy and vibrant neighbourhoods, towns and cities. The publication of *Social determinants of health: the solid facts* by the WHO in Europe helped to move forward

6 Public Health Advisory Committee. 2006. Health Is Everyone's Business: Working Together for Health and Wellbeing. Public Health Advisory Committee, Wellington.
7 Duhl L. 1995. The social entrepreneurship of change. New York, Pace University.
8 WHO. 1997. Intersectoral Action for Health: A Cornerstone for Health-for-All in the Twenty-First Century, Report to the International Conference 20-23 April 1997 Halifax, Nova Scotia, Canada, World Health Organisation, Geneva.
9 New Zealand Ministry of Health. 2001. Intersectoral Initiatives for Improving the Health of Local Communities: A Literature Review. http://www.moh.govt.nz/moh.nsf/pagesmh/369?Open, accessed 14/08/07.
10 Publc Health Agency of Canada. 2007. Crossing Sectors- Experiences in Intersectoral Action, Public Policy and Health. http://www.phac-aspc.gc.ca/publicat/2007/cro-sec/pdf/cro-sec_e.pdf, accessed 14/08/07.
11 WHO Regional Office for Europe. 1999. Community participation in local health and sustainable development: a working document on approaches and techniques. Copenhagen, European Sustainable Development and Health Series, no 4. http://www.euro.who.int/document/e78652.pdf, accessed 20/08/07
12 Public Health Advisory Committee. 2006. Health Is Everyone's Business: Working Together for Health and Wellbeing. Public Health Advisory Committee, Wellington.
13 Mcginnis JM, Foege JM. 1993. Actual causes of death in the United States. Journal of the American Medical Association; 270: 2207–2212.
14 Lindheim R. Syme L. 1983. Environments, people and health. Annual Review of Public Health; 4: 335–359.

thinking in this area[15].

The booklet highlighted ten interrelated areas that are critical to good health in the modern environment including the importance of addressing poverty and deprivation, unemployment, the environment that children grow up in, social exclusion, the role of friendship and social connections, the impact of alcohol and drugs, the need to ensure access to healthy food and the importance of a healthy transport system. In the same year the National Health Committee of New Zealand produced a similar report on the social, cultural and economic determinants of health in New Zealand which reached broadly similar conclusions[16 17].

Although the *Healthy Cities* approach successfully changed the way the health sector engages with local government and other agencies, the actual impact on the environment that people live in has often been limited. Planning policies have been resistant to change and many cities have continued to emphasise the needs of the individual over those of the community. Suburban sprawl and road building has continued, facilities for pedestrians and cyclists receive minimal investment and only a minority of cities have invested in substantial improvements in public transport. Hence car dependency has increased over the past 20 years.

This has created the demand for a new form of urban planning which once again makes improved public health a primary objective of planning considerations. These demands have emerged both from within the planning sector and from the public health community. Within planning, a new movement for change has emerged from the USA called New Urbanism or neo-traditional planning.

It developed in response to growing concern that post war planning had done great damage to the American urban environment creating towns and cities dominated by cars and lacking in aesthetic qualities. The 'New Urbanists' argue that the dominance of the suburb and the associated decline of inner urban areas reduced wellbeing in American society due to less time for personal enjoyment, financial constraints and a growing sense of disconnection from the wider community[18].

Coinciding with the emergence of New Urbanism, public health practitioners influenced by *Health for All* and *Healthy Cities* principles are taking a greater interest in how the social and economic environment that we live in affects our health and wellbeing and the likelihood of maintaining good health into old age. The impact of the post war urban environment on opportunities for physical activity and social interaction and its impact on mental health and wellbeing have become a common concern for 'New Urbanist' and new public health advocates and both have called for reintegration of public health and urban planning.

Healthy Cities programmes throughout Europe have sought to involve urban planners in their work since the late 1980s, but since the third phase of the WHO *Healthy Cities* network (1998-2002), a more concerted emphasis has been placed on the need to integrate health objectives into urban planning. The baseline for this new area of work was established in 1998, through a questionnaire survey targeted at the heads of urban planning departments in 38 cities participating in the second phase of the *Healthy Cities* project.

The survey found that planning departments and health agencies operate largely in isolation from one another and regular co-operation between health and planning occurred in only a quarter of cases. Nearly a third of planning chiefs considered that, in certain ways, planning policies were actually incompatible with health, in particular rigid standards of zoning and design[19].

In 1998, WHO began to work with urban planning practitioners and academics from across Europe and beyond in a more concerted way. As a first step, in 2000, Barton and Tsourou published the book *Healthy*

15 Wilkinson R. Marmot M., ed. 1998. Social determinants of health: the solid facts. Copenhagen, WHO Regional Office for Europe.
16 National Health Committee. 1998. The social, cultural and economic determinants of health in New Zealand: Action to improve health. National Health Committee, Wellington.
17 Public Health Advisory Committee. 2004. The Health of People and Communities – A Way Forward: Public Policy and the Economic Determinants of Health. Public Health Advisory Committee, Wellington.
18 Langdon P. 1994. A better place to live: reshaping the American suburb. Amherst, University of Massachusetts Press.
19 Barton H, Tsourou C. 2000. Healthy Urban Planning. London: Spon and Copenhagen: WHO.

Urban Planning with WHO support. It makes the case for health as a central goal of urban planning policy and practice, highlighting the role of planners in tackling the social, economic and environmental determinants of health. The next section summarises the approach suggested in this publication for developing healthy urban planning in municipal government.

Healthy Urban Planning in Practice

A comprehensive approach to healthy urban planning should address all the health determinants relating to the physical environment and should reflect the core principles of the WHO *Health for All* strategy such as community participation, intersectoral collaboration and equity[20].

Active community involvement throughout the planning process is a necessary condition to identify the real needs of town users and to establish priority interventions[21 22 23]. It can also strengthen social cohesion and individual self-determination, both important for mental health.

