

Liverpool Hospital Stage 2 Redevelopment

Equity-focused Health Impact Assessment

August 2009



SYDNEY SOUTH WEST
AREA HEALTH SERVICE
NSW  **HEALTH**

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Executive Summary

Health Impact Assessment (HIA) is a tool for assessing the potential effects of a program or project on the health of a population. Equity-focused HIA uses HIA methodology as a way of determining the potential differential distributional impacts for specific groups and populations. It enables practical recommendations to be made to improve the equity of proposed strategies and lessens the possibility that strategies will unintentionally widen the equity gap.

A Steering Committee was established in July 2006 to conduct a prospective HIA on the Redevelopment of Liverpool Hospital. The focus of this project was on the construction phase of the redevelopment and the scope covered four issues - reduced parking for staff, patients and visitors; health and wellbeing of staff and the community; community and patient safety (non-traffic related); and increased traffic in the area (general and construction traffic). Recommendations were developed for the Executive User Group (EUG) and these are currently being monitored by the EUG.

In August 2007, the Executive User Group (EUG) for the Liverpool Hospital Redevelopment endorsed the conduct of a second Health Impact Assessment (HIA) for the redevelopment. The scope for the HIA was defined as being environmental effects; health promoting effects and effects on patient recovery and staff wellbeing. A *Checklist of the potential health impacts of building design* was developed at the request of the managing contractors - Bovis Lend Lease (BLL) - to enable early identification of health impacts in the schematic design process of the redevelopment. This was informed by a scan of relevant literature and best practice guidelines. In addition, a more comprehensive literature review on the health impacts of hospital design was commissioned to inform the HIA. Further to this, a community consultation process for the redevelopment was facilitated by the SSWAHS Community Participation Manager and BLL on 29th September 2008 and the feedback from this session provided additional information for the HIA.

The current status of the redevelopment in August 2008 determined that we should focus on developing recommendations for the detailed design and commissioning phases of the project. An EFHIA was chosen for this project because it was thought that the most value that could be added at these stages of the design process would be to focus on a consideration of equity issues related to the redevelopment. This consideration is most relevant to the Liverpool Hospital Redevelopment because of the relative disadvantage of the local population and specific groups accessing the hospital.

On Friday 6th February 2009 a workshop was held with members of the Steering Committee as well as invited experts to complete the assessment phase of the EFHIA and to develop recommendations for the EUG, and any other appropriate groups. For the purposes of the assessment the affected groups who were considered included the whole population; Aboriginal people; people of low socioeconomic status; those who may be locationally disadvantaged; those disadvantaged by age, gender, disability or ethnicity; people with a chronic illness or disability; and the workforce. Appendix 1 contains a list of workshop participants.

Generally, workshop participants felt that there was much evidence that differential impacts have been well considered in the planning to date. Recommendations were developed at the workshop and they have been grouped according to the relevant design phase for the redevelopment (See Appendix 6).

At their meeting in March 2009 the EUG accepted the recommendations in general. They also agreed to incorporate the detailed design and commissioning recommendations into the *Checklist of the potential health impacts of building design* in order to assist the Managing Contractor and the Hospital's Commissioning team to advance the project design. It is proposed that the *Checklist* will be reviewed at the completion of each planning phase and the results reported to the EUG.

EFHIA Process

“Equity-focused health impact assessment (EFHIA) uses health impact assessment methodology to produce a complementary and structured way of determining the potential differential and distributional impacts of a policy or practice on the health of the population as well as on specific groups within that population and it assesses whether the differential impacts are inequitable”¹.

The status of planning for the redevelopment at the time of the HIA (August 2008) determined that we should focus on developing recommendations for the detailed design and commissioning phases of the project. An equity focus was chosen for the Health Impact Assessment of Liverpool Hospital Redevelopment because it was thought that the **most value that could be added to the current stages of the design process would be to focus on a consideration of equity issues related to relevant population groups**. This consideration is most relevant to the Liverpool Hospital redevelopment because of the relative disadvantage of the local population and specific groups accessing the hospital.

The following section will describe the processes and outcomes of each of the six steps of HIA² in relation to the EFHIA for the Liverpool Hospital Redevelopment.

1. Screening

The first HIA on the Redevelopment of Liverpool Hospital in 2006 focused on the construction phase of the redevelopment and covered four issues - reduced parking for staff, patients and visitors; health and wellbeing of staff and the community; community and patient safety (non-traffic related); and increased traffic in the area (general and construction traffic). Recommendations were developed for the Executive User Group (EUG) and these are currently being monitored by the EUG.

