

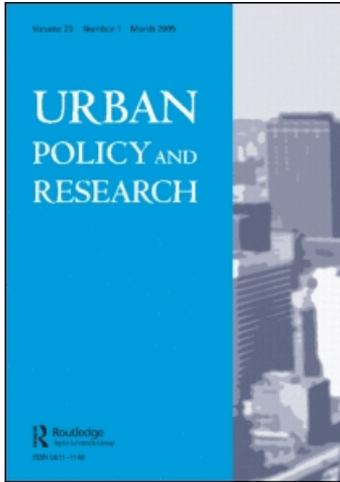
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The Use of Health Impact Assessment to Determine the Potential Impact of an Australian Urban Development Proposal on Health and Well-Being

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ABSTRACT A health impact assessment (HIA) was conducted on a local government urban proposal entitled “The Blue Mile, Wollongong City Foreshore Project”. Findings from the HIA showed that the Foreshore Project had the potential to benefit the health of residents and visitors by increasing opportunities for physical activity and social cohesion. The HIA also indicated there may be some benefits in relation to access to healthy food. This study demonstrated the value of the HIA process as a practical framework for bringing local government and health sectors together to determine the potential impact of urban development on health.

内容摘要: 对地方政府提出的“Blue Mile Wollongong 市海滩开发计划”进行健康影响评测 (HIA), 结果表明这项计划增加了居民和游客参加体育活动的机会, 提高了社会凝聚力, 因此对其身体健康有潜在益处。健康影响评测还表明, 这项计划有可能因提供更多健康食品而产生益处。这项研究说明健康影响评测可作为一个实用的框架, 使地方政府和健康部门共同确定城市发展对健康的潜在影响。

KEY WORDS: Health impact assessment, local government, urban development project, physical activity, access to healthy food, social cohesion

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Introduction

Increasing levels of chronic lifestyle-related diseases, such as cardiovascular disease, type two diabetes and cancers, incur significant costs to communities and governments worldwide (World Health Organization, 2005a; Begg *et al.*, 2007; Zhang *et al.*, 2009). While the creation of environments that enable and support healthy behaviours has long been recognised as an important strategy in preventing lifestyle-related disease (World Health Organization, 1986), and is strongly advocated in government health policy (NSW Department of Health, 2007), there is now a growing body of evidence describing the impact of the design of cities and towns and associated social, cultural and physical environments on health behaviours (Galea & Vlahov, 2005; Gebel *et al.*, 2005; Rao *et al.*, 2007). Consequently, the planning and management of urban environments to support healthy behaviours, such as providing opportunities for physical activity and social cohesion, as well as access to healthy food, are needed to assist in reducing the burden of chronic diseases to the community (McMichael, 2007).

The promotion of healthier communities requires the combined input from public health professionals, urban planners and designers, architects and environmentalists, as well as individuals and interest groups (Pollard, 2003; World Health Organization, 2007). One approach that has recently been used in Australia by the health and local government sectors for the appraisal of urban development proposals in relation to their potential effect on health is health impact assessment (Blau & Mahoney, 2005; Neville *et al.*, 2005; Harris-Roxas & Harris, 2007; Menzies, 2007). Health impact assessment (HIA) is used to assess the potential positive and negative effects of a policy, program or project on the health of a population, and to provide recommendations on ways to mitigate potential adverse effects as well as ways to enhance potential positive effects (Abrahams *et al.*, 2004; Harris *et al.*, 2007). HIA also explores the distribution of the potential health effects of a proposal to determine if it could cause health inequalities between population subgroups (Abrahams *et al.*, 2004; Harris *et al.*, 2007). As many of the determinants of health (e.g. environment, housing, poverty, education and employment) lie outside the health sector (Marmot & Wilkinson, 2006), HIA provides the opportunity for inter-sectoral collaboration between the health sector and the proponent of the proposal (usually from the non-health sector) (Scott-Samuel, 2005).