The operational and assessment tools developed during the *Healthy Cities* experience (indicators, health profile, and city health development plan) can provide urban environment planners and policy-makers with good information to identify priorities, understand local needs and assess the effects of implemented planning decisions. Since different public sector policies as well as activities of the private and voluntary sectors produce an impact on health, intersectoral collaboration represents a way to achieve a shared vision, legitimacy for action, knowledge exchange and co-ordinated actions among specialists, administrators and users[24 25].

The effective integration of the equity principle in urban planning should result in reduction of urban fabric imbalances, car use, air and noise pollution, while quality of public spaces, social cohesion, healthy lifestyles and employment opportunities are increased[26 27].

An integrated and holistic approach to pursuing the objectives highlighted in Table 1 is needed which requires cooperation and partnership to replace competition. The most important areas of cooperation are as follows:

- Land use and transport planning, linking the location of housing, employment and facilities with a strategy for transport
- Strategies for social services, embracing the forward planning for social housing, health, education, open spaces with integrated land use and transport planning
- Economic regeneration strategies, so that economic development and urban regeneration programmes are mechanisms for implementing a healthy planning strategy
- Integrated transport strategy, incorporating roading policies, car parking, public transport planning and operations, cycling and walking
- Integrated resource planning for energy, water, food, waste etc.

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20 WHO Regional Office for Europe. 1999. Health 21 - the *Health for All* policy framework for the WHO European Region. Copenhagen, European *Health for All* Series, No 6.

21 WHO Regional Office for Europe. 1999. Community participation in local health and sustainable development: a working document on approaches and techniques. Copenhagen, European Sustainable Development and Health Series, no 4. http://www.euro.who.int/document/e78652.pdf, accessed 20/08/07.

22 WHO Regional Office for Europe. 1997. Town planning and health, Copenhagen, Local authorities, health and environment briefing pamphlet series, No 16.

23 Public Health Advisory Committee. 2004. A Guide to Health Impact Assessment (second edition). Public Health Advisory Committee, Wellington.

24 Woodward, S. 1998. A conceptual framework for the analysis of intersectoral working groups. Paper presented at the *Healthy Cities* International Conference, Athens, 20-24 June.

25 OECD. 2001. Towards a new role for spatial planning. Territorial Development, OECD Proceedings.

26 United Nations. 2000. Agenda 21. http://www.un.org/esa/sustdev/documents/agenda21/index.htm, accessed 08/08/07.

27 WHO Regional Office for Europe. 1997. City planning for health and sustainable development. Copenhagen: European Sustainable Development and Health Series, No.1.

In many urban localities, the municipal units responsible for transport, energy, water, housing, food and health do not coincide, and it makes it difficult to pursue healthy planning objectives. Systems of urban planning and management in western societies tend to rely on specialist agencies pursuing their particular remits largely in isolation.

For example, there are often separate agencies for transport, pollution control, energy, water, health and land development. According to Barton & Tsourou[28] these systems have been failing as they are based on an overly simplistic linear view of cause and effect and a competitive ideology.

One key to consistency is a shared planning approach whereby settlements and their hinterlands are seen as ecosystems – different groups and activities are seen as interdependent and the relationship with the resource base of land, air, water, energy, food and materials is made explicit.

The shared objective, which overrides specific agency responsibilities, is to create a healthy human habitat functioning to create opportunities and a high quality of environment for people irrespective of socio-economic position in a manner that is ecologically sustainable.

Joint working across all of these different areas is challenging and often cuts across existing corporate objectives. Where this is the case the first stage must be to ensure that health and environmental concerns are made high priorities for organisations. This will frequently require central government to change the remits of organisations either through legislation or regulation.

In addition Government may require the application of rigorous process which ensures that health and sustainable development objectives are high priorities when dealing with major planning issues that involve agencies in all the above areas.

Governments in many countries now require the application of Strategic Environmental Assessment (SEA) of major planning policies and schemes to ensure they support central objectives for health and sustainable development. SEAs include a detailed report on the state of the environment and the likely impacts of the proposed plans on the environment. Health implications should be a significant component of the SEA process and can be integrated within the SEA or considered within a Health impact assessment (HIA) running alongside[29]. Either way the process should be collaborative and the development of a health profile which all responsible agencies can utilise is good practice.

Much of the process for implementing healthy urban planning therefore builds on the methods recommended for developing *Healthy Cities*. Barton proposes the following five-stage process for agencies seeking to collaborate on healthy urban planning:

1. Negotiate clear goals and purpose of the plan – agencies should consult widely with partners, public and politicians about the scope of their plans. Putting the health of the public as a central objective is something that many agencies and public will agree on and other potential objectives around housing, transport, resources and environment can flow from this. The public can be consulted through a range of methods such as social attitude surveys.
2. Establish the baseline by creating a city health profile which incorporates baseline social, health, economic and environmental conditions. This will provide an opportunity to recognise problems experienced by communities. Obtaining agreement that particular problems need to be addressed is an important step towards establishing the alliances to address the problems.
3. Scope and explore options – scoping and policy development is an ongoing process that should occur alongside identification and analysis of problems. A range of alternative options to the favoured option should be considered and evaluated to overcome policy inertia and ensure that the process stands up to assessment that might be applied through SEA.

28 Barton H, Tsourou C. 2000. Healthy Urban Planning. London: Spon and Copenhagen: WHO

29 Public Health Advisory Committee. 2004. A Guide to Health Impact Assessment (second edition). Public Health Advisory Committee, Wellington.

4. Evaluate and refine policies – the process of evaluating and choosing policy should be open, explicit and transparent if the resulting decisions are to carry weight. Quantitative and qualitative assessments need to be balanced and the interests of different groups recognised.
5. Coordinate implementation – many planning agencies have restricted powers which can be limited to yes or no responses to specific planning proposals. However there is little to be gained from allocating land for housing if water, transport, schools, jobs or health services are unavailable. The job of the healthy urban planner should be to negotiate and establish coordinated programmes of implementation in which the different agencies agree on social objectives and invest accordingly.

Another approach for healthy urban planning which is increasingly promoted is to focus on the needs of the most vulnerable populations[30]. This approach is frequently adopted in health protection considerations where, for example, the standard for the maximum permitted levels of lead exposure is set for the most susceptible population, i.e., children. Yet research suggests that urban planning is seldom focused on the needs of the most vulnerable groups[31]. Instead urban areas are mainly designed around the needs of economy and commerce.

