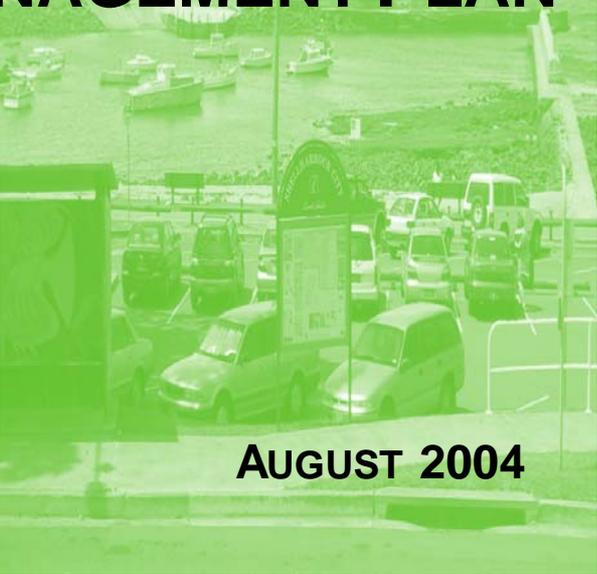


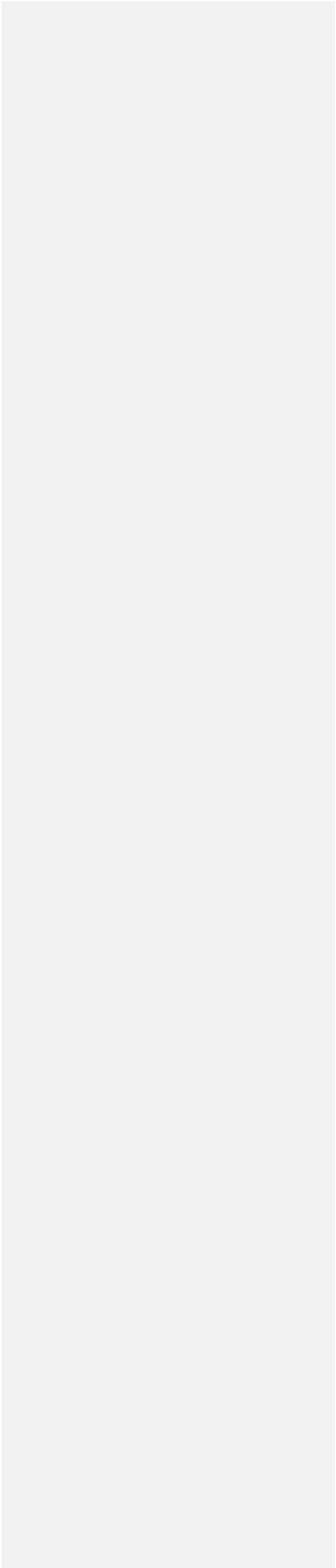


# HEALTH IMPACT ASSESSMENT:

# SHELLHARBOUR FORESHORE MANAGEMENT PLAN



**AUGUST 2004**



## **Authors**

Leonie Neville, Public Health Officer, NSW Public Health Officer Training Program, NSW Department of Health

Susan Furber, Research and Evaluation Coordinator, Health Promotion Unit, Illawarra Health

Sarah Thackway, Director Public Health and Population Health, Illawarra Health

Tuesday Wallin, Environment and Recreation Officer, Shellharbour City Council

Erica Gray, Manager, Health Promotion, Illawarra Health

Darren Mayne, Epidemiologist, Illawarra Health

Linda Campbell, Group Manager, Community Services & Development, Shellharbour City Council

Diane Hindmarsh, Biostatistical Officer, NSW Biostatistical Officer Training Program, NSW Department of Health

## **Acknowledgments**

The authors would like to acknowledge the following people for their input:

Sarah Moberley

Harry Gooden

Nancy Humpel

Joanne Gage

Joshua Wiffen

Ben Harris-Roxas

Sarah Simpson

### ***Suggested citation:***

Neville L, Furber S, Thackway S, Wallin T, Gray E, Mayne D, Campbell L & Hindmarsh D. Health Impact Assessment: Shellharbour Foreshore Management Plan. Illawarra Health & Shellharbour City Council, August 2004.

ISBN: 978-1-921525-16-2

<b>Contents</b>	<b>Page No.</b>
Executive Summary	i
<b>Recommendations</b>	iii
<b>Chapter 1: Introduction</b>	1
<b>Chapter 2: Methods</b>	3
2.1 Community profile of the Shellharbour Foreshore Area	3
Definition of the Shellharbour study areas	3
Data analysis	3
2.2 Literature Review	3
2.3 Policy Review	4
2.4 Recreational environment audit	5
2.5 Key Informant Interviews	5
<b>Chapter 3: Results</b>	7
3.1 Community profile of the Shellharbour Foreshore Area	7
3.2 Literature Review	11
3.2.1 Physical activity, the environment and health	11
3.2.2 Social cohesion, the environment and health	13
3.3 Policy Review	15
3.3.1 Legislation and polices considered by Shellharbour City Council in the development of the SFMP	15
3.3.2 Health policies relating to physical activity, social cohesion and the environment	16
3.3.3 Support from other policies for specific SFMP initiatives	16
3.4: Recreational environment audit	18
3.4.1 Description of facilities	18
3.4.2 Environmental barriers and promoters of physical activity and social cohesion	18
3.5 Key Informant Interviews	22
3.5.1 Potential impact on physical activity	22
3.5.2 Potential impact on social cohesion	24
<b>Chapter 4: Decision-making</b>	27
4.1 Typologies of evidence	27
4.2 Prioritising initiatives of the Shellharbour Foreshore Management Plan	27
4.3 Identifying potential health inequalities that may result from the implementation of the SFMP	28
4.4 Identifying opportunities to maximise potential positive impacts and minimise potential negative impacts of the Shellharbour Foreshore Management Plan on health	29
<b>Chapter 5: Evaluation</b>	30
5.1 Process evaluation	30
5.2 Impact evaluation	30
<b>References</b>	31

## Tables

No.	Title	Page No.
1	Age profile of the Shellharbour Foreshore Area community, the immediate surrounding area and the wider area of Shellharbour LGA	7
2	Demographic indicators of the population within the Shellharbour Foreshore Area, the immediate surrounding area and the wider area of Shellharbour LGA	8
3	Social capital indicators for residents of the Illawarra Health area and NSW in the NSW Adult Health Survey, 2003	9
4	Key informant opinions on the nature of the potential impacts on physical activity and groups likely to be affected	23
5	Key informant opinions on the nature of the potential impacts on social cohesion and groups likely to be affected	25
6	Priority matrix for Shellharbour Foreshore Management Plan initiatives with a potential to impact on physical activity	28
7	Priority matrix for Shellharbour Foreshore Management Plan initiatives with a potential to impact on social cohesion	28
8	Prioritised initiatives of the Shellharbour Foreshore Management Plan and the potential to maximise positive and minimise negative health impacts	29

## Figure

Title	Page No.
Socioeconomic Indexes for the Shellharbour Foreshore Area, the immediate surrounding area and the wider area of Shellharbour LGA	9

## **Appendices**

<b>No.</b>	<b>Title</b>	<b>Page No.</b>
1	Initiatives of the Shellharbour Foreshore Management Plan	35
2	Community consultation – summary of results	39
3	Steering Committee Terms of Reference	40
4	Screening and scoping report	42
5	Definitions of the study areas within Shellharbour LGA	50
6	Open area checklist	51
7	Audit tool for cycle/walkway & swimming pool	57
8	Key Informant Interview script	63
9	Evidence supporting potential impacts of the Shellharbour Foreshore Management Plan	71
10	Evidence supporting potential impacts of the shared cycleway/footway on physical activity and social cohesion	72
11	Evidence supporting potential impacts of landscaping on physical activity and social cohesion	73
12	Evidence supporting potential impacts of picnic tables on physical activity and social cohesion	74
13	Evidence supporting potential impacts of seating on physical activity and social cohesion	75
14	Evidence supporting potential impacts of community art on physical activity and social cohesion	76
15	Evidence supporting potential impacts of parking changes on physical activity and social cohesion	77
16	Evidence supporting potential impacts of public toilets on physical activity and social cohesion	78

## **Executive Summary**

### **1. Introduction**

Shellharbour City Council (SCC) released the Shellharbour Foreshore Management Plan (SFMP) in January 2004, which aims to conserve and beautify the foreshore whilst encouraging and supporting appropriate public use.

The Division of Population Health & Planning (DPPH), Illawarra Health recognised the potential of the SFMP to impact on health through increasing the opportunity for informal and formal recreation for locals and visitors to the area and approached SCC to take part in a Health Impact Assessment (HIA) on the SFMP.

The SFMP contained seven initiative areas believed to be relevant to health, in particular physical activity and social cohesion that were considered in this HIA:

- Shared cycle/walkway
- Landscaping
- Picnic facilities
- Seating
- Community art
- Parking changes
- Public Toilets

An intermediate, prospective HIA was undertaken over a period of six months. The aim of the HIA was to determine the potential health impacts of the SFMP related to physical activity and social cohesion. The objectives of conducting the HIA were to:

- Assist SCC in having a full appreciation of all associated health benefits related to physical activity and social cohesion
- Anticipate any inequalities that may result from the implementation of the SFMP
- Assist SCC in prioritising initiatives to benefit health.

### **2. Methods**

In order to determine the potential impacts of the SFMP on the community's physical activity levels and social cohesion the following methods of information collection were undertaken: community profile, literature review, policy review, recreational environment audit and key informant interviews.

#### **Community Profile**

Three study areas were defined and their demographic characteristics were compared. Indicators for social cohesion and physical activity levels were described for residents of the Illawarra Health Area. Information from a 1996 survey of Shellharbour LGA residents was also provided.

#### **Literature Review**

A literature review was conducted to determine the effect of the environment on physical activity and social cohesion, with a focus on initiatives that are described in the SFMP.

#### **Policy Review**

A policy review was conducted to determine the level of policy support within NSW Health, SCC and other potential stakeholders for the SFMP and its potential health impacts in terms of physical activity and social cohesion.

#### **Recreational Environment Audit**

A recreational environment audit was conducted to determine environmental barriers and promoters of physical activity and social cohesion in existing facilities for informal and formal recreation in the Shellharbour foreshore area.

### **Key informant interviews**

Key informant interviews were conducted with four people to determine their opinions on how the SFMP would impact on the community in terms of physical activity and social cohesion and whether any differential impacts could occur in different groups in the community.

SCC had conducted a community consultation on the SFMP and this information was used.

## **3. Results**

The main findings include:

- The majority of initiatives of the SFMP, in particular those relating to the cycleway, community art and landscaping were well supported in terms of their effectiveness to benefit health, their appropriateness for the Shellharbour Foreshore Area and their acceptability to the community.
- A significant concern was the potential for the proposed changes to parking to impact negatively on physical activity and social cohesion, due to a reduced number of parking spaces and resulting decrease in accessibility of the facilities.

## **4. Decision-making**

Once the information was collated a process of weighting the value of different types of evidence according to its contribution to answering certain questions of importance was undertaken. Consensus was gained from Steering Committee Members on the values placed on each source of evidence.

The nature, likelihood and relative size of the potential impacts on physical activity and social cohesion were considered for the seven health-related initiative areas of the SFMP in order to prioritise the initiatives in terms of their potential to produce health benefits. Priority matrices were developed for physical activity and social cohesion to aid in this process. The potential of the SFMP to differentially impact on certain population subgroups was considered. Opportunities to maximise the potential positive impacts and minimise the potential negative impacts of the SFMP were identified.

## **5. Evaluation**

### **Process evaluation**

A process evaluation will be conducted in order to reflect on the value and feasibility of conducting a HIA on the SFMP. Methods included:

- Review of relevant documentation associated with the HIA of the SFMP
- Collection of feedback from selected Steering Committee Members through completion of a semi-structured questionnaire.

### **Impact evaluation**

Follow up will occur in six and twelve months time to determine whether any changes have been made to the SFMP or its implementation schedule as a result of the HIA.

## Recommendations

### 1. General recommendations:

- The Shellharbour Foreshore Management Plan (SFMP) should be implemented due to its potential to benefit the health of local residents and visitors to the foreshore area by increasing physical activity and social cohesion.
- Further consultation regarding the proposed changes to parking may be required due to resistance within some parts of the local community and its potential negative impacts on accessibility for some members of the community.

### 2. Prioritising implementation of the Initiatives:

In order of priority, the following are recommended for initial implementation:

- 1) The shared cycle/walkway due to its clear potential to increase physical activity levels.
- 2) Community art initiatives due to their potential to increase social cohesion in the planning, development and viewing of the artwork.
- 3) Landscaping initiatives due to their potential to increase social cohesion and physical activity by providing an aesthetic and safe environment.

### 3. Maximising the potential positive and minimising the potential negative impacts:

- To maximise the health potential of the cycle/walkway, it should be actively promoted, and have strategically placed rest stops, bike racks and water bubblers. To minimise potential negative safety impacts the cycle/walkway should have appropriate signage for shared use between cyclists and pedestrians and be serviced through a regular maintenance program.
- To maximise the potential of community art it should be interactive and, where possible, incorporated into other initiatives, for example close to picnic tables. These initiatives must involve local residents and artists in the planning and development of the artwork. Including local youth may minimise the potential for vandalism of the community art.
- To maximise the health potential of landscaping, shade trees are recommended. To minimise potential negative safety impacts associated with secluded areas only low shrubs should be planted and adequate lighting ensured.
- To maximise the potential of picnic tables to increase social cohesion, shade structures need to be installed over or close to picnic tables. The tables should be accessible to those with prams, older people, those less mobile and the physically disabled.
- In order to maximise the potential of the SFMP to benefit health in terms of social cohesion, involvement of the local community in the design and implementation of the facilities including youth, families and older people should be encouraged and a maintenance program of facilities established.

## Chapter 1: Introduction

NSW Health is currently engaged in the NSW Health Impact Assessment (HIA) Project, which aims to build the capacity of the health system to undertake HIAs (Harris & Simpson, 2003). Phase 2 of the NSW Health HIA Project involved the selection of Developmental Sites from across NSW either within Area Health Services or the NSW Department of Health through a competitive selection process. These HIA developmental sites received training and support from the Centre for Health Equity Training Research and Evaluation (CHETRE) to undertake health impact assessments on policies, programs or plans.

NSW Health accepted the application of the Division of Population Health & Planning (DPHP), Illawarra Health to conduct a HIA on the Shellharbour Foreshore Management Plan (SFMP). The DPHP, Illawarra Health approached Shellharbour City Council to take part in a joint initiative: the HIA on Shellharbour Foreshore Management Plan (SFMP) (Anderson & Riggall, 2004).

Shellharbour City Council released the SFMP in January 2004, which aims to conserve and beautify the foreshore whilst encouraging and supporting appropriate public use. The public works are estimated to cost \$2.07 million and include construction of shared cycle-paths, a boardwalk, picnic facilities and landscaping. Appendix 1 provides a more detailed outline of the initiatives within the SFMP.

The objectives of the SFMP (Anderson & Riggall, 2004) are to:

- 1) Maximise the use of the Shellharbour foreshore for recreation activities
- 2) Provide and maintain appropriate facilities
- 3) Enhance community safety and access
- 4) Protect the environment
- 5) Enhance the aesthetic and heritage value of the area
- 6) Maximise pro-active community involvement in the area

The target population is all residents of, businesses in and visitors to the Shellharbour foreshore area. Shellharbour City Council conducted a community consultation on the SFMP, the results of which are provided in Appendix 2.

The DPHP recognised the potential of the SFMP to impact on health through increasing the opportunity for informal and formal recreation for locals and visitors to the area. The SFMP contained seven initiative areas believed to be relevant to health, in particular physical activity and social cohesion that were considered in this HIA:

- Shared cycle/walkway
- Landscaping
- Picnic facilities
- Seating
- Community art
- Parking changes
- Public Toilets

HIA typically involves the completion of five stages: 1) Screening; 2) Scoping; 3) Assessment; 4) Negotiation and decision-making; and 5) Monitoring and evaluation (Mindell et al, 2003). HIAs can be undertaken as rapid “desk-top” appraisals, intermediate or comprehensive assessments depending on the time and resources available. HIAs can be conducted prospectively, concurrently or retrospectively depending on the timing of the HIA and the stage of development under assessment that the plan, policy or program is at.

A steering committee for the HIA was formed which consisted of members from Illawarra Health and Shellharbour City Council:

- Public Health Officer, NSW Public Health Officer Training Program (based at Illawarra Health) (Project Manager)
- Environment and Recreation Officer, Shellharbour City Council
- Director Public Health and Population Health, Illawarra Health
- Research and Evaluation Coordinator, Health Promotion, Illawarra Health
- Manager, Health Promotion, Illawarra Health
- Public Health Epidemiologist, Illawarra Health
- Group Manager, Community Services & Development, Shellharbour City Council
- Immunisation Coordinator, Illawarra Health

For Terms of Reference of the Steering Committee refer to Appendix 3.

The screening stage of the HIA was undertaken by the steering committee, which firstly involved deciding whether the HIA was required. The scoping stage involved defining the study area, health outcomes of interest, stakeholders and potential groups affected. It also involved outlining the aims, methods and timeframe of the HIA. The steering committee decided an intermediate, prospective HIA was required and would be conducted over a period of six months.

The steering committee acknowledged a broad definition of health, however for the purposes of this HIA, health was defined in terms of adequate physical activity and social cohesion. For more detail on the screening and scoping stages of the HIA refer to Appendix 4.

The aim of the HIA was to determine the potential health impacts of the SFMP related to physical activity and social cohesion. The objectives of conducting the HIA were to:

- Assist Shellharbour City Council in having a full appreciation of all associated health benefits related to physical activity and social cohesion
- Anticipate any inequalities that may result from the implementation of the SFMP
- Assist Shellharbour City Council in prioritising initiatives to benefit health.