The concepts and processes involved in conducting a HIA have similarities with other forms of impact assessment such as environmental impact assessment (EIA) and social impact assessment (SIA) (Mindell & Joffe, 2003). While EIAs are expected to take into consideration the potential effects of development projects on human health, the focus of EIAs has primarily been on the potential negative consequences of a project with limited exploration of its impact on broader aspects of health and well-being (Mindell & Joffe, 2003). A study in Australia reported that health was not explicitly considered in the 22 EIAs examined; none used health data or explored the relationship between the proposal and physical or mental health (Harris *et al.*, 2009). Social impact assessment arose as decision makers and planners realised the need to identify the potential social effects of a proposal on the lives of human populations (Interorganizational Committee on Guidelines and Principles, 1994). Social impact assessment is similar to EIA as it aims to identify and mitigate the potential adverse impact of a proposal (Interorganizational Committee on Guidelines and Principles, 1994) whereas HIA explores both positive and negative impacts of a proposal on health (Harris *et al.*, 2007). In the USA, social impact

assessment is usually part of EIA, whereas in Australia and in the UK it can be used for proposals that do not require an EIA (Mindell & Joffe, 2003). HIA and SIA differ in that human health is the ultimate outcome of interest in a HIA, whereas a SIA considers a range of outcomes that may in turn influence health (Mindell & Joffe, 2003). In Australia, there are currently no legal requirements to conduct a HIA (Harris & Simpson, 2003).

There are four levels of HIAs (desk-based, rapid, intermediate and comprehensive) and the type of HIA chosen is related to factors such as the scope of the proposal, the available resources, the timeframe and the size of the potential impacts (Abrahams *et al.*, 2004; Harris *et al.*, 2007). A desk-based HIA takes two to six weeks for one full-time person and involves synthesising and appraising already collected information. A rapid HIA takes 6–12 weeks for one full-time person and involves accessing existing data as well as minimal input from experts and stakeholders. An intermediate HIA takes three to six months for one full-time person and involves gathering qualitative data from stakeholders and informants as well as collecting and analysing existing data. A comprehensive HIA takes 6–12 months for one full-time person and involves collecting and analysing qualitative and quantitative data from several sources. Desk-based and rapid HIAs take place when time and resources are limited; intermediate and comprehensive HIAs require more time and resources but provide greater in-depth assessment of the potential impacts (Abrahams *et al.*, 2004; Harris *et al.*, 2007).

As HIA is a relatively new type of assessment, the need for skill development among potential participants has been identified. Menzies (2007) stated that strategies are needed to broaden the skills of professionals such as urban planners and designers in the assessment of health impacts related to their development proposals. In Australia, the New South Wales Department of Health has been undertaking work in the field of HIA since the early 2000s with the aim of increasing workforce skills in the assessment of health impacts, and integrating HIA into the New South Wales (NSW) state health system as a tool to improve internal planning and decision-making; it is also used to engage external partners on initiatives which influence health outcomes (Harris & Simpson, 2003). The NSW Department of Health provided training and support to area health services¹ in the state which were interested in conducting a HIA.

In 2004, the former Illawarra Area Health Service in NSW conducted an intermediate HIA of a local government urban development proposal in conjunction with a local council (Neville *et al.*, 2005). From the Area Health Service's experience in conducting the intermediate HIA (Neville *et al.*, 2005) came the recommendation to conduct another HIA in conjunction with local government using a rapid HIA methodology which is likely to be a more feasible process for both the area health service and local councils to undertake on local government urban development proposals as it is less resource intensive than an intermediate or comprehensive HIA. In 2005, the opportunity arose for the area health service (now South Eastern Sydney and Illawarra Area Health Service (SESAHS))² and a local council (Wollongong City Council) to initiate a rapid HIA on an urban development proposal entitled "The Blue Mile, Wollongong City Foreshore Project" (hereon referred to as the Foreshore Project). The vision guiding the proposal was as follows: "The Blue Mile will become a high quality, popular and beautiful open space area that links the city centre to its magnificent foreshore, and provides a substantially enhanced amenity for residents and visitors" (The Blue Mile Vision, 2007, p. 3). Initiatives within the Foreshore Project proposal aimed to

establish high quality open space; improve pedestrian/cycle access to and along the foreshore; provide high quality facilities of distinctive local design that respond to and enhance the unique natural environment; provide a range of facilities for families, visitors and local residents; ensure design proposals maximise the safety of visitors; improve vehicular access and parking opportunities; and integrate public art into design proposals. (The Blue Mile Vision, 2007, p. 3)

The Project also allowed for the provision of increased café and other dining facilities. Funding allocated to the Project was \$44 million (AUD) (The Blue Mile Vision, 2007). The study area for the Wollongong Foreshore Project is indicated on Figure 1.