30 Crowhurst-Lennard SH, Lennard HL. 1987. Livable cities. Southampton, NY, Gondolier Press.
31 Duhl LJ, Sanchez AK. 1999. *Healthy Cities* and the planning process. WHO Europe. http://www.euro.who.int/document/e67843.pdf, accessed 21/08/07.

Table 1: Twelve Key Health Objectives for Planners

Key Objective	Unhealthy Urban Planning	Healthy Urban Planning
Healthy Lifestyle: Do planning policies and proposals encourage and promote healthy exercise?	Low density housing and facilities that lead to longer trip patterns or encourage use of cars do not encourage healthy lifestyles.	Planning can create attractive, safe and convenient environments that encourage walking or cycling to work, school etc. Planning can ensure recreational opportunities in accessible locations.
Social Cohesion: Do planning policies and proposals encourage social cohesion?	Social cohesion can be undermined by insensitive housing development and dispersal of communities. It is also undermined by roads severing community links, constructing barriers to pedestrian connectivity and by large commercial schemes.	Urban planning cannot create local community or cohesive social networks. It can though be facilitated by creating safe, permeable environments with places where people can meet informally. Mixed use development in town centres, commercial environments and neighbourhoods can broaden social options.
Housing Quality: Do planning policies and proposals encourage and promote housing quality?	Insufficient overcrowded housing, poorly insulated, built with toxic materials and unsafe structures are detrimental to physical health, mental health and increased risk of accidents. Poor locations, design and orientation of housing can exacerbate crime and vandalism.	Housing quality can be improved by ensuring detailed design, orientation and energy saving materials. Providing a range of housing tenure for different incomes and close to public amenities will benefit health.
Access to Work: Do planning policies and proposals encourage and promote access to employment opportunities?	Employment opportunities created in inaccessible locations or a lack of a variety of jobs in a community can negatively affect health directly and indirectly.	Urban planning linked to strategies for economic regeneration can assist by facilitating opportunities for business and can encourage diversity in employment and ensure that local job opportunities are retained. Provision of transport infrastructure is important.
Accessibility: Do planning policies and proposals encourage and promote accessibility?	Service rationalisation in recent times has often resulted in closure of local public facilities. This can result in restricted access especially amongst the old, women, children, people with disabilities and ethnic minorities. Out of town retail centres have proliferated, often to the detriment of local facilities.	Planning can ensure a choice of transport modes, especially ensuring that facilities are accessible to people walking, cycling and using public transport. Safe walking and cycling routes can be promoted and traffic managed to slow, calm and reduce vehicle speeds.
Local Food Production: Do planning policies and proposals encourage and promote local food production?	Planning can overlook the importance of accessible open spaces and providing allotment gardens. Centralisation of shopping facilities can reduce variety of food available locally and disadvantages those without private transport.	Local food sources such as market gardens, allotments and city farms can enable people on low incomes to grow their own food. Urban planning can encourage a diversity of shopping facilities, helping to prevent dependence on large out of town shopping.

Safety: Do planning policies and proposals encourage and promote safety and the perception of safety in the community?	Urban planning can create alienating environments where people are uncomfortable being out on the street. This can be due to inadequate lighting, heavy traffic or poor urban design. Where the pedestrian environment is intimidating people use cars more and streets become deserted increasing the perception of danger.	Traffic calming techniques which give priority to pedestrians and cyclists are vital for a safer environment. Good urban design for residential and commercial areas can ensure a natural process of surveillance over public space that reduces crime and the fear of crime.
Equity: Do planning policies and proposals encourage and promote equity and the development of social capital?	Planning does not directly affect income but does have indirect effects. The planning system can be used, for example, to hinder or to help the process or providing a range of facilities and providing opportunities for improving levels of equity.	The planning system can help with provision of social or low-cost housing, facilitate creation of job opportunities and can influence movement patterns by ensuring a range of easily accessible facilities.
Air Quality & Aesthetics: Do planning policies and proposals encourage and promote good air quality, protection from excessive noise and an attractive environment for living and working?	Poor air quality results in part from ineffective land use and transport strategies leading to high levels of road traffic and factories polluting residential areas. The absence of good neighbour policies can mean that residents and workers are subject to excessive noise, unpleasant fumes and visually arid environments that undermine wellbeing and contribute to ill health.	Planning can assist by putting local environmental quality high on the agenda in commercial, industrial and residential areas; by segregating polluting and noisy industrial uses of land; by promoting less polluting forms of public transport, deterring car use and restricting lorries to specific routes; and by supporting the development of energy-efficient buildings and neighbourhoods.
Water and Sanitation Quality: Do planning policies and proposals encourage and promote improved water and sanitation quality	Health can be adversely affected if the use of local sourcing and local treatment of supplies is not encouraged.	Urban planning can impose standards and criteria that new developments must meet. It can promote safe on-site water collection, purification and infiltration back into the ground or replenishing streams. It can ensure that developments do not take place where there is a threat of flooding and that aquifers are not contaminated when agricultural, transport and industrial processes are planned.
Quality of Land or Mineral Resources: Do planning policies and proposals encourage and promote the conservation and quality of land and mineral resources?	Planning can enable developments that cause land degradation such as developments on greenfield land, intensive agriculture or deforestation as well as excessive use of mineral resources in infrastructure projects.	Planning can ensure that recycled and renewable materials are used whenever possible in the building construction process. Green space, urban open spaces, allotments, market gardens and parks can be safeguarded in planning. Brownfield developments can be encouraged instead.
Climate Stability: Do planning policies and proposals encourage and promote climate stability?	Planning can contribute to climate problems by failing to consider policies that encourage reductions in fossil fuel use, including energy conservation in the construction and use of buildings.	Urban planning can affect the rate of human emissions of greenhouse gases by influencing energy use in buildings and transport and by developing renewable energy sources.

Adapted from Barton & Tsourou 2000 Pg. 13-22.