## Chapter 2: Methods

In order to determine the potential impacts of the Shellharbour Foreshore Management Plan (SFMP) on the community's physical activity levels and social cohesion the following methods of information collection were undertaken: community profile, literature review, policy review, recreational environment audit and key informant interviews. These methods are described below.

### 2.1 Community Profile:

The purpose of the community profile was:

- To describe the Shellharbour Foreshore community in terms of:
  - Demographic characteristics
  - Indicators that may relate to social cohesion and physical activity levels
- To compare the demographic characteristics and other indicators of the Shellharbour Foreshore community to those living just outside this area and those living in the wider area within Shellharbour Local Government Area (LGA).

#### ***Definition of the Shellharbour study areas***

Three study areas were defined to compare the profile of the community within walking distance of the Shellharbour Foreshore to those in surrounding and wider areas of the Shellharbour LGA (Appendix 5).

#### ***Data analysis***

Australia Census data for 2001 was accessed through CData (2001) for the defined study areas, and through the Health Outcomes Information and Statistical Toolkit (HOIST), a data warehouse maintained by the NSW Department of Health, for the Illawarra Health Area and NSW. The data was explored in terms of the following categories: age group, gender, indigenous status, born overseas, education level, income, employment status, single parent families, and changes in population. Socioeconomic Indexes for Areas (SEIFA) were also examined in the following categories: Index of Disadvantage, Advantage, Economic Resources, Education and Occupation.

There is no available information on the levels of physical activity and social cohesion for residents of the three defined study areas. Information on the physical activity levels and social capital of residents in the Illawarra Health Area has been collected through the NSW Health Survey program (NSW Department of Health, 2004).

Information on the use of recreational facilities in the Shellharbour LGA was obtained from a survey conducted by Illawarra Regional Information Service (1996; cited in Anderson and Riggall, 2004).

### 2.2 Literature Review:

The purpose of conducting the literature review was to describe the effect of the environment on physical activity and social cohesion, with a focus on initiatives that are described in the SFMP.

Electronic databases were searched for relevant published literature in March - April 2004 and included: Medline, Cinahl, Ovid full text and CIAP full text. The Internet search engine Google was also used to search for relevant information. The following search terms were used:

- Community connectedness
- Social connectedness
- Social capital
- Social cohesion
- Social support
- Social participation
- Health
- Health impact assessment
- Environment
- Community
- Community engagement

The following systematic reviews on public health and health promotion were searched for relevant reviews:

- Cochrane Collaboration (Cochrane Health Promotion & Public Health Field website). URL: <http://www.vichealth.vic.gov.au/Cochrane> Accessed 8 March, 2004.
- Guide to Community Preventive Services. URL: <http://www.thecommunityguide.org> Accessed 8 March, 2004.
- NHS Health Development Agency (HAD): effectiveness reviews. URL: <http://www.hda-online.org.uk/html/research/effectiveness.html>
- Evidence Base: information on what works to improve health and reduce health inequalities. URL: <http://www.had.nhs.uk/evidence/> Accessed 8 March, 2004.
- Campbell Collaboration. URL: <http://www.campbellcollaboration.org/> Accessed 8 March, 2004.

Other sources of information include:

- An existing database on environment and physical activity (a collection of published papers and media articles) within the Library, Division of Population Health and Planning, Illawarra Health.
- The Active Living Research website, which contains literature citations on the environment, physical activity and health, was used as an additional source of information on published papers. Two pages on this website were accessed: 'Health & Environment' and 'Environmental & Policy Correlates of Physical Activity Citations'. URL: <http://www.activelivingresearch.org/index.php/Literature%20Citations/129> Accessed 9 March, 2004.

Two major health journals with issues dedicating to examining the impact of the built environment on health were reviewed for relevant articles:

- American Journal of Public Health Vol. 93, No.9 (September 2003)
- American Journal of Health Promotion Vol. 18, No. 1 (September/October 2003)

### **2.3 Policy Review**

The aim of the policy review was to determine the level of policy support within NSW Health, Shellharbour City Council and other potential stakeholders for the SFMP and its potential health impacts in terms of physical activity and social cohesion.

Health policy documents available within the Division of Population Health and Planning, Illawarra Health and on the NSW Health website were reviewed for

reference to any of the following: social cohesion, social capital, physical activity, and physical environment.

A policy search was conducted on the Shellharbour City Council website. Policies potentially relevant to the SFMP were reviewed for relevance to the specific initiatives outlined in the SFMP.

The following websites were searched for relevant policy information relating to the initiatives outlined in the SFMP:

- Roads and Traffic Authority, NSW. URL: <http://www.rta.nsw.gov.au> Accessed 10 March, 2004.
- Coastal Council, NSW. URL: <http://www.coastalcouncil.nsw.gov.au> Accessed 10 March, 2004.
- Department of Infrastructure, Planning & Natural Resources. URL: <http://www.dipnr.nsw.gov.au/> Accessed 10 March, 2004.

#### **2.4 Recreational Environment Audit**

The aim of the recreational environment audit was to determine environmental barriers and promoters of physical activity and social cohesion in existing facilities for informal and formal recreation in the Shellharbour Foreshore area.

The project manager audited six facilities for informal and formal recreation in the study area between the hours of 11am –1pm on 28 May 2004 and 17 June 2004. A 'Physical Activity/Open Space' checklist developed by King and Furber (1998) was used to audit the four parks in the study area: Little Park, Bardsley Park and Grey Park and Cowrie Island (Appendix 6). An environmental audit tool developed by O'Sullivan et al (2001) and validated by Neville et al (2004) was used to audit the cycle/walkway and the Beverley Whitfield Pool, both located within the study area (Appendix 7). The facilities were assessed in terms of their accessibility, aesthetics and safety, specifically in relation to their possible impact on social cohesion and physical activity.

#### **2.5 Key informant interviews**

The objectives of the key informant interviews were to:

- Determine key informant opinions on how the proposed initiatives in the SFMP will impact on the community in terms of physical activity. Specifically, will the initiatives result in an increased opportunity for physical activity by addressing issues of improved opportunity, accessibility, aesthetics, safety, and additional supportive facilities?
- Determine if the proposed initiatives in the SFMP will have differential impacts in terms of physical activity on different groups in the community
- Determine key informant opinions on how the proposed initiatives in the SFMP will impact on the community in terms of social cohesion. Specifically, will the initiatives result in increased social cohesion by addressing issues of community trust, increased interaction, and improved safety?
- Determine if the proposed initiatives in the SFMP will have differential impacts in terms of social cohesion on different groups in the community

The Steering Committee members determined that information would be sought from five key informants that represented any of the following areas: local residents, the chamber of commerce, a welfare organisation, physical activity research, youth and community development. Five key informants were contacted and invited for interview, all of which accepted, however one key informant was unable to be interviewed within the time available.

Key informants were told at the beginning of the interview that the primary focus of the HIA was to consider the potential impacts of the SFMP initiatives on physical activity and social cohesion. These initiatives were grouped into nine different areas, each of which was represented on a picture card:

- Construct a shared cycleway/footway along the foreshore and link with existing footpaths
- Plant more shade trees near playgrounds
- Install seating
- Install community art
- Plant low shrubs
- Landscape
- Provide additional public toilet
- Proposed parking changes (Proposed parking changes was represented as additional parking on the picture card but changes to parking were explained by the interviewer)
- Provide picnic facilities

The key informant interview guide is provided in Appendix 8. Key informants were asked questions on whether they thought the nine initiative areas would have an impact on physical activity and social cohesion and to consider if certain groups in the community might be affected in different ways. Social cohesion was defined as social interaction, trust and community connectedness. They were also given the opportunity to talk about any other important issues to consider in relation to the SFMP.

Interviews were taped and later transcribed in a summary format by the interviewer. The summaries were sent to key informants to confirm they were an accurate representation of what was discussed. Confirmations were received from all key informants.

## Chapter 3: Results

This chapter provides the results for each method of information collection undertaken during the assessment stage: community profile, literature review, policy review, recreational environment audit and key informant interviews.

### 3.1 Community profile

#### Key points:

- The Shellharbour Foreshore Area has a lower proportion of Aboriginal and Torres Strait Islander people and people born overseas than the remaining Shellharbour LGA.
- The Shellharbour Foreshore Area has a greater proportion of people of retirement age than the remaining Shellharbour LGA.
- The Shellharbour Foreshore Area is relatively less disadvantaged when compared to the remaining Shellharbour LGA but more disadvantaged when compared to NSW, although differences are unlikely to be significant for health
- The level of social capital in the Shellharbour Foreshore Area is unknown, however for the Illawarra Health Area, it is comparable to that of NSW.
- The proportion of physically active Illawarra females is significantly less than NSW females.
- The Shellharbour Foreshore is a popular area for residents of the Shellharbour LGA for recreation activities

There are a greater proportion of people over 60 years of age in the Shellharbour Foreshore Area than in the remaining Shellharbour LGA (Table 1).

**Table 1: Age profile of the Shellharbour Foreshore Area community, the immediate surrounding area and the wider area of Shellharbour LGA**

Age group (years)	Shellharbour Foreshore Area*		Immediate area surrounding the Shellharbour Foreshore Area*		Wider area of Shellharbour LGA*	
	N	%	N	%	N	%
0 - 9	306	15.7	2285	15.6	9055	16.3
10 - 19	267	13.7	2081	14.2	8714	15.7
20 - 29	233	12.0	1920	13.1	6928	12.5
30 - 39	264	13.6	2250	15.4	8540	15.4
40 - 49	292	15.0	2050	14.0	8055	14.5
50 - 59	216	11.1	1752	12.0	6081	10.9
60 - 69	171	8.8	1224	8.4	4270	7.7
70+	197	10.1	1078	7.4	3931	7.1
Total	1946	100	14640	100	55574	100

Source: Australian Census Data 2001 (CData, 2001)

\*Refer to Appendix 5 for definitions of each study area

There is a lower proportion of Aboriginal and Torres Strait Islander people and people born overseas in the Shellharbour Foreshore Area compared to the immediate area surrounding the Shellharbour Foreshore Area, the wider area of Shellharbour LGA (Table 2), the Illawarra Health area (2.1% and 19.3%, respectively) and NSW (1.9% and 23.2%, respectively).

There is a slightly higher unemployment rate in the Shellharbour Foreshore Area (8.2%) than for NSW (7.2%), however it is lower than that for the rest of the Shellharbour study areas and the Illawarra Health Area (9.4%). A higher proportion of those in the Shellharbour Foreshore Area completed Year 12 (29.7%), than for other defined areas within Shellharbour LGA however, it is lower compared to NSW (38%). The proportion of those earning a low income (less than \$400 per week) is slightly lower (55.4%) than for other defined areas within Shellharbour LGA and for the Illawarra Health area (58.7%) but is greater than for NSW (51.2%).

There are a greater proportion of single parent families with children under 15 years of age in the Shellharbour Foreshore Area compared to the other defined areas of the Shellharbour LGA. There is a lower proportion of those with the same address as for one year ago and a higher proportion of rented houses in the Shellharbour Foreshore Area than for the other defined areas within Shellharbour LGA, the Illawarra Health area (84% and 26%, respectively) and NSW (82% and 28%, respectively).

**Table 2: Demographic indicators of the population within the Shellharbour Foreshore Area, the immediate surrounding area and the wider area of Shellharbour LGA**

Indicator	Shellharbour Foreshore Area*	Immediate surrounding area*	Wider area of Shellharbour LGA*
<b>Demographics:</b>			
Aboriginal or Torres Strait Islander	1.0%	2.2%	2.2%
Born overseas	13.8%	22.6%	20.3%
Single family with children under 15 years	29.2%	22.4%	22.1%
<b>Housing:</b>			
Dwellings being purchased	18.2%	24.8%	28.0%
Total being rented	30.1%	24.4%	23.6%
Same address 1 year ago	77.2%	82.5%	84.3%
Same address 5 years ago	57.4%	54.5%	59.8%
<b>Education, income and unemployment:</b>			
Unemployment rate	8.19%	10.2%	9.47%
Completed Year 12	29.7%	23.1%	22.7%
Income less than \$400/wk	55.4%	57.6%	57.9%
<b>Socioeconomic Indexes for Areas**:</b>			
Disadvantage	988.3	946.9	953.8
Advantage	995.6	940.5	941.8
Economic Resources	1004.4	976.4	971.1
Education & Occupation	995.0	920.0	920.6

Source: Australian Census Data 2001 (CData, 2001)

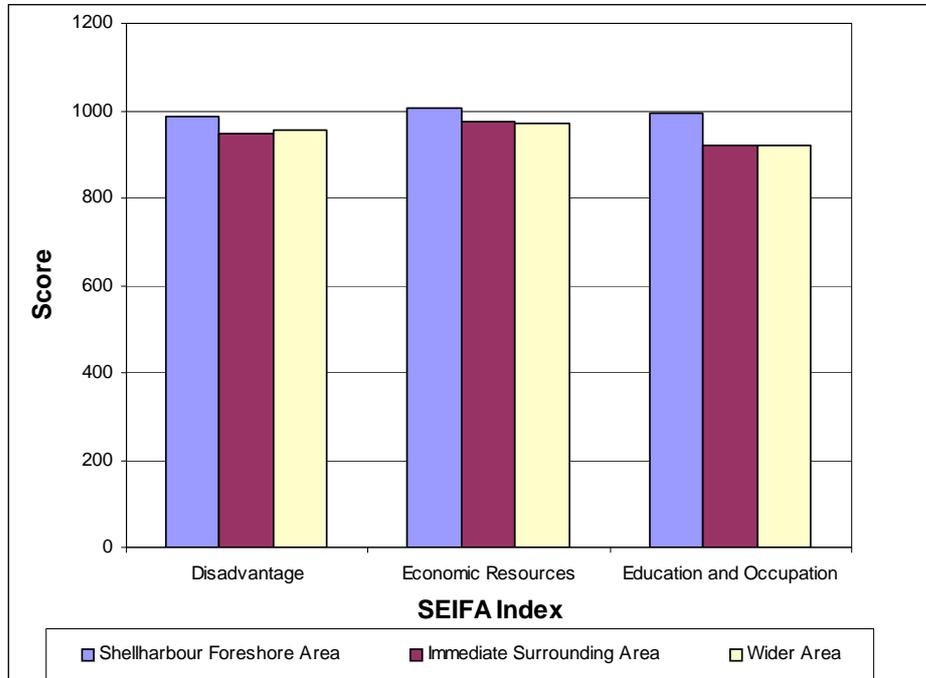
**Note:**

\*Refer to Appendix 5 for definitions of each study area

\*\*For all the indexes, a relatively disadvantaged area will have a lower index value (ABS, 2003).

The Shellharbour Foreshore Area is a relatively less disadvantaged area than the other defined areas of Shellharbour and the Illawarra Health Area (Table 2 & Figure), however is a more disadvantaged area than NSW, which has a score of 1000.46 for the Disadvantage Index. However we are unable to determine how important such differences in these socioeconomic indicators are for health. The small differences suggest they are likely to be insignificant.

**Figure: Socioeconomic Indexes for the Shellharbour Foreshore Area, the immediate surrounding area and the wider area of Shellharbour LGA.**



**Source:** Australian Census Data 2001 (CData, 2001)  
**Note:** For all the indexes, a relatively disadvantaged area will have a lower index value (ABS, 2003).

Figures from the NSW Health Survey 2003 indicate that less than half (43.5%) of residents in the Illawarra Health Area have an adequate physical activity level, a significantly lower proportion than for NSW (45.0%). This proportion has decreased since 1998 (49.6%). A lower proportion of Illawarra females (38.5%) are physically active when compared with females in NSW (40.5%). A significantly higher proportion of people are overweight or obese in the Illawarra Health Area (52.4%) compared with NSW (48.3%) (NSW Department of Health, 2004).

Indicators for social capital for the Illawarra Health area obtained from the NSW Health Survey are presented in Table 3. The results suggest a similar level of social cohesion to the state level, with the exception of visiting neighbours, in which a significantly greater proportion did so in the Illawarra Health Area compared to the whole of NSW. Similar patterns of results for social capital indicators were observed in the 2002 results of the NSW Health Survey (NSW Department of Health, 2004).

**Table 3: Social capital indicators for residents of the Illawarra Health area and NSW in the NSW Adult Health Survey, 2003**

Social Capital Indicator	Illawarra Health Area (95% CI)	NSW (95% CI)
Attended at least one community event in the last six months	58.0 (53.8-62.1)	56.4 (57.1-59.6)
Agreed that most people can be trusted	66.6 (62.5-70.8)	69.8 (68.6-70.9)
Visited someone in their neighbourhood at least once in the past week	74.6 (70.9-78.3)*	65.4 (64.2-66.7)

\*Significantly greater proportion than NSW

**Source:** NSW Department of Health. NSW Health Survey 2003: Illawarra Area Health Service Report. Health Survey Program, NSW Department of Health, April 2004.

The survey of Shellharbour LGA residents undertaken in 1996 indicated that nearly three-quarters (72.5%) of all residents had used a local park, nearly two-thirds (61.3%) had walked for fitness or leisure and approximately half (49.3%) had been push bike riding and had swam in a council pool (56.5%) in the last twelve months. The survey specifically highlighted the popular use of the Shellharbour Foreshore (IRIS, 1996; cited in Anderson & Riggall, 2004).

### **3.2: Literature review: The effect of the environment on physical activity and social cohesion**

#### **Key points:**

- The physical and social structures of an environment have an impact on physical activity levels and social cohesion
- Factors such as accessibility, convenience, aesthetics and safety of the environment need to be considered in designing and developing supportive environments for community health and well-being.

The first section of the literature review describes the effects of the environment on physical activity. The second section describes the effects of the environment on social cohesion. The relationship between the physical environment and social cohesion is also explored.

#### **3.2.1 Physical activity, the environment and health**

Physical activity ranks as the second most important factor in disease prevention in Australia (Mathers et al, 1999). Physical activity has been shown to reduce the risk of coronary heart disease mortality, non-insulin-dependent diabetes mellitus and colon cancer and to relieve symptoms of depression and anxiety (Commonwealth Department of Health & Family Services, 1998; US Department of Health and Human Services, 1996). Adequate physical activity levels are also important in the prevention of overweight and obesity (NSW Department of Health, 2003a; US Department of Health and Human Services, 1996).