Given the potential interaction between the Council’s interest in enhancing amenity and lifestyle for the local community, and the Area Health Service’s interest in promoting behaviours that can reduce the incidence and prevalence of chronic disease, the agreed aim of the HIA was to determine the positive and negative potential impacts of the Foreshore Project in relation to physical activity, social cohesion and access to healthy food—three risk factors for chronic disease.

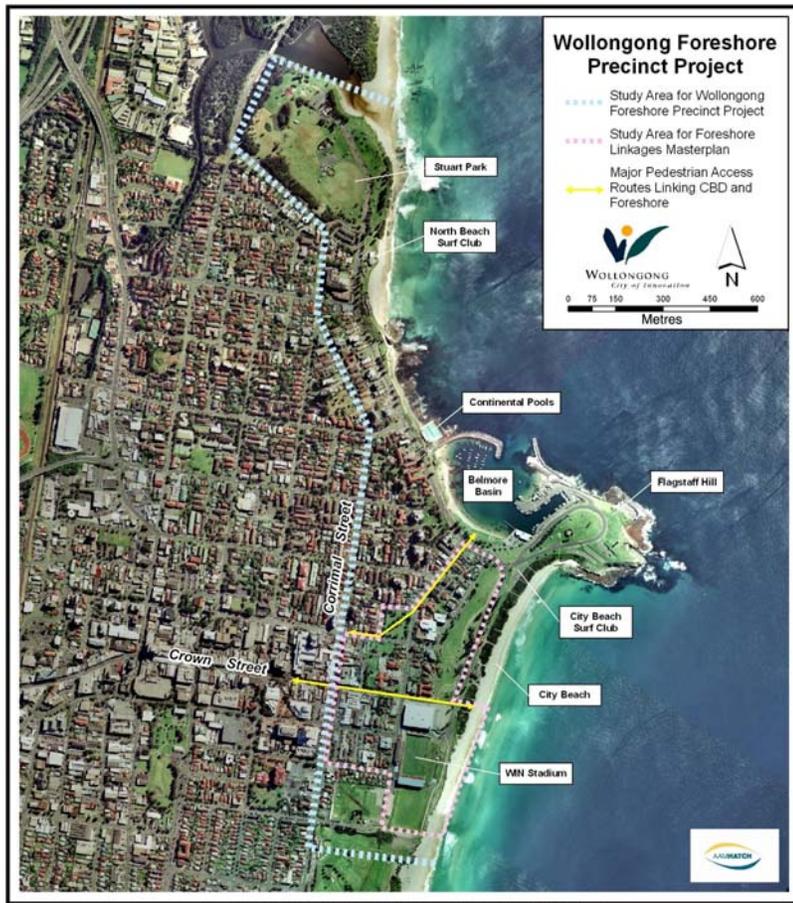


Figure 1. The study area for the Wollongong Foreshore Project

Health Impact Assessment

The HIA described here followed the standard process for conducting HIAs (Scott-Samuel *et al.*, 2001; Abrahams *et al.*, 2004; Mahoney *et al.*, 2004; Harris *et al.*, 2007). HIA comprises five stages: screening; scoping; identification and assessment of potential health impacts; decision-making and recommendations; and evaluation. Screening is undertaken to determine whether a HIA is needed and if the resources (e.g. time, staff) are available. In some cases, there may be a decision not to undertake a HIA as there may be no obvious benefits for the proposal. Scoping determines the extent and nature of the HIA. Issues considered during the scoping stage include the type of HIA to be undertaken; the type of health impacts that will be assessed; the members required for the Steering Committee; the range of stakeholders; the timeframe for each of the five HIA stages; the type of evidence that will be used; and mechanisms for making recommendations. Identification and assessment involves collecting information on potential health impacts on the population or community that will be affected by the initiatives within the proposal and then prioritising the potential health impacts based on an assessment of the information collected. The decision-making and recommendations stage involves ranking the initiatives that have potential health impacts and formulating recommendations about the proposal. The evaluation stage involves process evaluation (what was done and was it seen as useful) and impact evaluation (what changes resulted from the HIA). The next section provides a description of the tasks that were undertaken and the main findings for each of the five stages of the Foreshore Project HIA.

Stage 1: Screening

Screening was undertaken by the Area Health Service and the Council to determine if a HIA on the Foreshore Project proposal would proceed. Screening indicated that the Foreshore Project had the potential to affect the health of residents and visitors to the area and that it would be beneficial to conduct a HIA.