Healthy Urban Planning: Brief Introduction to Strategies, Policies, and the Role of Health Impact Assessment

Strategies

Urban areas vary enormously both in size and in social, economic, environmental and political dynamics. This means that any approach to healthy urban planning must be adapted to the individual circumstances of a particular urban area. Barton and Tsourou[32] describe four healthy urban planning strategies which may be applicable within the New Zealand urban context.

These are urban regeneration; compact growth; focused decentralisation; and linear concentration. They are long-term development strategies and are deliberately organised sequentially, so that those which are healthiest are considered first, e.g., urban regeneration is the best of all options. However it is not appropriate in all cases so it becomes necessary to move onto compact growth etc. If well planned, all these strategies can help to prevent uncontrolled sprawl and leapfrog developments which lead to increased vehicle dependency.

Urban Regeneration Strategy
A strategy for urban regeneration is based upon accommodating the vast majority of new development within existing urban boundaries. This approach needs effective planning policies to ensure that valued public open space is not lost and connectivity is built in to new developments. This approach applies especially in regions where growth and economic restructuring is occurring and where existing urban density is low.

Strategy for Compact Growth
A strategy for compact growth may be considered when the existing urban area has insufficient capacity to accommodate predicted growth. The strategy then is to release land close to the town/city with good access by walking, cycling and public transport. The compact growth strategy is likely to apply to smaller cities which are growing rapidly and is rarely appropriate in large conurbations. There is evidence to support a 1.5km distance that people are prepared to walk to access town centres which needs to be considered for developments in this approach.

Focused Decentralisation
This is an adaptation of the compact-growth strategy which is more appropriate to larger urban settlements with significant smaller towns in the local area. The focused decentralisation strategy deflects some of the urban growth into suburban towns or free standing commuter towns with the aim of making these more self-sufficient in jobs and services. This strategy is most appropriate in highly urbanised regions with clusters of closely linked towns and cities.

Linear Concentration
The focused decentralisation strategy works well in theory but in practice is very difficult to implement, especially in countries where the cost of fuel is low and people think little of travelling considerable distances to access work or shopping. So the fourth option is to return to the idea of concentration, not on a peripheral pattern but instead on a linear pattern. Linear concentration means growth along broad transport corridors, ideally public transport corridors linking the central city with smaller centres and suburbs. It is important to avoid these corridors becoming too long or trip lengths can become too lengthy. The strength of this approach is that it recognises the central city as the driving force of the regional economy whilst encouraging development of local facilities.

32 Barton H, Tsourou C. 2000. Healthy Urban Planning. London: Spon and Copenhagen: WHO.

Policies

This section will highlight three policy areas where urban planning can have a significant impact on health: transport, neighbourhoods and public spaces.

Transport

Transport is a key component of healthy urban planning. This has been recognised in Europe where a Charter on Transport, Environment and Health was adopted in a Ministerial conference in 1999. The Charter essentially recognises that we need to seek ways to reverse car dependency and promote alternative and active transport modes. It includes the following health priorities:

- Improve air quality especially in inner urban areas which usually have the highest levels of air pollution
- Encourage regular exercise in the form of walking and cycling which can reduce incidence of obesity, diabetes and heart disease and increase wellbeing
- Reduce the level of road traffic accidents, which result in high levels of death and injury and significant healthcare costs
- Improve levels of accessibility to jobs and services for those lacking access to a private car
- Enhance opportunities for social interaction and a sense of community - road traffic can cause alienation and isolation in cities with roads dividing communities and causing severance
- Reduce consumption of scarce energy and road building resources
- Reduce transport-related carbon dioxide emissions.

Confronting the transport issue in urban areas is one of the most important and challenging healthy urban planning issues and is probably the least well addressed. Constraining car use is often presented as restricting freedom and provokes opposition from politicians, especially those with a market-oriented approach, and from newspapers.

It is important that those seeking to initiate change confront the basis of the 'freedom' arguments. Conventional policies which facilitate increased dependence on cars in many instances reduce freedom. They exclude people who do not have access to a car – including children, many older people and many disabled people. And over time they have even reduced the freedom of those who do have access to cars by leading to decline of public transport networks and reduced opportunities for walking and cycling.

So a healthy urban transport strategy should seek to inject more choice into the system to ensure that all population groups can easily make the trips they need to make whether they have access to a car or not. Some progress is however being made. A recent WHO report highlights 48 case studies of intersectoral collaboration between health and transport bodies which have promoted physical activity in local populations[33]. Table 2 below includes some of the successful policies which have been adopted in these towns and cities.

33 WHO Europe. 2006. Collaboration between the health and transport sectors in promoting physical activity: Examples from European countries. http://www.euro.who.int/document/e90144.pdf, http://www.euro.who.int/document/hepan/casestudiesT&H/E90144_annexes_1-48.pdf, accessed 27/08/07.

Table 2: Transport Policies to Support Healthy Urban Planning

Walking and Cycling Policies
Dense network of footways linking major activities and public transport
Pedestrian priority measures where footpaths conflict with roads
Increased pedestrianisation in urban centres
Comprehensive network of cycle routes developed – off-road for school access and recreation. On road cycle provision introduced on urban roads by slowing traffic and improving junctions
Public Transport
Increased cost effectiveness of public transport relative to car use
Priority measures for public transport on major routes to beat congestion
Integrated ticketing for different types of public transport
All areas of cities should be accessible by regular public transport services
Quality thresholds should be established and enforced
New housing developments should be within 400m of a good bus service
New commercial and leisure developments should be within 300m of walking distance from a good public transport service
New developments should be used to help fund public transport improvements and orient development towards public transport nodes
Road Traffic
Sustainable traffic management goals should be introduced, *e.g.,* reduce traffic flow, moderate speeds and restrict capacity
New and improved roads should only be approved where essential for ensuring local access and for increasing public transport and pedestrian priority
Traffic speeds should be reduced by road design and traffic calming, especially in areas where there are significant numbers of pedestrians and cyclists

Neighbourhoods

Neighbourhoods imply a sense of belonging and of community, with some shared educational, shopping and leisure activities that provide a focus for social life. For many people, especially the old and young, the neighbourhood provides a network of friendships and mutual support. Such social networks are important to health and wellbeing.