There are many determinants of physical activity including individual, social and environmental determinants. There is an increasing interest in the physical environmental determinants as we acknowledge a more comprehensive explanation for physical activity behaviour (Carnegie et al, 2002).

Research has shown that accessibility and availability of recreational facilities, including cycle/walkways, are important factors in determining physical activity levels (Huston et al, 2003; Carnegie et al, 2002; Humpel et al, 2002; Brownson et al, 2001). Access to open public space and footpaths has been shown to be influential on whether an individual reaches the recommended level of walking (Giles-Corti & Donovan, 2003).

Having an aesthetic environment to exercise in is important in determining physical activity levels, the likelihood of walking for exercise and the use of parks (Lawlor et al, 2003; Carnegie et al, 2002; Humpel et al, 2002; Ball et al, 2001; Corti et al, 1996). Bauman et al (1999) found a link between living in a coastal area and having higher levels of physical activity. A cross-sectional study of Australian adults found that their perceptions of aesthetic and practical features of the physical environment were significantly associated with actual walking behaviour (Carnegie et al, 2002). Having adequate amenities is important in influencing the use of parks (Corti et al, 1996), for example toilets, drinking water, lighting and shade (Sallis et al, 1997).

There is evidence that people who perceive their neighbourhood as unsafe are more likely to be physically inactive (Centers for Disease Control & Prevention, 1999). An international study found that safety was the most important factor in parents' decisions about whether to take their children to parks (Sallis et al, 1997). Trust of neighbours and self-reported use of parks and playgrounds have been associated with increased physical activity levels (Addy et al, 2004). Walkers and cyclists have reported that safety is an important factor in influencing their use of cycle/walkways

(Lawlor et al, 2003).

Convenience is an important factor influencing the use of cycle/walkways (Lawlor et al, 2003), the likelihood of walking for exercise (Ball et al, 2001) and in the use of parks (Corti et al, 1996). Factors such as increased distance (Merom et al, 2003), busy streets and steep hill barriers have been negatively associated with use of cycle/walkways (Troped et al, 2001). Distance, busy streets and having to drive to a park are also important barriers in park use (Corti et al, 1996). Distance has been associated with the use of public open space for recreation, and may be more important in the utilisation of public open space than for sporting and recreation centres (Giles-Corti & Donovan, 2002).

Environmental barriers such as travel distance must be considered when planning community cycle/walkways (Troped et al, 2001). However it is not clear how far walkers and cyclists are willing to travel to use a cycle/walkway for exercise (Merom et al, 2003). An intervention conducted in Western Sydney, which involved the promotion of a newly constructed 16.5 km cycle/walkway, known as a rail trail, defined their target group as potential cyclists and pedestrians living within five kilometres of the cycleway (Merom et al, 2003). Giles-Corti and Donovan (2002) suggest most users of public open space live within approximately five hundred metres of the space. Another study suggests that, for older women, living within 20 minutes walking distance of a biking or walking trail is associated with greater amounts of walking (King et al, 2003). A better understanding of such an issue will assist in promoting the use of cycle/walkways more effectively (Troped et al, 2001).

Interventions that aim to change the environment by reducing barriers and increasing opportunities for physical activity can be effective and have the potential to impact the physical activity levels of large numbers of people (Sallis et al, 1998). An evaluation of the UK National Cycle Network indicated that nearly half of those interviewed felt the cycle network had allowed them to increase their physical activity levels by a substantial amount. However, these study results are limited due to possible selection and interviewer bias (Lawlor et al, 2003).

Two studies have found that people of higher education were more likely to use walking trails or walk/cycleways (Troped et al, 2001; Brownson et al, 2001). One of these studies also found people of younger age and men were positively associated with use of walk/cycleways (Troped et al, 2001), while the other study found women were more likely to use walking trails than men (Brownson et al, 2001). Women and those of lower income and education groups were more likely to have increased their amount of walking due to walking trail use (Brownson et al, 2001).

Providing the right infrastructure and access to an environment that supports physical activity is important but may be insufficient on its own to increase physical activity levels (Giles-Corti & Donovan, 2003; Giles-Corti & Donovan, 2002; Eyster & Vest, 2002). There is strong evidence of effectiveness for environmental policy approaches that enhance access to places for physical activity together with informational outreach activities (Kahn et al, 2002; Task Force on Community Preventive Services, 2002). Merom et al (2003) reported a heightened awareness of a rail trail after a media campaign however, only a low proportion of those aware of the rail trail reported using it.

Social support has been consistently, positively associated with physical activity in adults (Giles-Corti & Donovan, 2003; Eyster & Vest, 2002; Trost et al, 2002; Ball et al, 2001; Brownson et al, 2001). An Australian study found that men who had fewer

social connections were more likely to have low levels of physical activity (MacDougall et al, 1997).

To enable people to take advantage of a supportive physical environment complementary strategies that aim to influence individual and social environmental factors are needed (Giles-Corti & Donovan, 2002; Sallis et al, 1998). Interventions aiming to increase physical activity levels need to create a social and cultural environment that supports physical activity (Giles-Corti and Donovan, 2003; Eyster & Vest, 2002; Ball et al, 2001).

### **3.2.2 Social cohesion, the environment and health**

Social cohesion occurs when a community can work together and support each other (NSW Department of Health, 2003b). Lomas (1998) refers to social cohesion as the product of the physical and social structure in a community, both of which are important elements of the social system within a community. The physical structure can influence health through the creation, enhancement or neglect of the physical environment. The social structure of a community is reflected in things like meeting places and opportunities for interaction. The physical and social structure 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). Local neighbourhoods and relationships are important factors in people's sense of health and well-being (Baum, 1999).

Lomas (1998) argues that the way our society is organised, the extent of interaction among citizens and the degree of trust that exists within a caring community are the most important determinants of health. People who are socially engaged with others and actively involved within their community live longer and have better physical and mental health (Leyden, 2003). It is important to involve the community and to consider cultural values and social relations when undertaking changes to the physical environment (MacIntyre & Ellaway, 1999). Involving young people in decision-making is also important as it can assist in connecting them with their community (Foundation for Young Australians, 2003).

The design and layout of an environment can influence social interaction (Baum & Palmer, 2002). Baum and Palmer (2002) argue that 'third places' that is, common meeting places that are not commercial or domestic environments, a perception of safety and a pleasant environment are all important in encouraging people to interact within their community and in facilitating social relationships. Preserving and improving social structures such as meeting places where views and values can be exchanged and trust can be built, can enhance social cohesion (Lomas, 1998). Playing with children and walking dogs in parks is an informal way of bringing people together and facilitating interaction (Baum & Palmer, 2002).

Although the provision of public open space that is safe and accessible is an important resource for the community, the proximity, size and design characteristics of the space are important factors in whether the space is utilised (Giles-Corti & Donovan, 2002). Improvements in urban design such as community art organised by the local community can result in improved social networks and increased community capacity (Semenza, 2003).

Ensuring suburbs are places in which residents are encouraged to interact is an effective form of health promotion (Baum & Palmer, 2002). Baum & Palmer (2002) recommended strategies include creating attractive places to walk, parks with community facilitators, subsidy schemes for local cafes and shops so as to increase employment and providing meeting places. They argue these strategies may

contribute to efforts in overcoming disadvantage in suburbs of lower socioeconomic areas (Baum & Palmer, 2002).

Widespread social changes such as the increased use of cars and decreased amount of walking, allow little time to run into other people and affect the feeling of a community (Baum & Palmer, 2002). Leyden (2003) found higher levels of social capital in those living in walkable neighbourhoods than in those living in car-oriented suburbs, where a walkable neighbourhood is defined as one that allows residents to perform daily activities such as shopping, going to the park, taking children to school without the use of a car. However it is unknown whether social people might be more likely to choose walkable neighbourhoods rather than walkable neighbourhoods encouraging sociability (Leyden, 2003). Nevertheless social capital and walkable neighbourhoods are positively linked.

Lindstrom et al (2001) found a link between low levels of leisure-time physical activity and low levels of education, income and socioeconomic status. They argue that differences in social capital between socioeconomic groups may be the reason for some of the socioeconomic differences in leisure time physical activity and that efforts to improve social capital may be important in increasing the number of those physically active and in reducing socioeconomic differences in physical activity levels. However, a later study conducted by Lindstrom et al (2003) could not confirm whether contextual characteristics of the neighbourhoods such as social capital were important in differences in leisure time physical activity status between neighbourhoods. They found that differences in leisure time physical activity status between neighbourhoods were mainly due to individual factors such as their level of education, social participation and country of origin. However, Lindstrom et al (2003) did not investigate other contextual factors related to the physical aspects of the environment such as access to facilities and neighbourhood walkability and their links with physical activity status.

### 3.3 Policy review

#### Key points:

- Initiatives relating to constructing the cycleway, installing community art and landscaping are well supported by policy
- Shellharbour City Council considered appropriate and relevant environmental planning and management regulations in the development of the Shellharbour Foreshore Management Plan
- Health policies support the need to increase physical activity levels and social cohesion for health

The first section of the results from the policy review describes legislation and policies considered by Shellharbour City Council in the development of the Shellharbour Foreshore Management Plan (SFMP). The second section describes health policies that support the need to increase physical activity and social cohesion for health and well-being. The third section describes the relevance and support of other policies for specific SFMP initiatives.

#### 3.3.1 Legislation and policies considered by Shellharbour City Council in the development of the SFMP

The SFMP was prepared in accordance with the requirements of the Local Government Act 1993 (Anderson & Riggall, 2004). In the development of the plan several legislative and policy documents were considered which include:

- Crown Lands Act 1989
- Environmental Planning and Assessment Act 1979
- Fisheries Management Act 1994
- National Parks and Wildlife Act 1979
- NSW Coastal Policy 1997
- NSW Coastline Hazards Policy 1990
- NSW Heritage Act 1997
- Shellharbour City Council Environmental Policy 2002
- Threatened Species conservation Act 1995

The overarching goals of the NSW Coastal Policy 1997 were acknowledged in the development of the SFMP's goals and objectives (Anderson & Riggall, 2004):

- Natural environment protected, rehabilitated and improved;
- Coastal processes and hazards recognised and accommodated;
- Aesthetic qualities protected and enhanced;
- Cultural heritage protected and enhanced;
- Ecologically sustainable development and use of resources;
- Ecologically sustainable human settlement;
- Appropriate public access and use;
- Information to enable effective management; and
- Integral planning management.

The principles contained in the Crown Lands Act 1989 were also considered, which require:

- Environmental protection principles be observed in relation to the management and administration of Crown Land;
- The natural resources of Crown Land (including soil, water, flora, fauna and scenic quality) be conserved wherever possible;
- Public use and enjoyment of appropriate Crown Land be encouraged;
- Where appropriate, multiple use of Crown Land be encouraged;

- Where appropriate, Crown Land should be used and managed in such a way that both the land and its resources are sustained in perpetuity; and
- Crown Land be occupied, used, sold, leased, licensed or otherwise dealt with in the best interests of the State consistent with the above principles.

### **3.3.2 Health policies relating to physical activity, social cohesion and the environment**

The following health policies identify the importance of increasing physical activity levels, the first three of which listed here also recognise the important influence of the environment on physical activity:

- *Illawarra Population Health Plan 2003-2007*, Illawarra Health
- *Creating Active Communities: Physical Activity Guidelines for Local Councils*, NSW Department of Local Government, NSW Health Department, NSW Sport and Recreation, National Heart Foundation of Australia (NSW Division), 2001.
- *NSW Report on the Weight Status of NSW*, NSW Centre for Public Health Nutrition & NSW Department of Health, 2003.
- *Women's Health Outcomes Framework*, NSW Department of Health
- *Illawarra Aboriginal Health Plan 2001-2004*, Illawarra Health
- *Young People's Health Our Future*. NSW Department of Health

Health policies that have made reference to the importance of social cohesion in health and well-being include:

- *Women's Health Outcomes Framework*, NSW Department of Health
- *Illawarra Population Health Plan 2003-2007*, Illawarra Health

The Illawarra Population Health Plan 2003-2007 expresses a commitment from Illawarra Health in supporting local government agencies in the development of supportive environments for physical activity.

### **3.3.3: Support from other policies for specific SFMP initiatives**

Objective six of the SFMP, which refers to maximising pro-active community involvement in the area is consistent with objectives three and four of the Shellharbour City Council Cultural Diversity Policy (Shellharbour City Council, 1996a). These objectives relate to active community consultation and participation, community harmony and cultural expression.

Initiatives of the SFMP relating to the proposed cycle/walkway complement the Action for Bikes Plan set out in BikePlan 2010, (Salomon et al, 1998), which aims to improve the cycle network, make it safer to cycle and to improve personal and environmental health. In the development of BikePlan 2010 community and stakeholder consultations found that the community want to cycle but felt there were too few safe roads or cycle facilities and prefer the safety of off-road facilities. Cyclists are concerned with access, directness and the connections within the cycling network (Salomon et al, 1998). The initiatives of the SFMP relating to the proposed cycleway also complement the Shellharbour City Cycleway Plan (Shellharbour City Council, 1996b).

The 'Creating Active Communities: Physical Activity Guidelines for Local Councils' (NSW Department of Local Government et al, 2001) fully support each of the following initiatives of the SFMP considered in this HIA: the proposed cycle/walkway and linking footpaths, landscaping, community art, picnic areas, seating, toilets and shelters. The guidelines recommend creating safe, accessible and pleasant environments to enable activity to take place and encourage people to get 'out and

about'. These guidelines also support the SFMP initiatives relating to community involvement and consultation.

The SFMP is consistent with the aims of the State Environmental Planning Policy No 71 – Coastal Protection, specifically in relation to managing the natural, cultural and recreational attributes of the Shellharbour foreshore, identifying and realising new opportunities for public access, preserving Aboriginal cultural places, values and traditional knowledge and preserving native coastal vegetation.

### 3.4 Recreational Environment Audit

#### Key points:

- Shellharbour Foreshore Area has an adequate number of facilities for informal recreation and social interaction
- The Shellharbour Foreshore Area is aesthetic and has a safe and friendly atmosphere
- Most facilities are well maintained but vary in terms of accessibility to the local community and visitors
- Improvements in terms of accessibility and safety could include providing more pram and wheelchair accessible footpaths, public transport, drinking fountains and lighting
- The current cycle/walkway is insufficient in length to enable people to achieve the recommended amounts of walking or cycling for health
- There is a lack of connection between existing footpaths in the area and the facilities audited

The first section of the results provides a brief description of the facilities that were audited. The second section describes the environmental barriers and promoters of the facilities for physical activity and social cohesion in terms of accessibility, convenience, aesthetics and safety.

#### 3.4.1 Description of the facilities

The main uses of the Shellharbour Foreshore area are picnicking, swimming, walking and boating. Parking, through traffic and vehicular access to the boat ramp are other common uses of the area (Anderson & Riggall, 2004). A brief description of the six facilities in the area that were audited is provided below:

- Bardsley Park is located in a residential area adjacent to the beach beside Shellharbour Surf Club and function centre. It has picnic tables, some of which are shaded, grassed areas and a children's playground.
- Grey Park is located in a residential area and overlooks the harbour. It has grassed areas and picnic tables and is on a slight slope.
- Little Park is located within a commercial and residential area near a hotel and has picnic tables and shelters, a playground, seating, public toilets and a rotunda.
- Cowrie Island is located at the end of Towns Street and has a grassed area, two seats, boat ramps and fish cleaning tables.
- The cycle/walkway runs from the base of Grey Park, past Little Park to the Beverley Whitfield Pool. It is approximately 500 metres in length and takes approximately 5 minutes, or 650 steps to walk its length. Along the cycle/walkway there are seating, picnic tables, some of which are shaded and one BBQ.
- The Beverley Whitfield Pool is located within a commercial and residential area and is surrounded by rock pools and grassed areas with nearby picnic facilities. The pool has seating and public toilets with change areas and is patrolled by council lifeguard during the swimming season.

Refer to Appendix 1 for an aerial photograph of the area.

### **3.4.2 Environmental barriers and promoters of physical activity and social cohesion**

#### *Accessibility and convenience*

##### Location

As mentioned in 3.4.1, all facilities are located within either residential and/or commercial areas. The facilities are within walking distance (no more than 750 metres) of those living in the Shellharbour Foreshore Area, as defined in Appendix 5.

##### Signage

All parks and the pool have guide signs on site, the cycle/walkway has shared use path signs and there is one directional sign near the town centre to the foreshore facilities.

##### Footpaths

The cycle/walkway enables wheelchair and pram access from car parking areas to Little Park and the pool. The remaining parks audited and Cowrie Island do not have footpath access suitable for wheelchairs or prams from their respective parking areas or residential areas.

##### Parking

The car park servicing Little Park has 37 parking bays, two of which are for disabled persons. The car park servicing Grey Park and Cowrie Island is mainly used by fishermen with boat trailers and has been designed to be accessible to these users, with larger parking bays. There are approximately 24 parking bays but no disabled car spaces. There is parking for Bardsley Park adjacent to the surf club. The cycle/walkway and pool have additional parking. It is impossible to determine whether the number of parking bays is adequate for users of facilities in the area using these audit methods however the location of these parking areas provides convenient access.

##### Other facilities (toilets, seating, picnic facilities, shade, playgrounds, barbecues, drinking fountains)

There are three public toilet blocks located between the pool and Shellharbour Surf Club (adjacent to Bardsley Park), all of which were open, well maintained and accessible at the time of the audit. There is one unisex disabled toilet located at the pool. There are baby change facilities and a disabled toilet located in the toilet block next to Shellharbour Surf Club. There are adequate seating and picnic facilities along the existing cycle/walkway and in Little Park and Cowrie Island but only one barbecue. Bardsley Park has no seating adjacent to the playground. There is an inadequate amount of shade provided by shade trees and structures for users of any of the six areas or facilities audited. Parks were estimated to have about 20-30% shade and Cowrie Island has no shade. Approximately half of all picnic tables had shade hoods. The pool only has a shade structure over the children's pool. The two playground facilities are relatively new and provide children with a variety of equipment but have no shade structures. A small amount of graffiti exists on one of the playgrounds and the pool sign. There are no drinking fountains along the cycle/walkway and only one of the parks has a water tap (not including those in the toilets).