The importance of assessing the potential health impacts that may result from the completed redevelopment project was thought to be essential as a follow-up to this earlier work. It was agreed that the opportunity to develop a new facility that is healthy, safe and environmentally friendly could be enhanced through the HIA process. A HIA would also add value to the current planning process and potentially strengthen future planning processes, establishing SSWAHS as a leader in this area. Further, SSWAHS now had the capacity and commitment to conduct a HIA on the completed redevelopment of Liverpool Hospital based on the previous work. Consequently, the EUG agreed that a second HIA should proceed.

A scan of the relevant grey and published literature showed the potential health impacts that may result from various aspects of a new healthcare facility including:

- promotion of physical activity such as walkability and access to public transport
- access to healthy foods and breastfeeding facilities
- access to health services for vulnerable groups such as the disabled
- active and passive measures to conserve energy
- active and passive measures to encourage recycling and effective waste management

2. Scoping

The plan for the HIA was defined in the scoping step. Those members of the first HIA Steering Committee who were still available were approached and agreed to participate in the second HIA. Replacements for other representatives were sought and secured. A list of the Steering Committee members can be found in Appendix 1. The project team for the EFHIA consisted of the Service Development Officer and Assistant

¹ Mahoney M., Simpson S., Harris E., Aldrich R., Stewart Williams J. (2004) *Equity Focused Health Impact Assessment Framework*, the Australian Collaboration for Health Equity Impact Assessment (ACHEIA)

² Harris P., Harris-Roxas B., Harris E. & Kemp L. *Health Impact Assessment: A Practical Guide*, Sydney: Centre for Health Equity Training, Research and Evaluation (CHETRE).

Director for SSWAHS Population Health, and the Research Officer from CHETRE. This team were responsible for undertaking many of the planning activities and developing key documents and strategies for the approval of the Steering Committee and the EUG.

A scoping process which included a scan of relevant literature and consultation with the HIA Steering Committee determined **three areas of focus for the HIA – environmental effects; health promoting effects; and effects on patient recovery and staff wellbeing**. A more detailed description of the issues covered by the focus areas including potential health impacts was also developed for the Steering Committee. The HIA Steering Committee also proposed that an intermediate HIA be conducted to incorporate a more rigorous review of current evidence and best practice as well as consultations with stakeholders in relation to the three focus areas.

Following further discussions with the EUG regarding the timing of the HIA and based on advice from members who were involved in the redevelopment planning process, the Steering Committee also suggested that the HIA be conducted when the schematic design was finalised. This allowed the recommendations to be incorporated into the detailed design and commissioning phases of the redevelopment.

Additional consideration of how to add the most value to the next stages of the redevelopment led the Steering Committee to decide to undertake an equity-focused HIA. This consideration was most relevant to the Liverpool Hospital redevelopment because of the relative disadvantage of the population and specific groups accessing the hospital. **The EUG agreed with the proposal for an EFHIA in order to incorporate practical recommendations to improve the equity of proposed strategies and ensure that strategies did not unintentionally widen the equity gap.**

Population Health commissioned a temporary Senior Project Officer for a period of 12 weeks to undertake the literature review. This person was based at the Centre for Health Equity Training, Research and Evaluation (CHETRE) and received ongoing support from two members of the Steering Committee.

3. Identification

Four methods were used to gather information to identify the potential health impacts of the redevelopment, and to identify the populations likely to be affected - the development of a checklist of potential health impacts, a comprehensive literature review, updating of the population profile used in the first HIA and utilisation of the feedback from a community consultation planned for the redevelopment.

3.1 A Checklist of the potential health impacts of building design was developed at the request of the managing contractors - Bovis Lend Lease (BLL) - in May 2008 to enable early identification of health impacts in the schematic design process of the redevelopment. The checklist was informed by a scan of relevant literature and best practice guidelines, and was based on the three identified focus areas for the HIA.

The Development Manager, who was also a member of the Steering Committee, then organised the checklist according to the stage of the redevelopment that each item was relevant for. The stages of planning and development included Project Definition Planning phase; Concept Design phase; Schematic Design Phase; Design Development/Implementation phase and Commissioning phase. A copy of the checklist was provided to the managing contractors and their input was received regarding the feasibility of each recommendation. This checklist is available from the authors on request.