The central issue for the planning of neighbourhoods is accessibility by walking. Walking, running, playing and cycling safely, meeting people by chance or arrangement and travelling conveniently to places without a vehicle are vital to a healthy community environment. Neighbourhood planning should focus on how to achieve this.

The reality however has often been very different, especially during the last few decades. Households have become very private, home-based time is increasingly devoted to television and computer; walking, talking and playing on the street has been deterred by noise and danger associated with traffic. Simultaneously, rising car ownership has reduced the friction of distance and hence the significance of locality in people's lives has diminished.

Urban planners and policy makers have sometimes contributed to this decline by a misplaced belief in four principles common in modern development schemes: land-use zoning, comprehensive development, economies of scale and the inevitability of cars. The segregation of land uses, originally conceived to separate houses from polluting industrial locations, increases the need to travel to reach employment or services and decreases opportunity for social interaction.

Creating healthy neighbourhoods therefore inevitably involves challenging these principles. Table 3 gives an overview of the policies that are needed. The table identifies policy objectives for each of the key health issues in relation to the four policy areas of housing, local facilities, movement and open space. A clear neighbourhood planning strategy can be identified focused around the following broad headings:

- Increased population stability
- Housing diversity and quality
- Local jobs
- Access to facilities
- Pedestrian and cyclist networks
- Car restraint and public transport support
- A network of open spaces
- Energy strategy
- Water strategy
- Integrated spatial planning
- Community development

Table 3: Policies for Healthy Neighbourhoods

Key Issues	Housing	Local facilities	Movement	Open space
Air quality	Energy efficient Non-toxic materials	Local facilities for pedestrian convenience	Reduce car reliance Reduce through traffic	Good microclimate design Increase tree cover
Exercise	Attractive, safe residential environment	Accessible local facilities	Convenient & safe pedestrian and cyclist routes	Recreational greenways, parks & playgrounds
Safety	Good surveillance and clarity of ownership of public and private spaces	Accessible local facilities to encourage street use	Calmed traffic Natural surveillance along footpaths & pavements	Good visibility across open land
Accessibility	Develop close to public transport and local services Grade densities No new housing in inaccessible locations	Localise services within housing areas Locate for convenience of pedestrians Design for disability	Permeable pedestrian and cyclist environment Plan to ensure public transport is viable	Provide accessible open space for all kinds of activities
Shelter	Good range of housing tenure, size and price in every neighbourhood Energy efficient housing; siting to reduce heat loss	Adaptable buildings for local, social and commercial uses Inexpensive to operate and energy efficient; Siting to reduce heat loss	Bus shelters	Shelter belts
Work	Support dwelling-based working options Locate housing accessible by public transport to main work centres	Support local, small scale jobs	Good public transport services to main centres Strategic cycling network serving locality	Encourage productive use of land
Community	Support community action Design residential places Support co-housing and self-build schemes	Foster local services and employment	Permeable and attractive pedestrian/ cyclist environment Safety on the streets Design for casual gatherings	Parks, play areas, playing fields and allotments as meeting places
Water and biodiversity	Increase water autonomy Local wastewater and groundwater replenishment Preserve and enhance habitats	Increase self-sufficiency in water Local wastewater and groundwater replenishment Preserve and enhance habitats	Ensure local, clean road drainage, replenishing ground water Reduce vehicle traffic	Structure open space around watercourses to create habitats and conserve water Create a range of wildlife habitats
Natural resources, soil and minerals	Build using recycled or renewable materials Safeguard topsoil Encourage residential composting	Build using recycled or renewable materials	Construct fewer roads	Facilitate local allotment use and organic recycling Grow crops that can be used for craft and building materials
Global ecosystem	Low energy in construction and use	Low energy in construction and use	Reduce dependence on fossil fuel	Grow energy crops Reduce wind speed by planning Increase carbon fixing

Public Spaces and Urban Spaces/Green space

Many international reports published in recent years have highlighted the evidence base supporting the need for open space, especially green space in urban areas, for good health and wellbeing[34 35 36]. It has been associated with reducing feelings of stress[37 38], increased levels of physical activity[39 40], more opportunities for social interaction[41] and assisting in child development[42].

Wild spaces, woodland, parks, city squares, waterways, urban farms, allotments and other community spaces are all important in urban areas, especially in areas of density. Individuals should be able to relax in contact with elements of nature in green spaces for recreation, social, cultural and physical activities.

Post-war urban planning has produced many sprawling urban environments which impede regular engagement with the natural environment and are not conducive to good health and wellbeing. Examples are shopping centres that devote large tracts of land to parking, wide roads which deter people from walking or cycling, the loss of open spaces in city centres to make way for new office or residential developments. We have made contact with the natural environment too difficult for people who live and work in our towns and cities.

The urban poor in particular have limited opportunity for regular contact with the natural environment due to planning and land use policies and the neglect of city parks in some societies. This is increasing health inequalities. Public policy must identify how to increase people's access to green space through a broad range of new policies[43].

A report for the Dutch government on the relationship between nature and health concluded that the main public policy implications of current knowledge on the natural environment and health were in spatial planning[44]. In particular the report proposed an improvement in the accessibility of natural areas and public green spaces and the creation of additional natural areas in and around the large cities. It is particularly important given the strength of the evidence available that people in urban areas are provided with opportunities for recovery from stress and mental fatigue and to encourage them to take more exercise. There is certainly growing demand for such places.

For instance the UK has experienced a massive increase in demand for urban allotments leading to long waiting lists. Today there are 300,000 occupied allotments on 12,000 hectares of land. However this is down from 120,000 hectares in the 1940s. In the intervening years most of these spaces have been lost to make way for developments.