##### Public Transport

A bus service exists which stops just outside Little Park, enabling access to the cycle/walkway, pool, Little Park and the Shellharbour foreshore commercial centre. The buses run approximately every 20-30 minutes. The closest train station is Oak Flats, from which there are connecting buses to the Shellharbour Foreshore area. Trains arrive in Oak Flats approximately every half hour to an hour or more,

depending on the time of day and day of the week. These buses depart from Oak Flats rail approximately every hour and the bus trip takes approximately 25 minutes.

#### Overall rating

Little Park, the cycle/walkway and the pool are all fairly accessible with some public transport, and parking, which is in convenient locations for the use of facilities. There are adequate amenities such as seating, picnic tables, toilets and playgrounds for these facilities making the area accessible particularly to older people and those less mobile or with young children. Grey Park is not entirely accessible due to the lack of amenities and lack of parking, respectively. Grey Park and Bardsley Park have limited access in terms of public transport and footpaths. Overall accessibility to the six facilities audited could be improved through provision of wheelchair and pram accessible footpaths, drinking fountains and more public transport.

#### *Aesthetics*

##### Location

All facilities are positioned in an aesthetic location, offering views of the ocean and are close to the beach or harbour and have grassed areas. With the exception of the area around the pool and Cowrie Island, all facilities had trees providing shade, some of which are heritage listed and there were clear signs of bird life. Little Park has a historical plaque and a rotunda and the cycle/walkway has community art. The cycle/walkway, Little Park and Cowrie Island have landscaped gardens.

##### Maintenance

The facilities were all well maintained at the time of the audit with the exception of Grey Park, which has broken seats and picnic tables. Most public toilets were clean and well maintained and there was very little rubbish and graffiti present at the time of the audit. All facilities have rubbish bins.

##### Overall rating

All facilities are rated as very aesthetic, mainly due to their location and maintenance, with the exception of Grey Park, which scores an average rating due to the lack of maintenance and landscaping in comparison with the other facilities.

#### *Safety*

##### Lighting

The cycle/walkway has adequate lighting, however there is a limited amount of lighting at the pool, Cowrie Island and the parks. The pool has lighting around the adjacent toilet block, Bardsley Park has a light over the playground, Little Park has one light for the whole park and one for the rotunda within it and Cowrie Island has one light over the car turning area.

##### Open landscaping

The landscaping surrounding the cycle/walkway, pool and Cowrie Island is open, encouraging a safe and friendly atmosphere. There are two areas that may cause safety concerns for users of the parks because of isolation and inadequate views from the street: the area behind the toilet block in Little Park and the area in Grey Park behind dense bushes that run along Towns Street.

##### Restrictions

Signs indicating restrictions on alcohol use were present in all of the audited facilities with the exception of Bardsley Park, which has a nearby function centre and Cowrie Island.

Traffic conditions

Most of the facilities audited are either located in slow traffic areas or areas in which there are traffic calming devices or physical barriers between the facility and street. The two exceptions are Bardsley Park, which is on a street with a medium traffic volume with no physical barriers between the park and the street and Cowrie Island, which has no safe pedestrian access.

Overall rating

The overall rating for personal safety is very safe for the walk/cycleway, pool and Little Park although more lighting is needed for the latter two facilities. Bardsley Park and Cowrie Island had a slightly less safety rating, the former due to the need for physical barriers between the playground and the busy street and the latter due to the absence of safe pedestrian access. Both of these facilities also need more lighting. Grey Park has an average safety rating mainly due to the feeling of isolation created by dense bushes near the road and no lighting.

### 3.5 Key Informant Interviews

#### Key points:

- Most informants believe the initiatives in the Shellharbour Foreshore Management Plan will have a positive impact on physical activity and social cohesion
- Informants believed that the initiatives will assist in creating an accessible and aesthetic environment which would encourage use of the area for both recreation and social interaction
- A significant concern was the potential for the proposed changes to parking to impact negatively on physical activity and social cohesion, due to a reduced number of parking spaces and resulting decrease in accessibility of the facilities.

All informants were familiar with the Shellharbour Foreshore Management Plan (SFMP), with one having attended Shellharbour Foreshore Working Party meetings as a participant observer. One of the informants is a resident of the Shellharbour Foreshore area, one a resident of the Shell Cove area and one a regular visitor to the Shellharbour Foreshore area for recreational purposes. The informants represented the following groups and areas of interest: local residents, visitors to the foreshore, Shellharbour Village Ratepayers Action Group, youth development, community development and research in the area of physical activity and the environment.

#### 3.5.1 Potential impact on physical activity

All informants believe the initiative areas will not have a negative impact on physical activity with the exception of the proposed changes to parking, in which one of the informants was unsure about the potential impact. One of the informants could see a potential negative impact of the proposed changes if parking spaces adjacent to the foreshore are reduced, which would in particular affect older people and those with physical disabilities in terms of accessing the foreshore area for recreation. One of the participants thought all initiative areas would have a positive impact on physical activity levels. Table 4 describes the potential impact of the grouped initiatives on physical activity and the potential groups affected according to the key informants.

The reasons provided by informants for a potential positive impact on physical activity due to the proposed cycleway and connecting footpaths mainly related to increasing the accessibility of the foreshore area for the community. One key informant mentioned that certain groups, such as those less mobile and in wheelchairs were more in need of such facilities in the area. Overall informants believed the initiatives in general would benefit all members of the community and visitors, which would be at no cost and therefore accessible to all. The value of connecting existing cycleways and footpaths to provide a cycle/walking network, thus providing an opportunity for people to reach recommended levels of physical activity was recognised. Other benefits included safety from physical injury as currently some sections of the foreshore are used by the public as a walkway but are not sealed, such as around the caravan park.

The reasons provided by informants for a potential positive impact on physical activity due to landscaping, planting low shrubs and shade trees near playgrounds and installing community art, related to improving the aesthetics of the area, which could encourage people to come and use the recreational facilities. It was noted that these initiatives might encourage those not already active to the area whom will see others being active and could encourage them to participate in physical activity.

**Table 4: Key informant opinions on the nature of the potential impacts on physical activity and groups likely to be affected**

Proposed Initiative	Potential Impact on physical activity (no. respondents)	Potential groups affected
Construct a shared cycleway/footway along the foreshore and link existing footpaths to cycleway	Positive impact (all)	Local residents; cyclists; young people; older people; parents with prams; those less mobile; those with physical disabilities; walkers; joggers
Landscape	Positive impact (all)	Current users; older people
Provide picnic facilities	Positive impact (all)	Families; young people; those with physical disabilities; Current users
Plant low shrubs	Positive impact (all)	Current users
Install seating	Positive impact (3); No impact (1)	Older people; people with young children; people in rehabilitation; families
Install community art	Positive impact (3); No impact (1)	Community groups; visitors; local residents
Proposed parking changes	Positive impact (2); No impact (1); Both a negative and positive impact (1)	Local residents; visitors; people with young children; older people; families; people with physical disabilities; those less mobile
Provide more shade trees near playgrounds	Positive impact (3); No impact (1)	People with young children; children; families
Provide additional public toilet	Positive impact (3); No impact (1)	Families; older people

**Note:** If no groups are indicated in the third column, informants did not mention particular groups that may be affected

Having shade trees near playgrounds was also seen as important in encouraging people to stay for longer in the area and in getting children active. One informant noted the positive link between having a pleasant aesthetic environment and physical activity levels and another recognised the importance of planting low shrubs as opposed to dense bushes, which can contribute to a perception of safety.

Informants believe that providing additional picnic facilities could result in a potential positive impact on physical activity because such facilities encourage people to come to the area. Provided there is adequate open space around the picnic table people may then participate in group activities such as ball sports.

Informants believed more people would use the cycle/walkway if seating were provided which was strategically placed to allow rest spots. This would be particularly important for older people, those less mobile and children. It was also suggested that

if seating was provided near playgrounds this would enable families to rest while children are playing.

Most informants felt that the removal of parking would decrease the accessibility of the foreshore, discourage people from using the facilities and have a negative impact on physical activity. They mentioned this would particularly affect visitors, older people, those less mobile, those with a physical disability, families and people with young children.

Two of the informants believe there are an adequate number of public toilets in the area. It was noted that having these facilities is especially important for older people and children.

### **3.5.2 Potential impact on social cohesion**

Two informants believe all the initiatives will have a positive impact on social cohesion, however one of them expressed uncertainty about the proposed parking changes. The other two informants' concerns regarding negative impacts were related to landscaping, public toilets and the proposed parking changes. Table 5 describes the potential impact of the grouped initiatives on social cohesion and the potential groups affected according to the key informants.

Informants noted that by making the Shellharbour foreshore a friendly and aesthetic environment people would be encouraged to use the area and thus increase the level of social interaction. For example installing community art, landscaping and planting low shrubs would encourage people to use the area, to walk around the area and would provide points of interest for discussion.

Two informants noted that community art would also give ownership of the area to community members and encourage the whole community to participate in and view the artwork. It would provide people with the opportunity to view art who might otherwise not access it and would raise awareness about who else might be using the area and why. Another informant noted the importance of community art in bringing communities together and emphasized the need to involve the community in generating ideas, making decisions and in the creation of the art.

Seating could provide the opportunity for social interaction, particularly older people and people with young children or those in rehabilitation who would need these facilities to use the area. Similarly, planting trees and providing picnic facilities will encourage people to come and use the area and to stay for longer.

The main reasons for the initiatives having a positive impact on social cohesion relate to encouraging people to visit the foreshore, which will result in social interaction.

**Table 5: Key informant opinions on the nature of the potential impacts on social cohesion and groups likely to be affected**

Proposed Initiative	Potential impact on social cohesion (no. respondents)	Potential groups affected
Construct a shared cycleway/footway along the foreshore and link existing footpaths to cycleway	Positive impact (all)	Cyclists; walkers
Landscape	Positive impact (2); No impact (1); Both a negative and positive impact (1)	
Provide picnic facilities	Positive impact (all)	Older people; families; existing social groups; school children
Plant low shrubs	Positive impact (3); No impact (1)	Existing social groups
Install seating	Positive impact (all)	Older people; middle-aged people; families
Install community art	Positive impact (3); Unsure (1)	
Proposed parking changes	Positive impact (1); No impact (1); Both a negative and positive impact (2)	Young people using car parks inappropriately; local residents; fishermen
Provide more shade trees near playgrounds	Positive impact (4)	Children; families
Provide additional public toilet	Positive impact (2); No impact (1); Both a negative and positive impact (1)	Older people

**Note:** If no groups are indicated in the third column, informants did not mention particular groups that may be affected

The main concerns regarding the impact of the proposed parking changes on social cohesion that were raised by two of the key informants were similar to those concerns raised for their impact on physical activity levels. They argued that reducing the number of parking spaces close to the foreshore could have a negative impact on social cohesion as it may discourage visitors and in particular those that have disabilities or the elderly in coming to the foreshore area due to the inability to park close to the facilities. On the other hand it could discourage those that are currently using the car park inappropriately, for example doing car burnouts, which may have a positive impact on social cohesion.

One informant was concerned that the planting of trees, if not planned well could result in a negative perception of safety, for example dense bushes obscuring views, therefore resulting in reduced social cohesion. This informant also raised concerns

about the inappropriate use of public toilets and how if considered unsafe, could impact negatively on social cohesion. However, this informant noted that public toilets need to remain open so as not to disadvantage certain groups in the community in terms of access to the facilities.

An additional concern raised by one key informant related to the provision of sufficient bike racks to support people in using the facilities of the area for both informal and formal recreation, as opposed to just using the cycle/walkway as a way of transport. This informant noted that bike racks would be needed at either end of the cycle/walkway and near the shops. Another concern raised by one of the key informants was that the facilities, once put in place, might not be adequately maintained.

Two informants noted the importance of involving all groups in the community, such as older people, families and younger people, in the development of the initiatives to encourage interaction and create more understanding between the groups and to ensure areas are created that suit all members of community not just particular groups. By encouraging all to be involved in the development of the foreshore, the community may have more ownership of the space, which may result in less inappropriate use of the area and more interest in maintaining the facilities.

## Chapter 4: Decision-making

### Key points:

- The seven initiative areas of the SFMP considered in this HIA have the potential to increase physical activity levels and social cohesion of residents and visitors to the Shellharbour Foreshore Area both individually and collectively.
- Collectively, these seven initiative areas may increase use of the Shellharbour Foreshore Area and provide local residents and visitors with an increased opportunity to undertake recreational activities and to interact in an accessible, safe and aesthetic environment.
- The initiatives related to the cycle/walkway, landscaping and community art were the most supported initiatives in terms of their potential to benefit health by increasing levels of physical activity and social cohesion.
- Opportunities to maximise the potential positive impacts and minimise the potential negative impacts have been identified

This chapter describes how the evidence collected during the assessment stage of the HIA was reviewed, valued and prioritised in order to make recommendations regarding the SFMP.

### 4.1 Typologies of evidence

A process of weighting the value of different types of evidence according to its contribution to answering different questions of importance was undertaken (Appendix 9). This process was adapted from Petticrew & Roberts (2003) and weighs types of evidence against questions such as use, effectiveness, salience, safety, acceptability, cost effectiveness, appropriateness and satisfaction. Consensus was gained from Steering Committee Members on the values placed on each of the sources of evidence.

The community profile contributed a higher value to the use of the Shellharbour Foreshore Area. The literature review contributed a higher value to the effectiveness of the proposed changes and the cost effectiveness, although there was a limited amount of information available on the latter. The key informant interviews and community consultation contributed substantially to the appropriateness, satisfaction, salience and acceptability. The recreational environment audit and policy review also contributed substantially to the appropriateness of the proposed changes (Appendix 9).

### 4.2 Prioritising initiatives of the Shellharbour Foreshore Management Plan

The nature, likelihood and relative size of the potential impacts on physical activity and social cohesion were considered for each of the seven initiative areas in order to prioritise the implementation of the SFMP in terms of their potential to produce health benefits. These were determined through a review of the evidence, which is summarised in Appendices 9 to 16. Priority matrices were then developed for physical activity and social cohesion to aid in the decision-making process (Tables 6 and 7). Subsequent discussion and consensus was reached by the Steering Committee Members as to the level of priority assigned to the seven initiative areas.

The cycle/walkway, landscaping and community art initiatives were the initiatives most likely to benefit health by increasing levels of physical activity and social cohesion (Tables 6 and 7).

**Table 6: Priority matrix for Shellharbour Foreshore Management Plan: Initiatives with a potential to impact on physical activity**

LIKELIHOOD OF THE IMPACT	RELATIVE SIZE OF THE IMPACT		
	Large	Medium	Small
<b>Definite</b>	Cycle/walkway	Landscaping	
<b>Probable</b>			
<b>Speculative</b>		Parking	Community art Picnic facilities Seating Public toilet

Source: adapted from Risk Assessment Matrix (Shellharbour City Council)

<input type="checkbox"/>	High priority
<input type="checkbox"/>	Medium Priority
<input type="checkbox"/>	Low Priority

**Table 7: Priority matrix for Shellharbour Foreshore Management Plan: Initiatives with a potential to impact on social cohesion**

LIKELIHOOD OF THE IMPACT	RELATIVE SIZE OF THE IMPACT		
	Large	Medium	Small
<b>Definite</b>		Landscaping	
<b>Probable</b>	Community art	Cycle/walkway Picnic facilities	
<b>Speculative</b>		Parking Seating	Public toilet

Source: adapted from Risk Assessment Matrix (Shellharbour City Council)

**Note:**

The **likelihood of the impact** refers to whether there is sufficient evidence of an effect on physical activity and/or social cohesion

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.

**4.3 Identifying potential health inequalities that may result from the implementation of the SFMP**

The seven initiative areas were considered in terms of whether they could differentially impact on certain population subgroups. The parking changes are the only initiatives identified that have the potential to result in inequalities, due to a concern of decreased access to the Shellharbour foreshore for some groups, in particular for visitors, older people, those less mobile, disabled persons and families with young children. In order to resolve this issue and/or come to an agreement regarding recommendations more detailed information on this initiative and its potential impacts on social cohesion and physical activity is required.

**4.4 Identifying opportunities to maximise potential positive impacts and minimise potential negative impacts of the Shellharbour Foreshore Management Plan on health**

Opportunities to maximise the potential positive impacts and minimise the potential negative impacts were identified for the prioritised initiatives and are described in Table 8.

**Table 8: Prioritised initiatives of the Shellharbour Foreshore Management Plan and the potential to maximise positive and minimise negative health impacts**

<b>Initiative</b>	<b>Maximise positive impacts</b>	<b>Minimise negative impacts</b>
Cycle/walkway	Actively promote Strategically place bubblers, seating, bike racks and picnic tables	Establish regular maintenance program Provide signage for safe use of shared cycle/walkway
Landscaping	Provide adequate shade Maintain natural coastal environment	Establish regular maintenance program Plant low shrubs for safety Ensure adequate lighting
Community art	Provide interactive art, Provide a cultural story trail Maximise community involvement and consultation	Establish regular maintenance program
Picnic tables	Provide shade structures Ensure accessibility for older and disabled people	Establish regular maintenance program

## **Chapter 5: Evaluation**

### **5.1 Process evaluation**

A process evaluation will be conducted in order to reflect on the value and feasibility of conducting a HIA on the SFMP.

Methods will include:

1. Review of relevant documentation associated with the HIA of the Shellharbour Foreshore Management Plan i.e. e-mail communication between Steering Committee members, the Screening and Scoping Report and Steering Committee Terms of Reference, meeting minutes and the Project Manager's journal.
2. Collection of feedback from selected Steering Committee members through completion of a semi-structured questionnaire.