Stage 2: Scoping

A Steering Committee was formed with staff from the Area Health Service (researcher in health promotion; health promotion staff; epidemiologist; managers from health promotion and population health), the Council (landscape architect), the State Health Department (public health officer trainee³) and university with an interest in HIA (research fellow). The Steering Committee was interested in the relationship between the urban environment and physical activity, social cohesion and access to healthy food, and agreed to conduct a rapid HIA. The definition of health used for the HIA was “health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (World Health Organization, 2005b).

Stage 3: Identification and Assessment of Potential Health Impacts

The Council provided the Steering Committee with details of the initiatives in the Foreshore Project. Information obtained from routinely collected data from the Australian Bureau of Statistics and NSW Health Surveys (NSW Department of Health, 2002, 2004b),

a literature review and knowledge and expertise of the Steering Committee members formed the evidence base upon which the health impacts were assessed.

Data on the Wollongong foreshore area and the socio-demographic characteristics of its residents were obtained from the Australian Bureau of Statistics. Wollongong City is located on the south east coast of New South Wales, approximately 75 kilometres south of Sydney and covers an area of approximately 684 square kilometres. The foreshore area that was the subject of this HIA is located in the southern region of the city near the central business district and comprises one square kilometre of land cover. Sixty-three per cent of the study area is parkland (0.7 km²), 32 per cent is mixed density residential housing (0.3 km²), and the remaining 5 per cent is used for commercial and educational purposes (0.05 km²) (Australian Bureau of Statistics, 2006a). At the 2006 Australian Census of Population and Housing there were an estimated 184 213 residents living in Wollongong City and 2324 people living in 1433 dwellings in the foreshore area (Australian Bureau of Statistics, 2006b). The Wollongong foreshore area is predominantly inhabited by an older population with over 30 per cent of residents in the 55 years and older age category; followed by the 25–40 (24 per cent) and 41–54 (19 per cent) age groups (Australian Bureau of Statistics, 2003). The residents of the foreshore area are slightly less disadvantaged than residents in NSW (Australian Bureau of Statistics, 2003).

The 2003 NSW Health Survey provided information on physical activity levels, overweight and obesity, social capital and food consumption for residents from the former Illawarra Health Area (now the southern part of SESIAHS), in which the Wollongong foreshore area is located (NSW Department of Health, 2004b). The survey indicated that about half of the residents (52 per cent) were overweight or obese and only 44 per cent had an adequate level of physical activity (i.e. 30 minutes of moderate-intensity physical activity per day on most days of the week) (NSW Department of Health, 2004b). While 46 per cent of residents ate the recommended two servings of fruit per day, only 25 per cent ate the recommended five servings of vegetables per day and there was a higher rate of consumption of high fat foods than the state average (NSW Department of Health, 2004b). Social capital refers to the institutions, relationships and norms that influence social interactions and networks; it has been shown to be linked with the economic growth of societies and sustainable development (World Bank, 2010). The level of social capital for the former Illawarra Health Area was similar to the state level (NSW Department of Health, 2004b). The 2001 NSW Child Health Survey provided information on children's fruit and vegetable consumption (NSW Department of Health, 2002). In 2001, approximately 85 per cent of 2- to 12-year-old children in the former Illawarra Health Area consumed less than the recommended daily intake of vegetables; however, 95 per cent of children consumed recommended amounts of fruit (NSW Department of Health, 2002).

Literature review. The literature review summarised the links between the environment and the three health outcomes of interest (i.e. physical activity, social cohesion and access to healthy food), and is described fully in the literature review in the HIA Report (Dews *et al.*, 2006). Existing literature reviews were drawn on, including the one prepared for the previous HIA conducted on a similar urban development proposal addressing physical activity and social cohesion outcomes (Neville *et al.*, 2004). The literature review on access to healthy food was derived from peer reviewed publications, recent reports and documents from government and other expert agencies.

The literature review found evidence that physical and social structures of an environment have an impact on physical activity. The accessibility and availability of recreational facilities were found to be important factors in determining physical activity levels (Brownson *et al.*, 2001; Carnegie *et al.*, 2002; Humpel *et al.*, 2002; Huston *et al.*, 2003). Aesthetic and practical features of an environment to facilitate exercise were associated with physical activity levels, the likelihood of walking for exercise and the use of parks (Corti *et al.*, 1996; Ball *et al.*, 2001; Carnegie *et al.*, 2002; Humpel *et al.*, 2002; Lawlor *et al.*, 2003).