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34 Morris N. 2003. Well-being and Open Space. 2003. Edinburgh College of Art and Herriot-Watt University.
35 Cabe Space. 2004. The Value of Public Space. http://www.cabespace.org.uk/publications/index.html, accessed 21/08/07.
36 Royal Society for the Protection of Birds. 2007. Natural Thinking. http://www.rspb.org.uk/Images/naturalthinking_tcm9-161856.pdf, accessed 21/08/07.
37 Kaplan R, Kaplan S. 1989. The experience of nature. A psychological perspective. Cambridge: Cambridge University Press.
38 Kaplan S. 1995. The restorative benefits of nature toward an integral framework. Journal of Environmental Psychology; 15: 169-182.
39 Giles-Corti B, Broomhall MH, Kniuman M, et al. 2005. Increasing walking: how important is distance to, attractiveness and size of public open space. American Journal of Preventative Medicine. 28: 169-176.
40 Giles-Corti B, Donovan RJ. 2002. The relative influence of individual, social and physical environment determinants of physical activity. Social Science and Medicine, 54(12): 1793-1812.
41 Coley RL, Kuo FE, Sullivan WC. 1997. Where does community grow? The social context created by nature in Urban Public Housing. 1997. Environment and Behavior; 29(4): 468-494.
42 Kaplan R, Kaplan S. 1989. The experience of nature. A psychological perspective. Cambridge: Cambridge University Press.
43 CJC Consulting. 2005. Economic Benefits of Accessible Green Spaces for Physical and Mental Health, Scoping Study: Final Report for the Forestry Commission.
44 Health Council of the Netherlands and Dutch Advisory Council on Spatial Planning, Nature and the Environment. 2004. Nature and Health: The influence of nature on social, psychological and physical well-being. The Hague: Health Council of the Netherlands and RMNO.

An open space/green space strategy needs therefore to work towards an urban green network accessible to all residents and structured as much as possible around water and trees. This should be complemented by a network of squares and other outdoor facilities providing opportunities for interaction in a car-free environment.

Whilst access to green space in most New Zealand urban areas is clearly easier than in many European cities, there are elements of contemporary urban development in some New Zealand cities which impede access to open space/ green space which should be addressed in future planning.

The Role of Health Impact Assessment

Health impact assessment has emerged as a practical support to the development of healthy urban planning. It supports multi-sectoral, community oriented and participatory approaches and can be initiated by a wide range of different organisations both within and outside the health sector. It has been found that for people outside health, involvement in HIA increases awareness about health-related issues which is likely to produce healthier policy in the long term. HIA is now taught within some graduate urban and town planning courses, e.g., at Belfast's Queen's University.

New Zealand has become an international leader in the application of HIA within urban policy and planning[45 46]. To date it has been applied in a wide range of urban policy settings such as urban design plans, urban transport options, future energy scenarios and a regional land transport strategy[47 48 49].

It has high level support within government which has led to the establishment of a HIA support unit within the Ministry of Health. The central challenge for the support unit and HIA advocates in New Zealand is to ensure that health impact assessment becomes part of the normal process for urban environment policy development, rather than something which is undertaken as a result of lobbying by individuals or organisations.

Healthy Urban Planning: Progress to Date

The final section of this paper will describe progress that has been made internationally in applying the principles of healthy urban planning and draw on the experiences of cities which are regarded as leaders in this regard. Barton et al[50] reports on the progress of some of the European cities who participated in the third stage of the *Healthy Cities* project which put a special emphasis on developing healthy urban planning[51 52].

The concept was entirely new to many of the participating cities and most reported that health had been a powerful motivator for addressing issues that had not previously been faced, drawing in new constituencies of political support. Other participating cities, especially those from northern Europe, have had health embedded in planning and transport policy-making for some years.

45 Public Health Advisory Committee. 2004. A guide to health impact assessment: A policy tool for New Zealand, National Health Committee, Wellington.
46 Public Health Advisory Committee. 2007. An idea whose time has come: New opportunities for Health Impact Assessment in New Zealand public policy and planning. National Health Committee, Wellington.
47 Quigley R, Burt S. 2006. Assessing the health and wellbeing impacts of urban planning in Avondale: A New Zealand case study. Social Policy Journal of New Zealand; 29:165–175.
48 Signal L, Langford B, Quigley R, Ward M. 2006. Strengthening health, wellbeing and equity: Embedding policy-level HIA in New Zealand. Social Policy Journal of New Zealand; 29:17–31.
49 Stevenson, A, Banwell K, Pink R. 2006. Assessing the impacts on health of an urban development strategy: A case study of the Greater Christchurch Urban Development Strategy. Social Policy Journal of New Zealand; 29:146–164.
50 Barton H, Mitcham C, Tsourosu C. 2003. Healthy urban planning and transport. WHO Regional Office for Europe. Transport, Health and Environment Programme for Europe.
51 Barton H, Mitcham C, Tsourou C. 2003. Healthy urban planning in practice: experience of European cities.
52 Barton H, Mitcham C, Tsourou C. 2003. Healthy urban planning and transport. WHO Regional Office for Europe. Transport, Health and Environment Programme for Europe.

There was widespread agreement from participating cities that health-integrated planning was a positive development. Health is seen by the planners as providing re-enforcement for and validation of other planning goals. Planning policies have become better and more responsive to community needs. Five key elements to creating the ideal conditions for healthy urban planning were identified:

1. An acceptance of inter-departmental and inter-agency collaboration so that health implications can be properly explored and integrated solutions pursued across institutional remits. This is critical where transport is concerned
2. Strong political backing, which helps to ensure consistency of approach and the resources needed
3. Full integration of health with environmental, social and economic concerns in the context of the main land use planning, transport, housing and economic development policy statements: placing health at the heart of the plan-making
4. The active involvement of citizens and private/ public/ voluntary sector stakeholders in the policy process, so that health and other priorities are understood not just by town planners but by other interests whose actions might influence the situation
5. A toolbox of planning techniques which fully reflect health-promoting goals, e.g., quality-of-life monitoring, impact assessments, strategic environment assessments, urban capacity studies.

Many towns and cities both within and outside the international *Healthy Cities* network have been working to apply the principles of healthy urban planning. Summaries of progress from nine towns, cities and regions is included below. A broad range of examples are presented including European initiatives that predate *Healthy Cities*, other European initiatives largely driven by *Healthy Cities* and initiatives from the USA, Australia and New Zealand which are successfully recreating healthy and sustainable cities from sprawling environments, largely developed in the post war period.