The following questions will be asked of Steering Committee members:

- 1) What worked and what didn't work?
- 2) For things that didn't work – how could we have done better or how could the process be improved?
- 3) Did the process add value? If so, how?
- 4) Was the degree of stakeholder/decision-maker involvement appropriate?
- 5) What impact do you think this HIA could have on the future of the Shellharbour Foreshore Management Plan?

### **5.2 Impact evaluation**

Follow up on behalf of the Steering Committee to Shellharbour City Council will occur at six and twelve months after they have received this HIA report to determine whether any changes have been made to the SFMP or its implementation schedule as a result of the HIA recommendations or findings.

## References

- Addy CL, Eilson DK, Kirtland KA, Ainsworth BE, Sharpe P & Kimsey D. Associations of Perceived Social and Physical Environmental Supports With Physical Activity and Walking Behaviour. *American Journal of Public Health* 2004; 94(3): 440-443.
- Anderson B & Riggall J. Shellharbour Foreshore Management Plan, January 2004. Shellharbour City Council, Jan 2004
- Australian Bureau of Statistics. Socio-Economic Indexes for Areas: Australia 2001: Information Paper, Census of Population and Housing. ABS Cat. No. 2039.0, Canberra, 2003.
- Ball K, Bauman A, Leslie E & Owen N. Perceived Environmental Aesthetics and Convenience and Company Are Associated with Walking for Exercise among Australian Adults. *Preventive Medicine* 2001, 33: 434-440.
- Baum F. The Role of Social Capital in Health promotion: Australian Perspectives. *Health Promotion Journal of Australia* 1999; 9(3): 171-178.
- Baum F & Palmer C. 'Opportunity structures': urban landscape, social capital and health promotion in Australia. *Health Promotion International* 2002; 17(4): 351-361.
- Bauman A, Smith B, Stoker L, Bellew B & Booth M. Geographical influences upon physical activity participation: evidence of a 'coastal effect'. *Australian and New Zealand Journal of Public Health* 1999, 23(3): 322-324.
- Brownson RC, Baker EA, Housemann RA, Brennan LK & Bacak SJ. Environmental and Policy Determinants of Physical Activity in the United States. *American Journal of Public Health* 2001, 91(12), 1995-2003.
- Brownson RC, Housemann RA, Brown DR, Jackson-Thompson J, King AC, Malone BR & Sallis JF. Promoting Physical Activity in Rural Communities: Walking Trail Access, Use and Effects. *American Journal of Preventive Medicine* 2000, 18(3), 235-241.
- Carnegie MA, Bauman A, Marshall AL, Mohsin M, Westley-Wise V & Booth ML. Perceptions of the Physical Environment, Stage of Change for Physical Activity, and Walking Among Australian Adults. *Research Quarterly for Exercise & Sport* 2002, 73(2):146-155.
- Centers for Disease Control & Prevention. *Neighbourhood Safety and the Prevalence of Physical Inactivity – Selected States, 1996*. MMWR 1999; 48(7): 143-146. Available URL: <http://www.cdc.gov/mmwr/preview/mmwrhtml/00056582.htm> Accessed 4 May 2004.
- Commonwealth Department of Health & Family Services. *Developing an Active Australia: A framework for action for physical activity and health*. Public Health Division, Department of Health & Family Services, Canberra 1998.
- Corti B, Donovan RJ & Holman C. Factors influencing the use of Physical Activity Facilities: Results from Qualitative Research. *Health Promotion Journal of Australia* 1996; 6(1): 16-21.
- Eyler AA, & Vest JR. Environmental and Policy Factors Related to Physical Activity in Rural White Women. *Women & Health* 2002, 36(2): 111-121.

Foundation for Young Australians. *Sharing a New Story: Young People in Decision-Making*. Report by Foundation for Young Australians, June 2003.

Giles-Corti B & Donovan RJ. Relative Influences of Individual, Social Environmental, and Physical Environmental Correlates of Walking. *American Journal of Public Health* 2003 93(9): 1583-1589.

Giles-Corti B & Donovan RJ. The relative influence of individual, social and physical environment determinants of physical activity. *Social Science & Medicine* 2002; 54: 1793-1812.

Harris E & Simpson S. NSW Health Impact Assessment Process, Phase 1 Report. Sydney: Centre for Health Equity Training Research & Evaluation, UNSW, 2003.

Humpel N, Owen N & Leslie E. Environmental factors associated with adults' participation in physical activity: a review. *American Journal of Preventive Medicine* 2002, 22(3): 188-199.

Huston SL, Evenson KR, Bors P & Gizlice Z. Neighbourhood Environment, Access to Places for Activity, and Leisure-time Physical Activity in a Diverse North Carolina Population. *American Journal of Health Promotion* 2003, 18(1), 58-69.

Illawarra Health. *Illawarra Population Health Plan 2003-2007*. Illawarra Health, June 2003.

Illawarra Health. *Illawarra Aboriginal Health Plan 2001-2004*. Illawarra Health, 2001

Illawarra Regional Information Service. Shellharbour Recreation and Community Facilities Usage Survey. Illawarra Regional Information Service (IRIS), 1996. (cited in Anderson & Riggall, 2004).

Kahn EB, Ramsey LT, Brownson RC, Heath GW, Howze EH, Powell KE, Stone EJ, Rajab MW & Corso P. The Effectiveness of Interventions to Increase Physical Activity: A Systematic Review. *American Journal of Preventive Medicine* 2002, 22(4S), 73-102.

King WC, Brach JS, Belle S, Killingsworth R, Fenton M and Kriska AM. The Relationship Between Convenience of Destinations and Walking Levels in Older Women. *American Journal of Health Promotion* 2003; 18(1): 74-82.

King L & Furber S. Physical Activity/Open Space Audit. Unpublished document.

Lawlor DA, Ness AR, Cope AM, Davis A, Insall P and Riddoch C. The challenges of evaluating environmental interventions to increase population levels of physical activity: the case of the UK National Cycle Network. *Journal of Epidemiology & Community Health* 2003; 57(2): 96-102.

Leyden KM. Social Capital and the Built Environment: The Importance of Walkable Neighbourhoods. *American Journal of Public Health* 2003; 93(9): 1546-1551.

Lindstrom M, Moghaddassi M & Merlo J. Social capital and leisure time physical activity: a population based multilevel analysis in Malmo, Sweden. *Journal of Epidemiology and Community Health* 2003; 57: 23-28.

Lindstrom M, Hanson BS & Ostergren P. Socioeconomic differences in leisure-time physical activity: the role of social participation and social capital in shaping health related behaviour. *Social Science & Medicine* 2001; 52: 441-451.

Lomas J. Social capital and health: Implications for Public Health and Epidemiology. *Social Science and Medicine* 1998; 47(9): 1181-1188.

MacDougall C, Cooke R, Owen N, Willson K & Bauman A. Relating physical activity to health status, social connections and community facilities. *Australian and New Zealand Journal of Public Health* 1997, 21(6): 631-637.

Macintyre S & Ellaway A. Local Opportunity Structures, Social Capital and Social Inequalities in Health: What Can Central and Local Government Do? *Health Promotion Journal of Australia* 1999; 9(3): 165-170.

Mathers C, Vos T & Stevenson C. *The burden of disease and injury in Australia - summary report*. Australian Institute of Health & Welfare, Canberra: AIHW, November 1999.

Merom D, Bauman A, Vita P & Close G. An environmental intervention to promote walking and cycling – the impact of a newly constructed Rail Trail in Western Sydney. *Preventive Medicine* 2003, 36: 235-242.

Mindell J, Ison E & Joffe M. A glossary for health impact assessment. *Journal of Epidemiology & Community Health* 2003; 57: 647-651.

Neville L, Thackway S & Furber S. Factors that influence physical activity participation of women with young children in the Milton-Ulladulla area. Illawarra Health, March 2004.

NSW Centre for Public Health Nutrition & NSW Department of Health. *NSW Report on the Weight Status of NSW*, 2003.

NSW Department of Health. NSW Health Survey 2003: Illawarra Area Health Service Report. Health Survey Program, NSW Department of Health, April 2004.

NSW Department of Health. *NSW Chronic Disease Prevention Strategy: 2003-2007*. NSW Department of Health, September 2003a.

NSW Department of Health. *Four Steps Towards Equity: A Tool for Health Promotion Practice*. Equity Project Team, Health Promotion Service, South East Health, June 2003b.

NSW Department of Local Government, NSW Health Department, NSW Sport and Recreation, National Heart Foundation of Australia (NSW Division) *Creating Active Communities: Physical Activity Guidelines for Local Councils*, 2001.

NSW Health Department. *Women's Health Outcomes Framework*. NSW Health Department, February 2002.

NSW Health Department. *Young People's Health Our Future*. NSW Department of Health, January 1999.

O'Sullivan B, Thackway S & Pickett M. Social, Environmental and Behavioural Factors Influencing Physical Activity in Mothers in the Bay and Basin Area of the Shoalhaven. Illawarra Health, 2002.

Petticrew M & Roberts H (2003) *Evidence, Hierarchies and Typologies: horses for courses*, *Journal of Epidemiology & Community Health*, 57:527-9.

Sallis JF, Bauman A & Pratt M. Environmental and Policy Interventions to Promote Physical Activity. *American Journal of Preventive Medicine* 1998, 15, 4, 379-397.

Sallis JF, McKenzie TL, Elder JP, Broyles SL & Nader PR. Factors parents use in selecting playspaces for young children. *Archives of Pediatrics and Adolescent Medicine* 1997; 151: 414-7.

Salomon W, Nesbitt H and Katz R. BikePlan 2010: The Key Issues. Roads & Traffic Authority of NSW, Bicycle Section. July 1998

Semenza JC. The Intersection of Urban Planning, Art, and Public Health: The Sunnyside Piazza. *American Journal of Public Health* 2003; 93(9): 1439-1441.

Shellharbour City Council. Draft Shellharbour Foreshore Management Plan, Community Consultation Summary (unpublished document), 2004.

Shellharbour City Council. Environmental Policy 2002.

Shellharbour City Council. Cultural Diversity Policy, 1996a. Available at: <http://www.shellharbour.nsw.gov.au/?page=201>. Accessed 4 June 2004.

Shellharbour City Council. Shellharbour City Cycleway Plan 1996b.

Task Force on Community Preventive Services. Recommendations to Increase Physical Activity in Communities. *American Journal of Preventive Medicine* 2002; 22 (4S): 67-72.

Troped PJ, Saunders RP, Pate RR, Reininger B, Ureda JR & Thompson SJ. Associations between Self-Reported and Objective Physical Environmental Factors and Use of a Community Rail-Trail. *Preventive Medicine* 2001; 32(2): 191-200.

Trost SG, Owen N, Bauman AE, Sallis JF & Brown W. Correlates of adults' participation in physical activity: review and update. *Medicine & Science in Sports & Exercise* 2002, 34(12): 1996-2001.

US Department of Health and Human Services. *Physical Activity and health: A report of the Surgeon General*. Atlanta, Georgia: US Department of Health and Human Services, Public Health Service, CDC, National Center for Chronic Disease Prevention and Health Promotion, 1996.

**Appendix 1: Proposed initiatives for the Shellharbour foreshore**

Location	No.	Description
Bardsley Park	1.1	Construct shared cycleway/footway along the foreshore.
	1.2	Link east-west footpath to proposed cycleway/footway phase out north-south footway.
	1.3	Install picnic facilities and extra seating next to playground area.
	1.4	Relocate existing picnic tables.
	1.5	Plant low shrubs along roadside boundary.
	1.6	Install low barrier on grass embankment with a break for access to beach
	1.7	Liaise with community regarding a town threshold structure in Wollongong Street
	1.8	Provide more shade trees adjacent to playground
Sandy Beach & rock platform	1.9	Design and construct elevated cycleway/footway link to Cowrie Island
	1.10	Link existing stairs at eastern end Surf Rd to proposed cycleway/footway
Cowrie Island	2.1	Construct footpath on southern side of causeway
	2.2	Widen northern side of slipway to enable access for third boat trailer. Install safety fence and kerbs as guides for boat trailers on ramp and pollution control measures on slipway.
	2.3	Consider improvements to submerged portion of eastern boat ramp.
	2.4	Construct new jetty
	2.5	Install adequate lighting on new jetty
	2.6	Provide additional seating on grassed area
	2.7	Install community art on western face of break wall
	2.8	Liaise with Aboriginal community regarding cultural significance of Cowrie Island
	2.9	Install public art on Cowrie Island itself
Headland north of Towns Street	3.1	Review line marking of parking bays
	3.2	Provide signage reserving use for boat trailer parking & directing overflow boat trailer parking to Wentworth Street public car-park
	3.3	Landscape and provide picnic facilities
	3.4	Seal gravel area, install car barrier, landscape and provide seating and signage
	3.5	Liaise with Coast Guard to provide permanent facility with public toilet & car park
Grey Park & adjacent foreshore embankment	3.6	Review landscaping and picnic facilities, provide interpretative signage
	3.7	Landscape at stormwater pit
	3.8	Remove weed infestations on embankment and replant with native species
	3.9	Create stairs to Grey Park and proposed car park

	<p><b>3.10</b> Provide parking at eastern end of Grey Park unless Coast Guard is relocated to this area</p> <p><b>3.11</b> Create angled parking on southern side of Towns Street adjacent to Grey Park and provide footpath on southern side Town Street.</p> <p><b>3.12</b> Enhance sandstone bench</p> <p><b>3.13</b> Liaise with Coast Guard regarding extra wash down and tie down bays</p>
Harbour foreshore	<p><b>3.14</b> Replace existing paved cycleway/footway finish with standard surface finish</p> <p><b>3.15</b> Construct a ramp linking existing footpath with proposed boardwalk</p> <p><b>3.16</b> Construct board walk on top of breakwater with seating, viewing platforms &amp; signage</p> <p><b>3.17</b> Install community art on breakwater</p>
Little Park	<p><b>3.18</b> Provide seating adjacent to playground and under eastern Fig tree</p> <p><b>3.19</b> Provide separate cycleway to the rear of Little Park to divert cyclist from foreshore footpath.</p> <p><b>3.20</b> Provide stairway from Wollongong St to north western corner of Little Park.</p> <p><b>3.21</b> Provide passenger drop off bay on eastern side of Wollongong St and north of bus zone.</p> <p><b>3.22</b> Relocate bike racks to western edge of Little Park.</p> <p><b>3.23</b> Establish additional shade trees.</p> <p><b>3.24</b> Provide interpretive signage</p>
Little Park car park	<p><b>3.25</b> Provide signage to Wentworth Street public car park.</p> <p><b>3.26</b> Modify Little Park car park to 2 rows and no circulating road</p> <p><b>3.27</b> Provide public art features and interpretive signage.</p>
Foreshore Reserve	<p><b>4.1</b> Eliminate existing car parks and return to parkland with picnic facilities.</p> <p><b>4.2</b> Provide additional seating and shade covers around pool and standardise signage.</p> <p><b>4.3</b> Ultimately prevent through access for vehicles to Darley Street.</p> <p><b>4.4</b> Prevent through access for vehicles to Wilson St, convert Wilson St to two way traffic with turning bay</p> <p><b>4.5</b> Ultimately prevent through access for vehicles to Addison St and provide turning bay.</p> <p><b>4.7</b> Upgrade existing footway to shared cycleway/footway</p> <p><b>4.8</b> Investigate engineering solution for erosion on the northern side of the pool.</p> <p><b>4.9</b> Ensure pool operations and maintenance are environmentally friendly</p> <p><b>4.10</b> Reconstruct stormwater drainage outlets (from Addison and Wilson Streets)</p> <p><b>4.11</b> Provide interpretive signage.</p>

Formatted

Foreshore: caravan park to South Beach	<b>5.1</b>	Provide elevated shared cycleway/footway on eastern side of the caravan park.
	<b>5.2</b>	Provide interpretive signage
	<b>5.3</b>	Enhance grassed embankment and complete sand dune restoration work.
John Street: from Darley St to South Beach access	<b>5.4</b>	Construct shared cycleway/footway.
	<b>5.5</b>	Create angled parking along eastern side John St and eliminate parking on western side.
Hind dune area: from John St to South Beach amenities block	<b>5.6</b>	Maintain existing cycleway/footway and replace non-native vegetation over time with native species.



## Appendix 2: Community Consultation - Summary of results

A total of 23 feedback forms and 11 written letters were received during the community consultation phase

- 56% of respondents live in Shellharbour
- 71% of respondents visit the foreshore daily

### Most utilised facilities and popular activities:

The most utilised facilities are Walkways, Car Parks and the Swimming Pool. Walking and Swimming are the most popular activities undertaken on the foreshore.

### Support for initiatives within the SFMP:

Strategies contained within the SFMP that are most supported by residents are:

- Construction of shared cycleway/footway along the foreshore
- Permanent Coastguard facility, public toilet and parking at Grey Park
- Reconstruction of stormwater drainage outlets (from Addison and Wilson Streets)

Strategies contained within the SFMP that most concern residents are:

- Foreshore parking and closure of streets
- John Street parking

Two Petitions were received:

- 110 signatures from concerned residents regarding seating locations, passenger drop off points, foreshore parking and John Street parking
- 24 signatures regarding foreshore parking and John Street parking.

**Source:** Shellharbour City Council. Draft Shellharbour Foreshore Management Plan, Community Consultation Summary (unpublished document), 2004.