3.2 Population Health commissioned a senior project officer to complete a more comprehensive literature review on the health impacts of hospital design to inform the HIA. Following consideration of the available published literature, it was decided to confine the review to the impacts of hospital design that **affect patient recovery and wellbeing, and staff wellbeing**. The review reported potential health outcomes for patients and

staff associated with hospital design features, as well as associated design recommendations. Findings showed **an association between health outcomes and natural light, noise, contact with nature, design that promoted family involvement and patient control, safety and accessibility**³.

3.3 A population profile had been developed for the first HIA. This profile was updated by the Senior Planner on the Steering Committee. The Population Profile is attached to this report as Appendix 2.

3.4 **A community consultation** process for the redevelopment was planned and facilitated by the SSWAHS Community Participation Manager, SSWAHS Health Services Planning and Bovis Lend Lease on 29th September 2008. This meeting was held with **people with disabilities, carers and local service providers**. The purpose of the meeting was to ensure that the planning process for the redevelopment was informed by the needs of people with disabilities and carers. Issues to be incorporated into the design and ongoing operational policy of the hospital were discussed during the consultation. Participants identified the following areas of concern at the meeting:

- Signage
- Transport and Car Parking – including public transport, the hospital car park and drop off facilities
- Accessible toilets and bathrooms
- Equipment
- Furniture
- General hospital design issues
- Facilities and services

The feedback from the forum was used to provide additional information for the EFHIA.

4. Assessment

A workshop was held on 6th February 2009 to facilitate the assessment stage of the EFHIA. The purpose of the workshop was to examine and assess the information collected during the identification phase and then to prioritise health impacts and develop recommendations. The workshop utilised the work undertaken for the EFHIA including the literature review, the checklist of health impacts, the population profile and the feedback from the consultation session.

The Steering Committee members participated in the workshop. Other relevant experts from Health Promotion, Aged Care, Aboriginal Health, Multicultural Health Services and Paediatrics were also invited to attend the workshop, along with representatives from Liverpool Hospital (staff and management) and representatives from disability and carers groups. A list of those who attended the workshop is included in Appendix 3.

For the purposes of the assessment the affected groups who were considered included the following:

- the whole population
- Aboriginal people
- people of low socioeconomic status
- those who may be locationally disadvantaged
- those disadvantaged by age, gender, disability or ethnicity
- people with a chronic illness or disability, and
- the workforce.

The assessment process involved a consideration of the potential health impacts for each area of focus for the HIA and what was proposed in the current plans, for both the detailed design and commissioning phases (see

³ Ampt A, Harris P and Maxwell M (2008). *The Health Impacts of the Design of Hospital Facilities on Patient Recovery and Wellbeing, and Staff Wellbeing. A Review of the Literature*. Centre for Primary Health Care and Equity, University of New South Wales, Sydney

Appendix 4). An assessment template was developed to facilitate prioritisation of health impacts and recommendations (see Appendix 5). The assessment template included equity considerations such as who may be disadvantaged by the initiative or proposal; what is the evidence of inequality, what are the unanticipated impacts and what are the ways to reduce the negative impacts and improve the positive aspects of the initiative or proposal (recommendations).

The recommendations were developed by the Project Team following the workshop and sent to the workshop participants for feedback and support. They were grouped according to the relevant design phase for the redevelopment. The recommendations were finalised after incorporating this feedback. The workshop recommendations are listed at the end of this section.

5. Decision-making and recommendations

At their meeting in March 2009 the EUG accepted the recommendations in general. They also agreed to incorporate the detailed design and commissioning recommendations into the *Checklist of the potential health impacts of building design* in order to assist the Managing Contractor and the Hospital's Commissioning team to advance the project design.

6. Evaluation and follow-up

As the *Checklist of potential health impacts for building design* now includes the EFHIA recommendations, it will be used as a monitoring tool. The EUG has agreed that the **checklist be reviewed and reported on at the end of each planning phase.**

Acknowledgments

The authors wish to acknowledge the contribution, commitment and support of the members of the Liverpool Hospital Redevelopment Health Impact Assessment Steering Committee in this project and report. In particular we would like to acknowledge Patrick Harris from CHETRE for guidance and Frank Tong from Capital Insight for his valuable input.

We also wish to acknowledge the contribution and insights of those who attended the EFHIA workshop and the EUG for their ongoing support for Health Impact Assessment throughout the Liverpool Hospital Redevelopment.