Case Studies

Driving Change: Political Leadership

Case Study 1: Portland, Oregon
Political leadership is frequently an important component of healthy urban planning and this is exemplified in the case of Portland, Oregon, USA. By the 1970s this city had declined economically and culturally and the population had abandoned the inner city.

The state Governor, Tom McCall, called for a rejuvenation of the old city. This began with the introduction of an urban growth boundary to try and prevent continued urban sprawl. This boundary ensured that population growth of over 50 percent since 1980 has largely been concentrated within the existing urban boundaries and has provided the opportunity to develop new public transport routes including a 71km light rail network.

Planning policies have focused on reviving the city centre and ensuring that development away from the city centre is focused on public transport corridors. Facilities for walking and cycling have also been much improved. Walking magazine has rated it as one of the nation's top cities for walking and 2001 Bicycling magazine named it the best city in North America to ride a bike.

Portland adopted a greenhouse gas reduction plan in 1993, the first local plan in the USA. The plan was updated in 2001 with a goal of reducing greenhouse gas emissions to 10% below 1990 levels by 2010. It includes a target of supplying 100% of the municipal government's electricity needs from renewable energy by 2010. From 1990 to 2003, Portland's per-capita greenhouse gas emissions decreased by 13%, petrol consumption fell by 8% and electricity use for households fell by 10%.

Today, Portland is widely acknowledged as one of the most 'liveable' cities in the USA and amongst the most sustainable cities in the world.

Case Study 2: Waitakere, New Zealand
Within New Zealand some of the greatest modern advances in healthy urban planning have emerged from the Waitakere city in Greater Auckland. This district forms part of one of the most sprawling low density, car dependent urban environments on the planet.

Under the leadership of its Mayor, Bob Harvey, the city sought to redefine itself as an 'eco-city' and placed an emphasis on improving its environment and on sustainable development. Amongst its achievements in recent years are that it has halved child pedestrian and cyclist injuries since 1998, enhanced the natural environment, built strong partnerships with Maori iwi and ensured that new housing is overwhelmingly developed within the existing urban area. This has provided opportunities to improve walking and cycling facilities and support substantial improvements in public transport[53].

Driving Change: Communities

Case Study 3: Salzburg, Austria
The city of Salzburg grew substantially in the post war period. Much of this growth was not in keeping with the city's historic traditions and by the end of the 1970s many citizens were disenchanted with what had happened to the city[54]. When plans emerged for a new urban motorway which would further denigrate the city's heritage, citizens formed groups to advocate for the 'old city'.

53 Documents located at http://www.waitakere.govt.nz/AbtCit/ec/index.asp, accessed 18/07/07.
54 Crowhurst-Lennard SH, Lennard HL. 1987. Livable cities. Southampton, NY, Gondolier Press.

Individuals from the citizens' group were eventually elected to positions on the City Council and transformed the citizen participation process in Salzburg. This led to an agreed plan for a greenbelt around the city and the dropping of past policies that set aside 70% of the city's land reserves for new construction. Secondly, the citizens' groups initiated a project to renovate the historic city centre. Thirdly, Salzburg initiated work on architectural reform. Finally, a completely new traffic policy for the entire city was conceived, giving first priority in all planning decisions to pedestrians, second to cyclists, third to public transport and last to the car.

Case Study 4: Horsens, Denmark

Horsens is a historic market town with 60,000 population. The city's economy has been vulnerable during times of economic downturn leading to complex social issues more associated with larger urban areas. Horsens enthusiastically embraced both the *Healthy Cities* and Agenda 21 approach and has established health as the central goal of the planning system. To achieve this it has built up citizen involvement by supporting new councils and forums for youth, older people and the wider population and by ensuring these citizens' groups have good access to the planning system.

Neighbourhood regeneration initiatives and community empowerment activities have provided an important vehicle for implementing the health-oriented goals of the municipal plan. This has resulted in joint ownership of city plans, extensive use of health impact assessment within the planning system and a comprehensive transport plan focused around the objectives of road safety, environmental improvement, noise reduction and reduction of carbon dioxide emissions.

Case Study 5: Sandnes, Norway

Sandnes has a population of 55,000 and has been transformed from a largely industrial town 20 years ago to a service-based economy today benefiting from prosperity associated with the oil industry. It became a Healthy City in 1991 and immediately joined a Ministry of the Environment-led initiative to reduce car transport and increase walking, cycling and public transport.

Sandnes began to promote itself as a 'Bike City' focused on the health and wellbeing of children, constructing 70km of cycle lanes, with 400 bicycle parking places and free bicycle hire. The main strategy has been to promote sustainable development through a planning process in which land use, transport and environmental protection are integrated in long-term policies. It established a Children's City Council which provides direct access for children into the local electoral system and carried out research to identify children's informal play and moving areas so that they could be protected by the planning system. The Children's Trail programme has enabled children to identify and register 1265 play areas, 550 short cuts, 130 reference areas for schools and 185 reference areas for nurseries. These registered areas have been entered on digital maps and air photo maps and are required to be used in all planning activities to safeguard important play areas.

Driving Change: Government

Case Study 6: Belfast, UK

Belfast has a population of 280,000 people. The economy of the city used to be port-based and industrial but economic downturn and the impact of a 30-year sectarian conflict left the city with some of the most severe social and economic problems in western Europe with excessive rates of unemployment, low educational attainment and run down housing. Belfast became a Healthy City in 1988 and enthusiastically embraced the healthy urban planning concept in the late 90s.

The Department of the Environment (Northern Ireland) and Belfast *Healthy Cities* have taken a joint approach to promote and integrate health into a wide range of local and regional plans and policies. Tools such as Strategic Environmental Assessment, HIA and a quality of life matrix have been used extensively to assist this process. Urban planners in the city contribute to health by formerly incorporating health issues

into regional and area plans and by active participation in the *Healthy Cities* strategic planning groups. The City Health Development Plan assisted in the development of a more integrated planning approach and increased the understanding of healthy urban planning.