### **Appendix 3: Steering Committee Terms of Reference**

#### **HIA Steering Committee**

#### **Shellharbour Foreshore Management Plan**

#### **Terms of Reference**

##### **Purpose**

To provide advice and guidance for the Shellharbour Foreshore Management Plan Health Impact Assessment, in particular:

- Identification and engagement of stakeholders
- Establish the scope of the HIA – definitions, levels of evidence, principles, process for negotiation and decision making
- Develop the draft Health Impact Statement
- Frame the recommendations arising from the results of the HIA
- Provide guidance and advice on the process evaluation of the HIA

##### **Members**

The Steering Committee will include:

- Leonie Neville, Public Health Officer, NSW Department of Health (based at Illawarra Health) (Chair)
- Tuesday Wallin, Environment and Recreation Officer, Shellharbour City Council
- Sarah Thackway, Director Public Health and Population Health, Illawarra Health
- Erica Gray, Manager, Health Promotion, Illawarra Health
- Darren Mayne, Public Health Epidemiologist, Illawarra Health
- Susan Furber, Research and Evaluation Coordinator, Health Promotion, Illawarra Health
- Sarah Moberley, Immunisation Coordinator, Illawarra Health
- Linda Campbell, Group Manager Community Services & Development, Shellharbour City Council

##### **Responsibilities**

- Participate in HIA Steering Committee meetings (Shellharbour Foreshore Management Plan) – in person, by teleconference and/or feedback on key documents.
- Undertake the screening and scoping steps of the Shellharbour Foreshore Management Plan HIA.
- Use existing networks and forums to communicate about the Shellharbour Foreshore Management Plan HIA, including the main findings.
- Undertake the negotiation and decision making steps of the Shellharbour Foreshore Management Plan HIA.
- Facilitate presentation of the Health Impact Statement to Shellharbour City Council.
- Disseminate findings from the HIA to stakeholders/other agencies

##### **Meetings**

It is proposed that the Shellharbour Foreshore Management Plan HIA Steering Group meet up to three times during the course of the HIA:

- 5 April 2004
  - Undertake the screening step of the HIA and determine whether a HIA is appropriate

- If determined that a HIA is appropriate:
- Undertake the scoping step of the HIA
  - Identify key stakeholders
  - 5 May 2004 ○ Discuss progress of the assessment stage of the HIA
  - Late May 2004 ○ Undertake the negotiation & decision making steps of the HIA;  
○ Commence preparation of the draft Health Impact Statement  
○ Develop and/or endorse recommendations as part of the HIS.
  - Late June 2004 ○ Progress report on the process evaluation of the HIA  
○ Finalise any outstanding issues

The venue for the face to face meetings will be at the Division of Population Health & Planning.

**Out of session issues**

Issues that arise out of session and may require member's input will be dealt with by the project officer.

Formatted

It is estimated the HIA will be complete by July 2004. This committee will cease to function once the HIA has been completed.

## **Appendix 4: Screening and Scoping Report**

### **1. Screening**

#### **1.1 Context of the Management Plan**

Shellharbour City Council recently released a Management Plan for the Shellharbour foreshore that aims to conserve and beautify the foreshore whilst encouraging and supporting appropriate public use. The public works are estimated to cost \$2.07 million and include construction of shared cycle-paths, a board walk, picnic facilities and appropriate and safe lighting.

In general, the initiatives are as follows:

- Construct a shared cycleway/footway along the foreshore
- Link existing footpaths to the cycleway/footway
- Install picnic facilities and seating
- Landscape, plant low shrubs
- Provide more shade trees near playgrounds
- Town threshold structure in Wollongong Street
- Widen boat ramp and improve its safety by installing safety fence and kerbs
- Construct new jetty and install lighting
- Install community art
- Review parking areas
- Provide signage for boat trailer parking
- Provide permanent coast guard with public toilet and car park
- Create stairs
- Provide additional parking

#### **1.2 Target population of the Management Plan**

Residents of, businesses in and visitors to the Shellharbour foreshore area.

#### **1.3 Assumptions underpinning or embedded within the Management plan**

The assumptions of the Division of Population Health & Planning (DPHP) are: Improving the accessibility, aesthetics and safety of the Shellharbour foreshore area will provide more opportunity for informal and formal recreation for locals and visitors to the area. This provides potential for physical activity levels and social cohesion to increase resulting in better health outcomes.

Shellharbour City Council's overall aim for the Shellharbour Foreshore is: To provide recreation facilities and services that meets the Shellharbour community's current and future expectations.

Shellharbour City Council's objectives for the Shellharbour Foreshore are to:

1. Maximise the use of the Shellharbour foreshore for recreation activities
2. Provide and maintain appropriate facilities
3. Enhance community safety and access
4. Protect the environment
5. Enhance the aesthetic and heritage value of the area
6. Maximise pro-active community involvement in the area

#### **1.4 Potential links between the Management Plan and health**

Providing a safe, accessible and aesthetic environment conducive to both informal and formal recreational activities may increase physical activity levels and social cohesion in the target population (Figure).

There are many factors that have an effect on health that may be impacted upon:

- **Social and economic factors:**
  - Employment opportunities created in development of foreshore
  - Employment opportunities created through increased number of visitors to the area
  - Changes in social conditions and lifestyle opportunities
  - Improved opportunity for informal recreation and socialisation
  - Social exclusion - increased/decreased isolation of individuals
  - Shifts of population groups into or out of the area
- **Lifestyle and Behaviours:**
  - Physical Activity
- **Access to Services:**
  - Leisure
  - Community perceptions of local government
- **Environment:**
  - Changes to shade resulting in increased sun protection
  - Increased demands on water supply, sewerage
  - Altered motor vehicle traffic leading to changed risk of injury or air pollution
  - Changes to noise

### 1.5 Groups most likely to be affected by the Management Plan

All residents of and businesses in the Shellharbour Foreshore area and neighbouring areas, have the potential to be affected by the proposal. Visitors to the area also have the potential to be affected. Sub-populations of interest are:

**Table 1: Sub-population groups likely to be affected by the Management Plan**

Group affected	Why?	Potential effect
Women & children	Provision of a safer environment in which to exercise and socialise and more shade around playground	Increase level of physical activity and socialisation; increase level of sun protection
Parents with young children	Provision of a more aesthetic and safer environment in which to take their children for recreation and be able to push a pram	Increase level of physical activity and socialisation
People with a physical disability	Provision of a more accessible environment in which to socialise and undertake recreation activities	Increase physical activity and socialisation
Older people	Provision of a more accessible environment in which to socialise and undertake recreation activities	Increase physical activity and socialisation
Local businesses	Increased business to the area during construction and due to increased number of visitors	More income, more employment
Teens/ adolescents	Reduced opportunity to use the area inappropriately	Inappropriate users move to other areas

Visitors to the Shellharbour foreshore area from outside the local area also have the potential to be affected however we do not intend to assess the impact on this population.

### **1.6 Equity issues**

- Anecdotal evidence suggests the Shellharbour Foreshore area is the least disadvantaged area of the Shellharbour LGA. We will need to confirm this using SEIFA indicators as a measure of relative disadvantage and advantage. If it is the least disadvantaged area of the Shellharbour LGA there may be an equity issue about putting resources into this area as opposed to a more disadvantaged area within the LGA.
- A potential desirable equity outcome is the increased opportunity for both informal and formal recreation for most people in the Shellharbour area, but in particular women with prams, the disabled, elderly or frail, due to increasing the accessibility of the foreshore and improving on the aesthetics and safety (Table 1).
- A potential desirable equity outcome is an increase in job opportunities during the construction of the proposed initiatives, which may benefit the unemployed and increase job opportunities in the long-term in the retail/service industry due to an increased number of visitors to the area and more demands for such services.
- Ensure equitable access – need to ensure the most disadvantaged have reasonable access, and to determine whether visitors within the surrounding suburbs have access through public transport &/or active transport

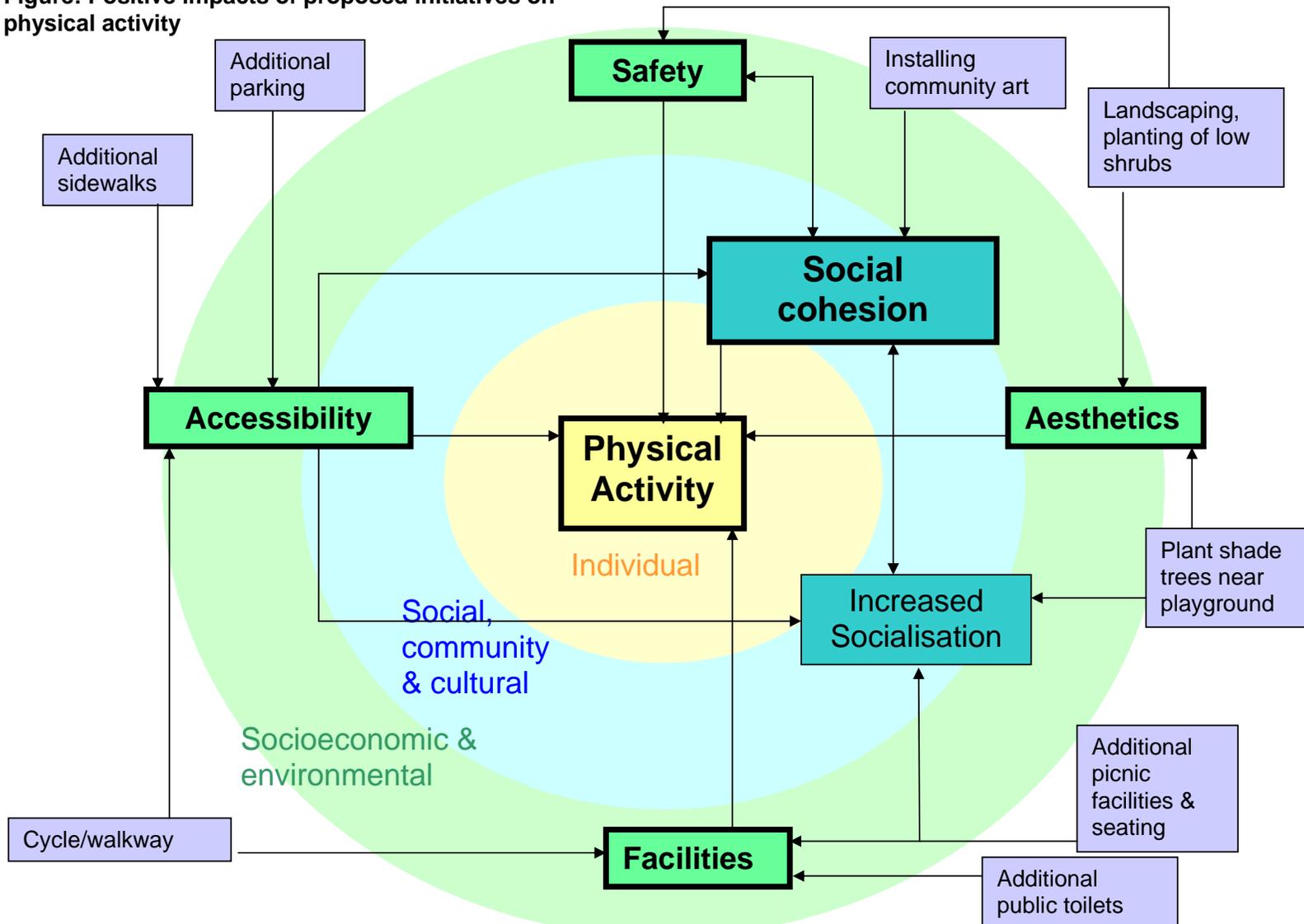
### **1.7 Potential for change to the Management Plan**

The Management Plan for the Shellharbour foreshore has been endorsed by Shellharbour City Council however funding for the project has not yet been identified. It is envisaged that the HIS would assist Shellharbour City Council in prioritising the initiatives outlined in the Plan. Support from Illawarra Health may provide added impetus for funders. An environmental hazard analysis process must be undertaken which means the Plan may not be implemented for at least one year. In addition each individual initiative must have a full design phase, which would involve community consultation. Council expectations are that it may take up to fifteen years to fully implement all initiatives. Therefore there is opportunity to influence the decision makers regarding the phasing of implementation.

#### **Justification that an HIA is appropriate**

There are no available publications or reports that indicate a health impact assessment has been conducted on a similar project before. Therefore it is necessary to conduct a HIA to determine the health impacts of the Shellharbour Foreshore Management Plan. The Health Impact Assessment would assist Shellharbour City Council in having a full appreciation of all associated health benefits, to anticipate any inequalities that may result from the implementation of the Plan and to enable them to prioritise initiatives.

Figure: Positive impacts of proposed initiatives on physical activity



## 2. Scoping

### 2.1 Steering committee

The steering committee will consist of staff within the Division of Population Health & Planning, Illawarra Health and two staff from Shellharbour City Council:

- Public Health Officer (Project Manager)                      Leonie Neville  
NSW Department of Health, based at<sup>1</sup>
- Environment and Recreation Officer                              Tuesday Wallin  
Shellharbour City Council
- Director Public Health, Population Health<sup>1</sup>                      Sarah Thackway
- Research and Evaluation Coordinator,  
Health Promotion<sup>1</sup>    Susan Furber
- Manager, Health Promotion<sup>1</sup>    Erica Gray
- Public Health Epidemiologist<sup>1</sup>    Darren Mayne
- Immunisation Coordinator<sup>1</sup>    Sarah Moberley
- Group Manager, Community Services  
& Development, Shellharbour City Council                      Linda Campbell

The steering committee will meet four times to discuss:

- 1) Screening and scoping
- 2) Progress of assessment stage
- 3) Negotiation and decision making (post-assessment)
- 4) Evaluation and Health Impact Statement

The Terms of Reference (Appendix 1) were agreed upon at the first steering committee meeting (5 April 2004).

### 2.2 Definitions:

#### 2.2.1 Definition of health

The World Health Organization defines health as:

“...a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”.<sup>2</sup>

For the purposes of this HIA health will be defined in terms of adequate physical activity and social cohesion. Adequate physical activity is participating in 150 minutes or more of at least moderate intensity physical activity/ week (Armstrong et al, 2000). Social cohesion is referred to as the product of the physical and social structure in a community. The physical and social structure can either inhibit or support a sense of belonging, social relationships, and mutual support and caring, all of which can have an influence on health (Lomas 1998).

The reasons for considering the health outcomes physical activity and social cohesion as opposed to many health outcomes for this HIA include: an interest in the effect of changes in the physical environment on physical activity levels and social cohesion in addition to the time and resources available.

#### 2.2.2 Definition of the Shellharbour Foreshore area

When referring to Shellharbour Foreshore we refer to the area defined in the Shellharbour Foreshore Management Plan (Anderson & Riggall, 2004), which is a section of Crown Land approximately 275 000m<sup>2</sup> within the Shellharbour LGA (Figure 1). This area extends along the coast from Bardsley Park in the north to Shellharbour South Beach in the south. When referring to the Shellharbour Foreshore Area this

---

<sup>1</sup> Illawarra Health

<sup>2</sup> Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 states (Official Records of the World Health Organization, no.2, p.100) and entered into force on 7 April 1948

includes the residential and commercial area extending west from the Shellharbour foreshore to Shellharbour Rd.

### **2.2.3 Definition of key stakeholders**

- Residents of the Shellharbour Foreshore area
- Businesses in the Shellharbour Foreshore area
- Visitors to the Shellharbour Foreshore area
- Shellharbour City Council
- Illawarra Health
- Local community groups

## **2.3 Methods**

The likely impact of the proposed environmental changes in the Shellharbour Foreshore area on physical activity levels and social cohesion will be determined through a population profile, literature review, policy review, environmental audit and key informant interviews. These tools will assist in determining the likely number of people that will be affected by the changes and the potential level of health impact. The project manager will develop a Health Impact Statement (HIS) based on the findings.

### **2.3.1 Population profile**

The project manager with the assistance of the public health epidemiologist and a biostatistical officer, DPHP (Diane Hindmarsh), will access, analyse and interpret the following data to develop a profile of the Shellharbour Foreshore population:

- Census Data 2001 for demographic information.
- NSW Health Survey 1997, 1998, and 2002 to provide information about physical activity behaviour and levels of Shellharbour LGA residents.
- Usage of foreshore by residents and visitors

Information will be sought from Tourism NSW to determine the number of tourists who visit the area.

### **2.3.2 Literature Review**

The project manager will conduct a literature review to assess the evidence surrounding the effects of environmental changes similar to the initiatives outlined in the Management Plan on physical activity and social cohesion. This will also establish whether there has been any health impact assessments conducted on similar issues.

### **2.3.3 Policy Review**

The project manager will conduct a review of relevant policies within Shellharbour Council, Illawarra Health, regional tourism and planning. This policy review will be conducted with the assistance of the Research & Evaluation Coordinator, Manager of Health Promotion and the Manager of Population Health.

### **2.3.4 Environmental audit**

The project manager using a validated tool will conduct an environmental audit of existing facilities that affect physical activity. This audit tool will identify and examine environmental barriers and promoters to physical activity in the area in terms of its accessibility, aesthetics and safety.

The public health epidemiologist (DPHP) and environment and recreation officer (SCC) will assist the project manager in identifying environmental infrastructure and features relevant to participation in physical activity by obtaining proximity and

topography data for the Shellharbour Foreshore area through Geographical Information Systems.

The environment and recreation officer will determine whether there is any information on the level of traffic to the area through the Traffic Committee or RTA.

### **2.3.5 Key informant consultation**

The project manager will undertake interviews with a range of informants, with the aim of representing the groups: Shellharbour City Council, residents of the Shellharbour Foreshore Area, the Chamber of Commerce in the Shellharbour Foreshore Area, youth and researchers in public health and environmental health.

The steering committee members (ST, SF, TW, EG) will assist the project manager with the development of questionnaires. Community consultation with local residents will be undertaken by Shellharbour City Council as part of the process of developing the Management Plan.

## **2.4 Evaluation**

In the short term, the DPHP will determine whether Shellharbour City Council adopt the recommendations from the HIS.

In the longer term, it is proposed that the HIA be evaluated by a research project (cohort study) to determine whether the process was effective in assessing the likely impact on physical activity levels. The extent of correlation between the HIS and the research project will provide evidence on the effectiveness of HIA in these environments. The evaluation will also determine whether any recommendations made actually resulted in the expected effects.

## **2.5 Accountability and reporting**

The Steering Committee is responsible for providing the final HIS to:

- NSW Health as per the project agreement, and
- Shellharbour City Council

The Steering Committee is responsible for reporting on the process of conducting HIA to the Centre for Health Equity Training, Research and Evaluation (CHETRE).