Social cohesion occurs when a community can work together and support each other (NSW Department of Health, 2003). The physical and social structure of a community can either inhibit or support a sense of belonging, social relationships, mutual support and caring, all of which can have an influence on health (Lomas, 1998). For example, the design and layout of an environment can influence social interaction (Baum & Palmer, 2002).

Food access is defined as access to quality food in local communities that is safe, affordable, culturally acceptable and nutritious, and provides the opportunity for healthy food choices (NSW Department of Health, 2004a). Changes to the environment have been found to lead to more sustainable health outcomes than educating consumers to change their eating habits (Webb & King, 2004). The location of shops that stock healthy food close to where people live enables people to have easy access to healthy food, and the opportunity to walk or cycle to these shops as well as making social contact with others (Capon & Blakely, 2007). Facilities such as water bubblers, community gardens and breastfeeding facilities also influence people's access to healthy food and nutrition (Webb & King, 2004).

Stage 4: Decision-Making and Recommendations

After consideration of the proposed changes to the Wollongong foreshore, the Steering Committee developed matrices to rank initiatives from the Foreshore Project that had potential health impacts in terms of likelihood and relative size of impact. The matrices were also useful for the prioritisation of initiatives for implementation. The Steering Committee discussed the likelihood of the impact and the relative size of the impact for each initiative in the Foreshore Project in relation to physical activity, social cohesion and access to healthy food. The decisions were based on the available literature and the Steering Committee's knowledge and expertise in these areas. The matrices are presented in Tables 1–3.

The likelihood of the impact refers to whether there is sufficient evidence of an effect of an initiative from the Foreshore Project on physical activity or social cohesion or access to healthy food. The definitions used for the likelihood of the impact occurring were as follows: 'definite' is a demonstrated association in the published literature or through expert opinion; 'probable' is likely to have an impact; and 'speculative' means we are presuming there will be an impact. The relative size of the impact refers to the number of people potentially affected and the magnitude or severity of that impact on an individual. This does not reflect the actual size of the impact but is presented in relative terms. A ranking system was used to prioritise the initiatives as high, medium or low priority. An initiative was considered to be high priority if there was a definite likelihood of impact with a large or medium size of impact; or a probable likelihood of impact with a large size of impact. An initiative was considered to be medium priority if there was a probable likelihood of impact with a medium size of impact; or a speculative likelihood of impact

Table 1. Priority matrix for initiatives with a potential to impact on physical activity

Likelihood of the impact	Relative size of impact		
	Large	Medium	Small
Definite	Lighting Playground and cultural open space Park upgrade including cycleway	Cycleway/shareway Seating Additional parking	
Probable	Toilets Perimeter walk Fitness stations Boardwalk Continental pool upgrade Street improvements Elevated walkway	Shade structures Picnic facilities Art (temporary)	
Speculative		Vehicular access to park	Art (permanent) Markets Visitors centre

■ High priority ■ Medium priority □ Low priority

with a large size of impact. An initiative was considered to be low priority if there was a definite or probable likelihood of impact with a small size of impact; or a speculative likelihood of impact with a medium or small size of impact.

Based on the matrices and the information collected through the identification and assessment stage (i.e. Stage 3), the Steering Committee formulated a set of recommendations for presentation to Wollongong City Council. A general recommendation was made by the Steering Committee that the Foreshore Project had the potential to benefit the health of the local residents and visitors to the Wollongong foreshore area notably by increasing levels of physical activity and social cohesion. The initiatives in the Foreshore Project that were

Table 2. Priority matrix for initiatives with a potential to impact on social cohesion

Likelihood of the impact	Relative size of impact		
	Large	Medium	Small
Definite	Lighting Toilets Parkland/open space		
Probable	Installation of cultural outdoor space Picnic facilities Perimeter walk	Seating Shade Street improvements Elevated walkway Parking Art (temporary)	
Speculative	Markets	Visitors centre Continental pool upgrade Vehicular access to park	Art (permanent) Footpath

■ High priority ■ Medium priority □ Low priority

Table 3. Priority matrix for initiatives with a potential to impact on access to healthy food