With the assistance of the *Healthy Cities* project Queens University, Belfast has recently established the first Healthy Urban Planning module in the UK into their Town Planning degree courses. In recent years Belfast city centre has been transformed and the economy has been revitalised. With the formal end of the conflict it is anticipated that the success of healthy urban planning within the central city can be rolled out into deprived housing estates throughout the city.

Case Study 7: Victoria State, Australia
Although not a city, the State of Victoria includes Melbourne, which has over three million population and is one of the largest cities in Australia. The State took an early lead in healthy urban planning by introducing Municipal Public Health Plans (MPHPs) in 1988 in order to integrate *Healthy Cities* principles across the 210 Local Government areas that operated within the state at that time (today that has been reduced to 79).

MPHPs are local authority-led documents which identify significant local health issues and set out organised, multisectoral programmes for tackling them. In 2000 a survey was carried out to assess the effectiveness of the plans. Positive features reported included that they provide a strategic planning focus by promoting partnerships and networks throughout the municipality, they highlight local health issues and provide a vehicle to address them, they promote community involvement and ownership and they enable councils to integrate a social model of health into public health planning.

A wide range of suggestions were made for improving the plans including ideas for how they might address issues within the built environment more effectively. This led to the introduction of Victoria's Environments for Health Municipal Public Heath Planning Framework in 2001[55]. The framework is based on a social view of health and highlights the impact of the four environmental domains - social, built, economic and natural -on community health and wellbeing and is designed to provide an integrated planning approach for MPHPs.

It provides a practical guide for implementing the new public health approach within local government, aims to make public health a central focus for local government and to increase its capacity to prevent ill health and increase wellbeing.

An external evaluation recently concluded that the framework has had a major impact on local government health planning since its launch in 2001[56]. In particular it has led to better public policy, focused on improved health and wellbeing, and helped to create supportive environments in local government.

Case Study 8: Seixal, Portugal
Seixal is a city of 150,000 population on the banks of the River Tagus within the wider city region of Lisbon, Portugal. Following the building of a new highway and a bridge over the river in the 1960s the city grew substantially, attracting immigrants and becoming a commuter community for Lisbon. The urban development of Seixal was marked by extensive and scattered low-density settlement along the major roads.

Seixal only joined the *Healthy Cities* network in 1998 but immediately sought to apply the principles of healthy urban planning within its future development plans. Its central aim was to reverse the sprawl of the last quarter of the 20th century by enhancing the quality of the urban environment, reducing excessive car use and improving and promoting public transport.

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55 Victoria State Government Department of Human Services. 2001. Environments for Health: Promoting health and wellbeing through built, social, economic and natural environments. http://www.health.vic.gov.au/localgov/mphpfr/index.htm, accessed 20/08/07.

56 Deakin University Program Evaluation Unit, School of Population Health- The University of Melbourne. 2006. Evaluation of the Environments for Health Framework. http://www.health.vic.gov.au/localgov/mphpfr/eval.htm, accessed 20/08/07.

Transport was at the root of many of Seixal's problems. Seixal had been designed around the needs of those wanting to travel out of the city towards central Lisbon and there were inadequate connections between neighbourhoods within the city. In addition, the scattered low density settlement encouraged people to drive almost everywhere– school, work, shopping and leisure activities.

A study in 2001 suggested that 23% of the population lacked vehicle access and had major difficulties getting about the city. Regulations have since been introduced to ensure that mobility and transport needs are considered in planning applications. The aim is to increase the proportion of people living close to railway stations by ensuring development is targeted in these areas and by introducing a new light rail system. Other recent initiatives launched by the municipal working group for healthy urban planning include establishing a method for renewing the historic urban centres, identifying green spaces that should be protected and included in the municipal ecological network and revitalizing urban allotment gardens.

Driving Change: Health Sector

Case Study 9: London Healthy Urban Development Unit

The London Healthy Urban Development Unit was established in 2004 as an alliance between the National Health Service, the London Development Agency and the Regional Public Health Group in response to forecasts of unprecedented growth in the population of London and on demands on health services.

It has a broad remit which includes influencing the London planning agenda to ensure that health objectives are a primary concern in urban planning decisions, for instance it has recently hosted a major national conference highlighting the importance of maintaining green spaces in urban areas.

It provides training and support in health impact assessment methods and has lobbied for its widespread use in planning. Finally, it influences urban development to ensure that high quality healthcare facilities are developed for new communities and that new NHS facilities support sustainable development principles.

Geoff Barnes
September 2007

Glossary

Agenda 21: Sets out a comprehensive plan for sustainable development for cities and was adopted by UN member states at the 1992 Rio summit.

Charter on Transport, Environment and Health: Adopted in Europe in 1999 in recognition that transport is a key component of healthy urban planning.

***Health for All by the Year 2000*:** Strategy launched at the World Health Assembly in 1979 to address concerns at health services' inability to respond to health needs.

***Health for All in the 21st century* (*Health 21*):** An update of the 1979 strategy and adopted by WHO in 1998. This strategy recognised the role of agencies outside the health sector to tackle the wider determinants of health.

***Healthy Cities*:** Project established by the World Health Organization in the 1980s to raise health high on the political and social agenda, particularly in relation to planning.

Health Impact Assessment (HIA): Assessment of the impacts policy or planning will have on the health of a community.

Healthy Urban Planning: An approach where health is the central goal of urban planning policy and practice. The book *Healthy Urban Planning* was first published in 2000 with WHO support.

New Urbanism: A movement for change in planning developed since the 1980s in the USA which believes a decline of inner urban areas, in favour of suburban development, has reduced the wellbeing of Americans.

Municipal Public Health Plans (MPHPs): Developed in Victoria, Australia in 1988 to integrate *Healthy Cities* principles across the 210 Local Government areas (79 areas in 2007).

Strategic Environmental Assessment (SEA): Required in many countries for major planning policies and schemes to ensure they support central objectives for health and sustainable development. SEAs include a detailed report on the state of the environment and the likely impacts of the proposed plans on the environment.

Thematic networks: Cities networking together where they have common areas of interest in the Healthy Cities programme.