### **References:**

*Armstrong T, Bauman A and Davies J. Physical activity patterns of Australian adults. Results of the 1999 National Physical Activity Survey. Canberra: Australian Institute of Health and Welfare, 2000.*

Lomas J. Social capital and health: Implications for Public Health and Epidemiology. *Social Science and Medicine* 1998; 47(9): 1181-1188.

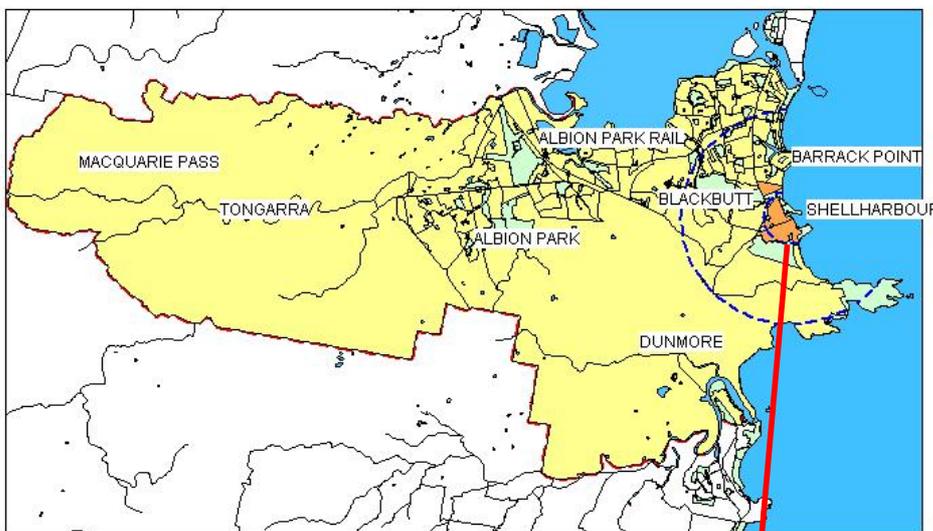
Anderson B & Riggall J. Shellharbour Foreshore Management Plan, January 2004. Shellharbour City Council, Jan 2004.

**2.6 Time frame**

<b>Date</b>	<b>Task</b>	<b>Responsibility (to be finalised)</b>
December 2004	DPHP meet with Shellharbour City Council about the Shellharbour Foreshore Management Plan	ST & SF
Feb 2004	Attend HIA training	SF & ST
March 2004	Attend HIA training Establish Steering Committee (SC) Undertake the screening step of the HIA Identify key stakeholders	LN & SF LN, SF, ST LN & SC SC
Early April 2004	Hold first steering group meeting Establish SC Terms of Reference Undertake scoping step of the HIA Complete screening and scoping report	LN & SC SC LN LN
Mid April 2004 - Early May 2004	Undertake assessment step of the HIA: <ul style="list-style-type: none"> <li>• Population profile</li> <li>• Literature review</li> <li>• Policy review</li> <li>• Environmental audit</li> <li>• Key informant consultation</li> </ul> Hold second SC meeting (5 May)	(LN & SC) LN, DM, DH, LN, SM LN, ST, EG, TW LN LN, SF, EG, TW SC
Late May 2004	Undertake the negotiation & decision making step of the HIA Hold third SC meeting Develop recommendations as part of the HIS Draft Health Impact Statement	ST, SF, LN, TW  SC LN, SC LN, SF, ST, TW
Early June 2004	Attend HIA Training and present on preliminary HIA results (1 June)	LN & SF
Late June 2004	Hold final SC meeting Progress report on the process evaluation of the HIA Finalise any outstanding issues Finalise Health Impact Statement	SC LN, SF, ST  LN LN, SC
July 2004	Complete report and submit for publication Write up case study	LN, ST & SF LN, SF & ST

**Appendix 5: Definitions of the study areas within Shellharbour LGA**

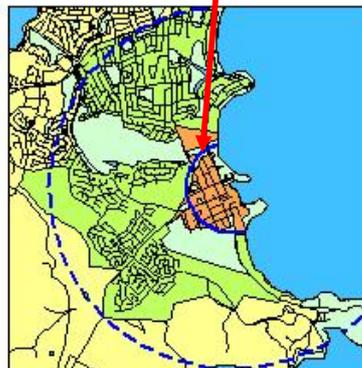
Study Area	Definition
Shellharbour Foreshore Area	The area that extends no more than 750 metres from the Shellharbour Foreshore and is bounded by Beach Rd in the north and Shellharbour Road in the west. The area consists of two Census Collection Districts.
Immediate area surrounding the Shellharbour Foreshore Area	The area beyond Shellharbour Foreshore Area but no further than 3000 metres from the Shellharbour Foreshore
Wider area of Shellharbour LGA	The area beyond the immediate area surrounding the Shellharbour Foreshore Area within the Shellharbour LGA boundary.



**Key:**

- Shellharbour Foreshore Area
- Immediate area surrounding the Shellharbour Foreshore Area
- Wider area of Shellharbour LGA
- 750m from Shellharbour Foreshore
- 3000m from Shellharbour Foreshore

Based on 2001 Collection District Boundaries  
Source: CData (2001)  
Produced by Illawarra Health  
© Commonwealth of Australia, 2004



**Appendix 6:**

**PHYSICAL ACTIVITY/OPEN SPACE AUDIT**

Date/Day: \_\_\_\_\_ Time: \_\_\_\_\_

Land Description: \_\_\_\_\_

Name of Park: \_\_\_\_\_

Sign identifying park:  Yes  No

Address: \_\_\_\_\_

Location (please specify), i.e. alongside or next to a busy/heavy traffic road, school, shops, public transport, ocean/beach, lake, swimming pool.

\_\_\_\_\_

LGA Suburb: \_\_\_\_\_

Census District: \_\_\_\_\_

Local Government Category:

- a natural area
- a sportsground
- a park
- other – general community use

Describe characteristics (type, number and location) of area, i.e. trees, grassed areas, shrubs, playground facilities.

\_\_\_\_\_

Describe the major facilities surrounding the park, e.g. shops, school, houses, etc.

\_\_\_\_\_

Local Government Zoning:

- 6(a) Open Space "A" – existing recreation
- 6(b) Open Space "B" – private recreation
- 6(c) Open Space "C" – proposed recreation
- 5(a) Special Uses "A"
- 7(c) Rural environment protection "C" – water catchment
- 2(a) Residential "A"
- 2(b) Residential "B"
- 2(v) Residential "V"
- Other (please specify) \_\_\_\_\_

Area (m2, Ha): \_\_\_\_\_

Ownership:

- Council/community
- Crown Land
- Department of Housing
- Private (please specify) \_\_\_\_\_
- Other (please specify) \_\_\_\_\_

## FACILITIES

Children's Playground/Play Equipment:  Yes  No

If yes:  newer style  older style

Describe type and condition of equipment: \_\_\_\_\_

---

Public access toilets:  Yes  No

Opening hours: \_\_\_\_\_

Location within area: \_\_\_\_\_

Change rooms:  Yes  No

Opening hours: \_\_\_\_\_

Location within area: \_\_\_\_\_

Barbeques:  Yes  No

Number & location: \_\_\_\_\_

Free: \_\_\_\_\_ Coin operated: \_\_\_\_\_

Picnic tables:  Yes  No

Number & location: \_\_\_\_\_

Seating (benches):  Yes  No

Number & location: \_\_\_\_\_

Shaded structures/natural areas:  Yes  No

Number & location: \_\_\_\_\_

Estimated proportion of area under shade: \_\_\_\_\_%

Parking facilities:  Yes  No

Free:  Yes  No User-pay:  Yes  No

Number of bays: \_\_\_\_\_ Number of bays for disabled drivers: \_\_\_\_\_

Street parking:  Yes  No

Kiosk/Café:  Yes  No

If yes, location within area: \_\_\_\_\_

Opening hours: \_\_\_\_\_

---

Drinking fountains:  Yes  No  
Number and location: \_\_\_\_\_

Public telephones:  Yes  No  
Number and location: \_\_\_\_\_

Sporting fields:  Yes  No  
Walking tracks:  Yes  No  
Footpaths:  Yes  No  
Bicycle track:  Yes  No  
Skateboard ramp:  Yes  No  
Clubrooms/meeting rooms:  Yes  No

List any other facilities provided: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Additional comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## SAFETY ISSUES

### 1. Specific to park

Lighting (not street lighting):

In some areas  Yes  No  
In BBQ/picnic areas  Yes  No  
In playground  Yes  No  
Along paths/walkways  Yes  No  
None  Yes  No

Other (please specify): \_\_\_\_\_

Are there any secluded and/or isolated areas?  Yes  No  
Please specify: \_\_\_\_\_

Is there any broken glass or debris present?  Yes  No  
Please describe amount and location: \_\_\_\_\_

Is alcohol use restricted in area:  Yes  No

## 2. Surrounding park

Street and car park lighting:  Yes  No

Number and location: \_\_\_\_\_

Is the park located in the vicinity of a public bar, hotel or bottle shop?  Yes  No  
Describe the area surrounding the park, i.e. hotel, residential, well lit, and isolated.

---

Traffic conditions surrounding area:  Slow  Medium  Heavy density

Comments on variations and the quality of the roads surrounding area: \_\_\_\_\_

---

Describe any traffic calming devices and location of pedestrian crossings if present: \_\_\_\_\_

---

Is there safe access to park via pedestrian crossings:  Yes  No

Are areas in the park clearly visible from the road:  Yes  No

Comments: \_\_\_\_\_

---

Any other observations: \_\_\_\_\_

---

How would you rate the park for overall personal safety (circle one number):

- 1 = extremely
- 2 = very
- 3 = quite
- 4 = average
- 5 = not entirely
- 6 = not very
- 7 = not at all

## MAINTENANCE ISSUES

Ground surface:

Maintained:  Yes  No

Even surface:  Yes  No

Moderate gradient:  Yes  No

Designated paths:  Yes  No

Condition of facilities:

Well-maintained:  Yes  No

---

Average:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Poor:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Graffiti (unofficial) present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Discarded syringes:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Litter/rubbish present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Type, amount and location: _____		
Dumped rubbish/furniture:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Reticulation present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Number and location of bins: _____		

How would you rate the overall cleanliness and maintenance of the park (circle one):

- 1 = extremely
- 2 = very
- 3 = quite
- 4 = average
- 5 = not entirely
- 6 = not very
- 7 = not at all

### AESTHETICS:

Comment on overall appearance of area in terms of vegetation, bird life, water features, statues/monuments, and general maintenance and condition of area.

---

---

How would you rate the park for overall aesthetic appeal (circle one):

- 1 = extremely
- 2 = very
- 3 = quite
- 4 = average
- 5 = not entirely
- 6 = not very
- 7 = not at all

Additional comments: \_\_\_\_\_

---

---

### ACCESS ISSUES

Accessible to wheelchairs and prams:  Yes  No

Comments:/restrictions: \_\_\_\_\_

Items allowed, not allowed/restricted and specify: \_\_\_\_\_

- Dogs:      Yes, on leash only
- Yes, no leash specified
- Not allowed
- Unclear
- Bicycles:       Yes       No
- Skateboards/Rollerblades:       Yes       No

**Comment on access into and through the area, e.g. connecting footpaths/walkways/cycleways, etc.**

## PHYSICAL ACTIVITY

How would you rate the park for the following (circle one number for each item):

- 1 = extremely
- 2 = very
- 3 = quite
- 4 = average
- 5 = not entirely
- 6 = not very
- 7 = not at all

Structured activities/sports comments/restrictions:	1	2	3	4	5	6	7
Unstructured activities comments/restrictions:	1	2	3	4	5	6	7
Walking comments/restrictions:	1	2	3	4	5	6	7
Casual ball sports comments/restrictions:	1	2	3	4	5	6	7
Cycling comments/restrictions:	1	2	3	4	5	6	7
Accessibility for Physical activity comments/restrictions:	1	2	3	4	5	6	7
Overall appeal for Unstructured recreation comments/restrictions:	1	2	3	4	5	6	7



## Appendix 7:

### Audit of the Shellharbour Foreshore Area: environmental barriers and promoters of physical activity

This audit has been developed against best practice physical activity guidelines for local councils called *Creating Supportive Communities* according to the criteria for environmental, programmatic and other council based initiatives that promote physical activity for specific at-risk groups. The literature on barriers and promoters of physical activity in women with children was also considered in its development. It has been piloted in the Bay & Basin area of the Shoalhaven and validated in the Milton-Ulladulla Area of the Shoalhaven.

#### Cycle and walking tracks

##### Identification

Name of cycle/walkway \_\_\_\_\_ Address \_\_\_\_\_  
 Auditor name \_\_\_\_\_ Date audited \_\_\_/\_\_\_/\_\_\_

##### Audit

	Yes	No	Comments
1. Can a pram or pusher be pushed along the cycle/walkway?	a	a	_____
2. Is there adequate lighting along the cycle/walkway?	a	a	_____
3. Is there adequate open landscaping along the Cycle/walkway?	a	a	_____
4. Is there adequate signage to indicate the commencement of the cycle/walkway?	a	a	_____
5. Does the cycle/walkway have parking at its commencement and finish points?	a	a	_____
6. Does the cycle/walkway have local public transport at its commencement and finish points?	a	a	_____
7. Does the cycle/walkway have informal recreation areas along it's way that incorporate 'family orientated' facilities?	a	a	_____
8. Does the cycle/walkway have associated picnic facilities, seating, tables, BBQ's? <b>Specify</b>	a	a	_____
9. Is there adequate shade around the cycleway?	a	a	_____

Audit	Yes	No	Comments
10. Does the cycleway have associated larger fenced playgrounds or play equipment safely located?	a	a	_____
11. Does the cycleway have associated features like gardens, native vegetation, water features, grassed areas? <b>Specify</b>	a	a	_____
12. Are there functioning water taps along the cycleway?	a	a	_____
13. Are the water taps conveniently located?	a	a	_____
14. Does the cycleway have toilet and change facilities? <b>If yes,</b>	a	a	_____
14a. Are the toilet/change facilities clean?	a	a	_____
14b. Are the toilet/change facilities well maintained?	a	a	_____
14c. Are there separate change facilities for an adult?	a	a	_____
14d. Are there change facilities for a baby?	a	a	_____
15. Is the cycle/walkway clean ie clear of rubbish?	a	a	_____
16. Is the cycle/walkway well maintained?	a	a	_____
17. Does the cycle/walkway have a safe//friendly atmosphere?	a	a	_____
18. Is the cycle/walkway strategically located to cater for a town or cluster of towns, minimising need to transport to get there?	a	a	_____

Audit	Yes	No	Comments
19. Does the cycle/walkway operate in a network, that links areas of open space and facilities and provides access to a range of settings eg natural and open areas? <b>If Yes, describe</b>	a	a	_____
20. Does the cycle/walkway provide a link to shops?	a	a	_____
21. Does the cycle/walkway provide a link to active recreation areas e.g. sports fields, leisure centres?	a	a	_____
22. Does the cycle/walkway provide a link to other cycle/walkways <b>If Yes, specify</b>	a	a	_____
23. Does the cycle/walkway ensure safe and direct road crossing to recreation and community areas such as foreshores, parks, recreation and sport facilities and commercial centres?	a	a	_____

**Comments**

### Audit of the Shellharbour Foreshore Area: environmental barriers and promoters of physical activity

This audit has been developed against best practice physical activity guidelines for local councils called *Creating Supportive Communities* according to the criteria for environmental, programmatic and other council based initiatives that promote physical activity for specific at-risk groups. The literature on barriers and promoters of physical activity in women with children was also considered in its development. It has been piloted in the Bay & Basin area of the Shoalhaven and validated in the Milton-Ulladulla Area of the Shoalhaven.

#### Leisure Centres, pools and Gyms

##### Identification

Name of centre \_\_\_\_\_ Address \_\_\_\_\_

Auditor name \_\_\_\_\_ Date audited \_\_\_/\_\_\_/\_\_\_\_\_

Audit	Yes	No	Comments
1. Are there pathways leading to the leisure centre that a pram can be pushed along?	a	a	_____
2. Is there adequate signage to the leisure centre?	a	a	_____
3. Is there adequate lighting leading in to the leisure centre?	a	a	_____
4. Is there open landscaping around the pathways?	a	a	_____
5. Does the leisure centre have parking?	a	a	_____
6. Is the leisure centre accessible by public transport?	a	a	_____
7. Does the leisure centre have a friendly/safe atmosphere?	a	a	_____

Audit	Yes	No	Comments
8. Is the leisure centre near a cycle/walkway or park? <b>Specify</b>	a	a	_____
9. Is the leisure centre strategically located within a residential area?	a	a	_____
10. Does the leisure centre allow for safe and direct road crossing between recreation and community areas?	a	a	_____
11. Does the leisure centre have toilet/change facilities? <b>If yes,</b>	a	a	_____
11a. Are the toilet/change facilities clean?	a	a	_____
11b. Are the toilet/change facilities well maintained?	a	a	_____
11c. Are there separate change facilities for an adult?	a	a	_____
11d. Are there change facilities for a baby?	a	a	_____
12. Are the leisure centre facilities clean?	a	a	_____
13. Are the leisure centre facilities well maintained?	a	a	_____
14. Does the leisure centre have grassed areas?	a	a	_____
15. Does the leisure centre have picnic facilities, seating, tables, BBQ's?	a	a	_____
16. Does the leisure centre have trees and shade?	a	a	_____
17. Does the leisure centre have larger fenced playgrounds or play equipment safely located?	a	a	_____

Audit	Yes	No	Comments
18. Does the leisure centre provide an informal meeting place, having features like gardens, native vegetation, water features? <b>Specify</b>	a	a	_____
19. Does the leisure centre have access to water taps that function?	a	a	_____
20. Are water taps conveniently located?	a	a	_____
21. Does the leisure centre provide a variety of activities?	a	a	_____
22. Does the leisure centre provide low cost activities for disadvantaged groups?	a	a	_____
23. Does the leisure centre provide adequate child care to meet the needs of carers? <b>Specify cost</b>	a	a	_____
24. Are activities mothers would enjoy rostered for times when child care is available?	a	a	_____
25. Are there supervised activities for children that would allow mothers to exercise at the same time?	a	a	_____

**Comments**

**Appendix 8:            Key Informant Interview script**

Thankyou for agreeing to talk with me about the Shellharbour Foreshore Management Plan and the potential impacts this Plan could have on health.