Likelihood of the impact	Relative size of impact		
	Large	Medium	Small
Definite	Picnic facilities	Extension of cycleway/shareway Toilets	
Probable	Park upgrade		
Speculative	Street improvements	Vehicular access to park with additional parking Timber boardwalk	Footpath

■ High priority □ Medium priority □ Low priority

considered to have the greatest impact on health and therefore should be prioritised for implementation included the following:

- Improvements to lighting throughout the site, particularly along the primary cycleway/walkway routes, will increase safety and security and allow greater use of the area.
- Improvements to the cycleway/walkway will benefit physical activity and would improve safety to users by increasing space available for pedestrians and cyclists.
- Improvements to open space and recreation areas (including installation of picnic areas) will provide greater opportunity for physical activity as well as provide a meeting place to improve social cohesion. Installation of taps and bubblers will provide access to water and together with picnic tables and seating may encourage people to bring food to consume in the vicinity.
- Provision of toilet facilities (including disabled toilets and a parents' room) would enhance the usability of the foreshore area by enabling people to stay longer in the vicinity, and making it a suitable location for people with special needs.

Strategies to maximise the potential positive health impacts and minimise the potential negative health impacts include:

- Ensure that the lighting is vandal-proof and that a regular maintenance program is established so that it remains in good working order.
- Conduct regular inspections and maintenance of the open space and recreation areas (e.g. cycleways).
- Provide picnic tables with shade covers and ensure that tables are accessible to those with prams, and those who are less mobile including older people and people with disabilities.
- Improve crossing points in areas where local residents and visitors are likely to access the foreshore area.
- Address traffic management issues and associated car-parking issues in and around the foreshore area.
- Incorporate Crime Prevention through Environmental Design (NSW Police) principles to reduce potential for anti-social behaviour in open space and recreation areas.
- Consider re-designing the cycleway/walkway so that both parts are located at the same level. In the proposal, the proposed cycleway/walkway is to be constructed at

different levels which may result in an increase in the risk of falls and accidents.

Figure 2 shows an example of a dedicated walkway for pedestrians.

In addition to providing suggestions on specific initiatives within the Foreshore Project, the Steering Committee recommended that Wollongong City Council consider the development of a comprehensive approach for improving the community's access to healthy food for the whole Wollongong local government area. It was considered that such an approach could influence the distribution of supermarkets, fresh food outlets and community food services (e.g. soup kitchens) across a larger area, ensuring all residents have access to low cost and fresh food. Other aspects could include an increase in the availability of water bubblers, the development of breastfeeding facilities and the establishment of food gardens throughout the local government area. The Committee also recommended that the Council and the Area Health Service jointly undertake HIAs on future plans and projects.



Figure 2. Dedicated walkway for pedestrians

Stage 5: Evaluation

Process evaluation. Interviews were conducted with each member of the Steering Committee to determine the usefulness of undertaking a HIA shortly after completion of Stage 4. Process evaluation examined what worked and what could be done differently next time. The Steering Committee agreed that the HIA process was effective in ensuring that the health impacts of the Foreshore Project were considered in the early stages of the development of the proposal and before the proposal was made available to the public for consultation. The HIA findings were of interest to local government policy makers as the proposal had not been considered at its initial development stage in terms of health impacts. The generally positive nature of the proposal with respect to physical activity and social cohesion was well received. Furthermore, the Council stated that the HIA Report on the Foreshore Project (Dews *et al.*, 2006) would be a useful document for applying for funds for the capital works due to its positive findings and that it involved an external partner (i.e. the health sector).

Impact evaluation. Impact evaluation was conducted to determine if any changes were made to the Foreshore Project as a direct result of the HIA process and the recommendations listed in the HIA Report (Dews *et al.*, 2006). The Area Health Service contacted the Council member of the Steering Committee at 6 and 12 months, and four years after the completion of the HIA. The HIA process was considered to be important in fostering a relationship between the Area Health Service and Council. The Council member reported that the masterplan consultation had been very wide and covered state and local government, businesses, community groups and individuals and, as such, the HIA was only one of the processes that facilitated the consideration of the potential long-term health benefits. While it was difficult to determine the exact impact the HIA had on the Foreshore Project, the HIA process and Report were considered to have been useful in adding weight to the need for the Foreshore Project to be undertaken.