EFHIA Recommendations

Generally, workshop participants felt that there was much evidence that differential impacts have been well considered in the planning to date. Recommendations were developed at the workshop and they have been grouped below according to the relevant design phase for the redevelopment. There were also some other issues raised that fell outside of the detailed design and commissioning phases or were outside of this project's scope, but may require additional advocacy or negotiation by the management of Liverpool Hospital or SSWAHS.

1. Detailed design phase

1.1 Environmental effects of the redevelopment

- 1.1.1 Consider the installation of sensor lighting in corridors and zoning of artificially lit areas to reduce energy costs and ensure staff safety
- 1.1.2 Direct consultation should occur with residents and schools in the streets surrounding the redevelopment to improve communication and minimise negative environmental impacts, particularly related to the planned new access road to the hospital – the hospital should aim to be a good neighbour.
- 1.1.3 The design of air handling systems, water cooling systems (cooling towers, associated equipment and pipework), warm water systems and hot water systems must comply with NSW public health legislation and NSW Health policy directives to prevent microbial contamination of these systems and Legionnaire's Disease in immunocompromised patients and visitors.
- 1.1.4 Recycled water systems (including systems incorporating rainwater harvesting) shall be designed in accordance with risk assessment and risk management principles and shall comply with all NSW Health guidelines and NSW Government guidelines/codes of practice to prevent illness in immunocompromised patients and visitors.

1.2 Health promoting effects of the redevelopment

- 1.2.1 A 3 metre wide shared path should be provided for all walking routes (including access to Liverpool and Warwick Farm stations) to promote walking and cycling
- 1.2.2 Provide appropriate facilities and equipment for breastfeeding eg space for other siblings to play, privacy screens, for parents of young children.

1.3 Effects on patient recovery and staff wellbeing

- 1.3.1 Main entrances should be numbered (similar to the proposed numbering system for the clinics) and clearly signed from all approaches to the hospital
- 1.3.2 Ensure that internal offices have windows or glass panels that face open spaces to maximise light and sense of space
- 1.3.3 Ensure that design avoids culturally inappropriate décor, colour and features
- 1.3.4 Consider the placement of visual cues on glass doors and panels
- 1.3.5 Consider the use of contrasting colours where relevant eg to highlight doorways
- 1.3.6 Ensure that consultations regarding needs for quiet and spiritual areas are conducted with all appropriate groups, including special populations and staff
- 1.3.7 Ensure that measures are in place to reduce risks (especially to children) associated with power and data connections. Consider placement of connections at an appropriate height on walls or connection point guards
- 1.3.8 Ensure that all rooms/wards are able to accommodate folding beds or reclining chairs for carers

2. Commissioning phase

2.1 Environmental effects of the redevelopment

- 2.1.1 That cooling tower and hot water system guidelines for monitoring and maintenance are followed, to prevent legionella, particularly in immunocompromised patients
- 2.1.2 The commissioning, operation, maintenance and monitoring of air handling systems, water cooling systems, warm water systems and hot water systems must comply with NSW public health legislation and NSW Health policy directives to prevent microbial contamination of these systems and Legionnaire's Disease in immunocompromised patients and visitors.
- 2.1.3 Recycled water systems shall be commissioned, operated, maintained and monitored in accordance with risk assessment and risk management principles and shall comply with NSW Health guidelines and NSW Government guidelines/codes of practice to prevent illness in immunocompromised patients and visitors.

2.2 Health promoting effects of the redevelopment

- 2.2.1 The committee responsible for the Commissioning phase should include a representative from the SSWAHS Health Promotion Service to provide advice on health promotion strategies to be incorporated into the redevelopment.
- 2.2.2 Directional and informative signage should be provided from Liverpool and Warwick Farm stations, including distances and approximate walking times. Adequate lighting, seating and shade along these routes would also support the use of these routes, as well as level and well-maintained footpaths.
- 2.2.3 Information kiosks need to have personnel allocated for regular updating of information and maintenance.
- 2.2.4 Data should be collected on the utilisation of the information kiosks in different areas of the hospital
- 2.2.5 Transport Access Guides (TAGs) should be updated when new information becomes available or changes are made eg pedestrian crossings, access from railways stations
- 2.2.6 TAGs should be distributed with all planned admissions, at staff orientation and/or with offers of employment
- 2.2.7 Information about bus services should be located inside the Main Entrance where people can wait with protection from the outdoor environment.
- 2.2.8 Provide clear signage for designated rooms for breastfeeding and signage supporting breastfeeding at all main entrances. Ensure that breastfeeding facilities are clear on maps and at the information kiosks
- 2.2.9 Ensure that staff and patients have access to free Nicotine Replacement Therapy (NRT) to encourage smoking cessation