I work for Illawarra Health and am the project officer for the Health Impact Assessment that is being conducted on the Shellharbour Foreshore Management Plan. Shellharbour City Council has adopted this Plan. We are conducting the Health Impact Assessment to look at the potential health effects this Plan will have on the Shellharbour foreshore community, particularly for physical activity and social cohesion. Part of this HIA process involves interviewing key stakeholders in the Plan about the possible impacts this may have on the community.

Let me start off by telling you how the information I will be getting from you will be used. This interview should take no more than half an hour of your time. All the interviews will be taped and typed up for analysis. A typed summary of this interview will be sent to you to ensure you are happy with the way your words have been transcribed. The tapes will be destroyed once the project report is complete.

There will be no statements directly attributed to you, unless we get your consent to do so. Would you like to be acknowledged as a key informant in the final report?

Are you happy to continue with the interview?

**Questions:**

1. Are you familiar with the Shellharbour Foreshore Management Plan?

- Yes
  - No (*orient to SFMP using the Plan and cover points below*)
- 

2. Were you involved in any part of the development of the plan, for example the community consultation?

- Yes (*describe involvement below*)
  - No
- 
-

Physical activity

3. We're interested in looking at how the proposed initiatives of the SFMP will impact on the community's physical activity levels. That is, we'd like to look at how certain initiatives might assist people in being more active or decrease their levels of physical activity.

I have grouped the initiatives of the Shellharbour Foreshore Management Plan into 9 different areas, each of which is represented on a card in front of you.

I'd like you to put the cards into three groups:

- Those initiatives you think will have no impact on physical activity levels of the community
- Those initiatives you think will have a positive impact on physical activity levels of the community
- Those initiatives you think will have a negative impact on physical activity levels of the community

*If the respondent is not sure whether they will have an impact on physical activity tell them to put them aside into a fourth group.*

*If key informant recognises a positive or negative impact on physical activity:*

4. Do you think [this] impact on physical activity will affect certain groups within the community differently?

*Prompt: groups such as adolescents, older people, disabled, women, children?*

*Prompt: Will certain groups be advantaged or disadvantaged over other groups in the community?*

**Table 1: Impact of proposed initiatives on physical activity**

Proposed Initiative	Impact on physical activity			DK/NS	Comments	Groups affected (reasons)
	+ve	-ve	None			
Construct a shared cycleway/footway along the foreshore & link existing footpaths to cycleway						
Landscape						
Provide picnic facilities						
Plant low shrubs						
Install seating						
Install community art						
Provide additional parking						
Provide more shade trees near playgrounds						
Provide additional public toilet						

*Additional comments:*

Social cohesion

5. We're also interested in looking at how the proposed initiatives of the SFMP will impact on social cohesion. By social cohesion we mean social interaction, feelings of trust and connectedness in the community We'd like to look at whether certain initiatives will increase or decrease the level of community trust, social interaction and feelings of connectedness.

I'd like you to put the cards into three groups:

- Those initiatives you think will have no impact on social cohesion in the community
- Those initiatives you think will have a positive impact on social cohesion in the community
- Those initiatives you think will have a negative impact on social cohesion in the community

*If the respondent is not sure whether they will have an impact on social cohesion tell them to put them aside into a fourth group.*

*If key informant recognises a positive or negative impact on social cohesion:*

6. Do you think [this] impact on social cohesion will affect certain groups within the community differently?

*Prompt: groups such as adolescents, older people, disabled, women, children?*

*Prompt: Will certain groups be advantaged or disadvantaged over other groups in the community?*

**Table 2: Impact of proposed initiatives on social cohesion**

Proposed Initiative	Impact on social cohesion			DK/NS	Comments	Groups affected (reasons)
	+ve	-ve	None			
Construct a shared cycleway/footway along the foreshore & link existing footpaths to cycleway						
Landscape						
Provide picnic facilities						
Plant low shrubs						
Install seating						
Install community art						
Provide additional parking						
Provide more shade trees near playgrounds						
Provide additional public toilet						

*Additional comments:*

**7. Finally, is there anything else you think it would be important for us to think about regarding the SFMP and its impact on physical activity or social cohesion?**

*Thank participant*

The Health Impact Assessment will be conducted over a period of five months up until July 2004.

The outcomes of this process will be in the form of some recommendations to Council based on the findings of the HIA and on how to proceed with the Plan in order to maximise the health benefits for the community. Would you like us to send you a summary of the final report of the Health Impact Assessment?

If you would like more information on the Shellharbour Foreshore Management Plan you may contact Tuesday Wallin, Environment and Recreation Officer, Shellharbour City Council. If you have any queries about the process of the HIA you can contact me (*give contact details – card*)

### Appendix 9: Sources of evidence and the support for potential impacts of the Shellharbour Foreshore Management Plan

Key Questions	Sources of Evidence					
	Community Profile	Literature Review	Policy Review	Recreational Environment Audit	Key Informant Interviews	Community consultation*
<b>Use</b> Who's going to use the area following the implementation of the proposal?	+++	++	+	+	++	+
<b>Effectiveness</b> Will the proposed changes increase physical activity/social cohesion?		+++	+	+	+++	
<b>Salience</b> Is it important to the community/stakeholders?		+	++		++	+++
<b>Safety</b> Will the proposed changes do more good than harm?		++	+	++	++	
<b>Acceptability</b> Will the local community be willing to or want to use the area following the proposed changes?		+	+	+	+++	+++
<b>Cost effectiveness</b> Is it worth making the proposed changes?		+				
<b>Appropriateness</b> Are the proposed changes the right one for the area/context?	+	++	++	+++	+++	+++
<b>Satisfaction</b> Are users, providers, and other stakeholders satisfied with the proposed changes?			+	++	+++	+++

Adapted from: Petticrew M, Roberts H (2003) *Evidence, Hierarchies and Typologies: horses for courses*, Journal of Epidemiology & Community Health, 57:527-9.

Note: the number of + denotes the level of contribution each source of information adds to the evidence.

\*Source: Shellharbour City Council. Draft Shellharbour Foreshore Management Plan, Community Consultation Summary (unpublished document), 2004 (see Appendix 2).

### Appendix 10: Evidence supporting potential impacts of the shared cycle/walkway on physical activity and social cohesion

Key questions	Evidence Used	Summary of Evidence
<i>Use</i>	Community consultation (+++) Literature review (++) Key informant interviews (++) Policy review (++) Recreational environment audit (+) Community profile (+)	Increased access through the provision of the cycle/walkway and links to footpaths may encourage more use, in particular for local residents, cyclists, young people, older people, parents with prams, those people less mobile and physically disabled
<i>Effectiveness</i>	Literature review (+++) Recreational environment audit (++) Key informant interviews (++) Community consultation (+) Policy review (+)	Strong and moderate positive effects on physical activity levels for cyclists and pedestrians, respectively; Small positive effect on social cohesion
<i>Salience</i>	Community consultation (+++) Key informant interviews (+++) Policy review (++) Literature review (++) Recreational environment audit (++)	Having a cycle/walkway is important to the community and stakeholders in order to provide more access to the area and to increase levels of physical activity and social cohesion
<i>Safety</i>	Literature review (++) Policy review (++) Key Informant Interviews (+)	Increased risk of physical injury to pedestrians due to presence of cyclists; Decreased risk of injury to pedestrians due to level walking surface; Decreased risk of physical injury for cyclists
<i>Acceptability</i>	Key informant interviews (+++) Community consultation (+++) Literature review (++) Policy review (+)	The new extended cycleway/footway will be used by more people
<i>Cost Effectiveness</i>	Literature review (+)	Insufficient information available
<i>Appropriateness</i>	Key informant interviews (+++) Community consultation (+++) Recreational environment audit (+++) Policy review (++) Literature review (+) Community profile (+)	The extended cycle/walkway is appropriate to the Shellharbour Foreshore area and existing facilities
<i>Satisfaction</i>	Community consultation (+++) Key informant interviews (+++) Recreational environment audit (+++) Policy review (+)	The community, including users of the area and key stakeholders are satisfied with the proposed cycle/walkway changes

Note: the number of + denotes the level of contribution each source of information adds to the evidence.

### Appendix 11: Evidence supporting potential impacts of landscaping on physical activity and social cohesion

Key Questions	Evidence Used	Summary of Evidence
<i>Use</i>	Key informant interviews (++) Literature review (++) Recreational environment audit (+) Community profile (+)	Improved aesthetics of environment and increased amount of shade, may encourage more people to use the area, in particular older people, families, young children
<i>Effectiveness</i>	Key informant interviews (+++) Literature review (++) Recreational environment audit (+)	Medium positive effect on social cohesion and physical activity
<i>Salience</i>	Key informant interviews (+++) Literature review (++) Recreational environment audit (+)	Providing an aesthetic environment with adequate shade in which to socialise and exercise is important to encourage physical activity and social cohesion in the community; Older people in particular are more likely to appreciate landscaping
<i>Safety</i>	Recreational environment audit (++) Literature review (+) Key informant interviews (+)	Planting low shrubs provides increased perceptions of personal safety
<i>Acceptability</i>	Key informant interviews (+++) Community consultation (+) Literature review (+)	Landscaping will encourage local residents and visitors, in particular older people to use the area
<i>Cost Effectiveness</i>	No information available	No information available
<i>Appropriateness</i>	Key informant interviews (+++) Recreational environment audit (+++) Policy review (+++) Literature review (+) Community consultation (+) Community profile (+)	Landscaping is appropriate to the Shellharbour Foreshore Area by providing more shade, improving aesthetics and preserving natural coastal vegetation
<i>Satisfaction</i>	Key informant interviews (+++) Recreational environment audit (++) Community consultation (+)	The community and other stakeholders are satisfied with the proposed landscaping

Note: the number of + denotes the level of contribution each source of information adds to the evidence.

## Appendix 12: Evidence supporting potential impacts of picnic facilities on physical activity and social cohesion

Key Questions	Evidence Used	Summary of Evidence
<i>Use</i>	Key informant interviews (++) Recreational environment audit (+) Community profile (+)	An increased number of picnic facilities may encourage more people to use the area, in particular families, older people, existing social groups, children, physically disabled and provide facilities in which people can interact
<i>Effectiveness</i>	Key informant interviews (++) Literature review (+) Recreational environment audit (+)	Very small positive effect on physical activity; small positive effect on social cohesion
<i>Salience</i>	Key informant interviews (++) Recreational environment audit (+) Literature review (+)	Having sufficient picnic facilities is important to older people, families, children and existing social groups to allow for social interaction and recreation
<i>Safety</i>		No adverse effects recognised
<i>Acceptability</i>	Key informant interviews (++) Literature review (+) Community consultation (+)	People, in particular older people, families, children and existing social groups will be more likely to use the area if there are adequate picnic facilities
<i>Cost Effectiveness</i>	No information available	No information available
<i>Appropriateness</i>	Key informant interviews (++) Recreational environment audit (+) Community consultation (+) Community profile (+)	Providing additional picnic facilities is appropriate for the Shellharbour Foreshore Area
<i>Satisfaction</i>	Key informant interviews (+++) Recreational environment audit (++) Community consultation (+)	The community and other stakeholders are satisfied with the proposed additional picnic facilities

Note: the number of + denotes the level of contribution each source of information adds to the evidence.

### Appendix 13: Evidence supporting potential impacts of seating on physical activity and social cohesion

Key Questions	Evidence Used	Summary of Evidence
<i>Use</i>	Key informant interviews (++) Recreational environment audit (+) Community profile (+)	Providing seating may improve the accessibility of the foreshore area, in particular for older people, children and those less mobile and will provide facilities in which people can interact
<i>Effectiveness</i>	Key informant interviews (++) Recreational environment audit (+) Literature review (+)	Very small positive effect on physical activity levels, small positive effect on social cohesion
<i>Salience</i>	Key informant interviews (++) Recreational environment audit (+) Literature review (+)	Installing seating is important in making the area more accessible to older people, those less mobile and children and therefore increase levels of physical activity and social cohesion
<i>Safety</i>		No adverse effects recognised
<i>Acceptability</i>	Key informant interviews (++) Community consultation (+) Literature review (+)	People, in particular older people, young children and those less mobile will be more likely to use the area if there is seating available for rest stops and interaction
<i>Cost Effectiveness</i>	No information available	No information available
<i>Appropriateness</i>	Key informant interviews (++) Recreational environment audit (++) Community consultation (+) Community profile (+)	Providing additional seating is appropriate for the foreshore area
<i>Satisfaction</i>	Key informant interviews (+++) Recreational environment audit (++) Community consultation (+)	The community is satisfied with the proposed seating installation
	Community consultation (+) Key informant interviews (+)	The community is concerned with the proposed locations of seating

Note: the number of + denotes the level of contribution each source of information adds to the evidence.

## Appendix 14: Evidence supporting potential impacts of community art on physical activity and social cohesion

Initiative	Evidence Used	Summary of Evidence
<i>Use</i>	Key informant interviews (+++) Literature review (+) Community profile (+)	Providing community art in the area may increase the number of people using the area by making it more aesthetic and providing points of interest for discussion and encouragement for walkers; The indigenous community will be involved in the development of the art
<i>Effectiveness</i>	Literature review (+++) Key informant interviews (+++) Policy review (++)	Medium positive effect on social cohesion and small positive effect on physical activity levels
<i>Salience</i>	Key informant interviews (+++) Literature review (+++) Policy review (++)	This initiative is important for the local and the indigenous community in building relationships and networks and creating cultural understanding. It is important for visitors in providing a reason for visiting the area other than for recreation
<i>Safety</i>		No adverse effects recognised
<i>Acceptability</i>	Key informant interviews (+++) Policy review (++) Community consultation (+) Literature review (+)	The installation of community art will encourage more people to use the area and provide a discussion point
	No evidence	The local indigenous community is willing to be involved in the development of community art (no evidence)
<i>Cost Effectiveness</i>	No information available	No information available
<i>Appropriateness</i>	Policy review (+++) Key informant interviews (++) Literature review (++) Community consultation (+) Community profile (+)	It is appropriate to install local and indigenous community art in the area and to involve the aboriginal community in its development
<i>Satisfaction</i>	Key informant interviews (+++) Community consultation (+)	The local community is satisfied with the proposed inclusion of community art

Note: the number of + denotes the level of contribution each source of information adds to the evidence.

## Appendix 15: Evidence supporting potential impacts of parking on physical activity and social cohesion

Initiative	Evidence Used	Summary of Evidence
<i>Use</i>	Key informant interviews (+++) Community consultation (++) Recreational environment audit (+) Community profile (+)	The proposed parking changes may decrease accessibility of the foreshore area, in particular for visitors, families, older people, those less mobile and those physically disabled. However decreasing parking spaces on the foreshore could encourage more active transport to the area. Providing additional green space may encourage more social interaction and physical activity
<i>Effectiveness</i>	Key informant interviews (+++) Recreational environment audit (++) Literature review (+)	Small negative effect on social cohesion and physical activity levels of those with limited access
	Literature review (+++) Recreational environment audit (+) Key informant interviews (+)	Small positive effect on social cohesion and physical activity
<i>Salience</i>	Community consultation (+++) Key informant interviews (+++) Recreational environment audit (++) Literature review (+)	It is important to the community that adequate parking is provided to ensure access and use of the facilities. It is also important to the community to have an aesthetic environment in which to interact and exercise
<i>Safety</i>	Key informant interviews (++)	The proposed changes may decrease inappropriate use of the area, e.g. car burnouts and increase perceptions of safety
<i>Acceptability</i>	Community consultation (+++) Key informant interviews (+++)	The community believes the area will be used less, in particular by the groups listed above that have reduced access; The community are not willing to expand the Johns St car park
<i>Cost Effectiveness</i>	No information available	No information available
<i>Appropriateness</i>	Community consultation (+++) Key informant interviews (+++)	The community believes the proposed reduction in parking spaces and additional John St parking is not appropriate for the area
<i>Satisfaction</i>	Community consultation (+++) Key informant interviews (++) Recreational environment audit (+)	The local community and other stakeholders are not satisfied with the proposed parking changes which will involve a reduction of overall parking spaces and the relocation of parking spaces to less convenient places.

Note: the number of + denotes the level of contribution each source of information adds to the evidence.

**Appendix 16: Evidence supporting potential impacts of public toilets on physical activity and social cohesion**

<b>Initiative</b>	<b>Evidence Used</b>	<b>Summary of Evidence</b>
<i>Use</i>	Key informant interviews (++) Literature review (++) Community profile (+) Recreational environment audit	Providing an additional toilet will make the foreshore area more accessible, in particular for visitors, families and older people
<i>Effectiveness</i>	Key informant interviews (+) Literature review (+) Recreational environment audit (+)	Small positive effect on physical activity levels and social cohesion
<i>Salience</i>	Key informant interviews (++) Literature review (++) Recreational environment audit (+)	Having an adequate number of toilets is important, in particular to older people and people with young children in terms of the amount of time they can spend in the area
<i>Safety</i>	Key informant interviews (+)	Decreased perceptions of safety surrounding toilets may occur
<i>Acceptability</i>	Key informant interviews (+) Community consultation (+)	The additional toilet(s) would allow more people to use the area in particular the disabled
<i>Cost Effectiveness</i>	No information available	No information available
<i>Appropriateness</i>	Community consultation (++) Recreational environment audit (++) Key informant interviews (+) Literature review (+) Community profile (+)	An additional toilet for disabled people is needed in the proposed area
<i>Satisfaction</i>	Recreational environment audit (++) Key informant interviews (+) Community consultation (+)	The local community is satisfied with the proposal to include an additional public toilet on or near Grey Park

Note: the number of + denotes the level of contribution each source of information adds to the evidence.