Discussion

There are few published studies on the use of HIA as an approach to determine the potential impact of urban development on health in Australia (Neville *et al.*, 2005; Menzies, 2007). The present HIA demonstrated that the Foreshore Project would have benefits on physical activity and social cohesion thereby having potential to support health promoting behaviours. Similar findings were reported from an earlier HIA on a foreshore urban development proposal that also focused on physical activity and social cohesion (Neville *et al.*, 2005). However, there were fewer initiatives in the Foreshore Project that were considered to have a definite impact on access to healthy food compared with those having a definite impact on physical activity and social cohesion. This finding was most likely related to the recreational nature of the Foreshore Project. However, the findings regarding access to healthy food in this study need to be viewed with caution as research on the relationship between the environment and people's access to healthy food is relatively new (McKinnon *et al.*, 2009). A review of local governments in Australia found that councils had limited involvement in nutrition-related matters compared to food regulation responsibilities even though local government can have a major influence on the public's nutrition (Yeatman, 1997). The review identified that barriers to the

involvement of local government in nutritional activities included lack of awareness of a potential role in promoting nutrition (as nutrition was not considered to be core business), and legislation that was not supportive of local government involvement (Yeatman, 1997). These barriers could be redressed by comprehensive guidelines that assist local government in providing an environment that supports the availability and accessibility of affordable healthy food.

Evaluation of the present HIA demonstrated that the HIA process was effective in developing a partnership between the local council and the health service that had the joint aim of ensuring that the environment encourages and supports healthy lifestyle behaviours. Davenport *et al.* (2006) reported that inter-sectoral relationships developed during the HIA process can facilitate the consideration of the determinants of health by decision makers. For the present HIA, members of the Steering Committee agreed that the HIA process was valuable, however, it was difficult to identify the effect of the HIA process on the final plan. Possible reasons for this difficulty include timing, as the HIA was conducted at an early stage of proposal development (although this is the optimum time as changes can easily be undertaken); and that HIA was only one of several processes used by the Council to inform the development of the Foreshore Project. The complexities in evaluating HIAs have been described by Quigley and Taylor (2004).

Involvement in HIA is a potential strategy for skill development of professionals such as urban planners and designers in the assessment of health impacts related to their development proposals. If there is limited time or resources for conducting a HIA, councils could use checklists to ensure that the initiatives in their proposals support and promote healthy communities (National Heart Foundation of Australia, 2004; Capon & Blakely, 2007; NSW Department of Health, 2009). Ideally, healthy design principles could be included in the instruments used by planners (Menzies, 2007). Introduction of HIA as a subject in the university curriculum for planners and designers, or by offering HIA as a separate training course, could be beneficial for skill enhancement (Menzies, 2007).

As HIA is not mandated in Australia (Harris & Simpson, 2003), the health sector usually takes the responsibility for initiating and/or leading HIAs on local government proposals as that sector is not adequately resourced to undertake HIAs (Menzies, 2007). From the Area Health Service's perspective, the use of a rapid HIA in the present study was a more feasible methodology for the assessment of local government proposals compared with the methodology used in an intermediate or comprehensive HIA due to the short timeframe and level of resources needed. As the area health service can be required to comment on urban development planning documents and proposals on a variety of planning issues from a range of sources, staff experience from their involvement in this and earlier HIA processes (Neville *et al.*, 2005; Thackway *et al.*, 2005; Furber *et al.*, 2007) has strengthened their ability to provide evidence-based feedback on the potential health impacts of local government proposals. It has also assisted in fostering a relationship with local government.

In conclusion, this HIA process provided a practical framework for bringing local government and the health sector together to consider the potential impact of urban development on health and in building partnerships for future collaborative action. As HIA is a relatively new tool, further research is needed to determine the effectiveness of the HIA approach more generally in relation to assessing the health impacts of urban development proposals.

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Notes

1. Area health services are legally constituted jurisdictions responsible for providing a range of health services to residents of defined geographical areas in NSW (Health Services Act, 1997). Area health services can include a number of local government areas (councils) within their geographical boundaries.
2. In 2005, the Illawarra Area Health Service and South Eastern Sydney merged to form the South Eastern Sydney and Illawarra Area Health Service.
3. The public health officer trainee was undertaking the NSW Public Health Officer Training Program which is a three-year service-based training program for people who have completed postgraduate studies in public health.

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