2.3 Effects on patient recovery and staff wellbeing

- 2.3.1 Ensure that reception staff have access to current information regarding location of services, including accessible facilities.
- 2.3.2 Ensure the provision of public telephones (using coins and cards) at main entrances
- 2.3.3 Promote the access, availability and role of the Aboriginal Liaison Officer for Aboriginal people
- 2.3.4 Ensure there are regular checks of the adequacy of lighting for safe task operation and that a preventative maintenance program is in place
- 2.3.5 Ensure staff receive adequate orientation regarding lighting systems, economical use of lighting and patient needs including any relevant cultural issues
- 2.3.6 Establish a standard opening position for venetian blinds to maximise comfort for all
- 2.3.7 Ensure that strategies are in place to increase patient awareness of their surroundings and the need for appropriate lighting for various tasks, particularly for the elderly and disabled
- 2.3.8 Develop a procedure for distribution of earplugs to patients and/or carers as required

- 2.3.9 Ensure there is appropriate access to facilities such as washing machines that may be required by carers and long stay patients
- 2.3.10 Ensure there is after-hours access to healthy food for carers
- 2.3.11 Consider the development and implementation of a policy which allows for the use of patients' personal equipment whilst in hospital eg walking frames

3. Other issues

The following recommendations are either outside of the scope of the current Liverpool Stage 2 Phase 1 project or fall into earlier phases of the design process. They are included here for the purpose of consideration in future stages of Liverpool Hospital's development:

- 3.1 To consider incorporating shower and adult change facilities for visitors to encourage visitors to cycle to the hospital. These facilities could also be utilised by carers who may need to spend extended periods of time on wards.
- 3.2 Review current and projected staff and visitor needs regarding disabled parking and allow for this in the redevelopment
- 3.3 Secure bike parking should be provided for staff in the new car park on Eastern Campus, with a designated bike lane on the overpass into the staff car park.
- 3.4 Examine the feasibility of providing a walking trail around the hospital as a no-cost option to supplement physical activity opportunities such as the staff gym
- 3.5 Consider the allocation of additional resources to facilitate improved connection, protection and access between the Emergency Department and the Main Entrance
- 3.6 Provide appropriate breastfeeding facilities in the Emergency Department, for parents of young children.
- 3.7 To consider developing an education area next to the antenatal clinic (applicable to Stage 2 Phase 2 of the redevelopment)
- 3.8 Monitor the frequency of bus services to the hospital, including the number of modified buses suitable for people with physical disabilities
- 3.9 Liverpool Hospital should discuss the feasibility of a regular shuttle bus between key transport connections (Liverpool Station, Main Entrance, Ambulatory Care Entrance, Warwick Farm Station) with potential sponsors – similar to the Parramatta shuttle bus.
- 3.10 Conduct a rapid EFHIA on the proposal to develop medi-hotel facilities
- 3.11 An ongoing process that includes discussion and consultation will be required to identify specific future community needs for the hospital.
- 3.12 To consider the use of guides and/or support people to assist those with vision problems or intellectual disabilities to navigate through the hospital
- 3.13 To investigate the need and feasibility of providing free parking for carers of patients who very frequently need to attend the hospital – the “frequent flyers”.

APPENDIX 1

EFHIA Steering Committee Members

Michelle Maxwell	Service Development Officer, Population Health	(Chair)
Mark Thornell	Assistant Director, Population Health	(Secretary)
Patrick Harris	CHETRE	
Gay Horsburgh	Senior Planner, Health Services Planning	
Frank Tong	Development Manager, Capital Insight	
Matt Sydenham	Redevelopment Coordinator, Liverpool Hospital	
Peter Cavagnino	Public Health Unit	
Graeme Loy	Director, Corporate Services Liverpool Hospital	
Judy North	Community Representative	
John North	Community Representative	

APPENDIX 2
Liverpool Hospital Stage 2 Health Impact Assessment

Population Profile

The population profile helps to establish an overview of the affected population, helps to identify potentially vulnerable groups and establishes a baseline against which possible future health impacts can be assessed.
(Health Impact Assessment Guidance, Institute of Public Health in Ireland, April 2006)

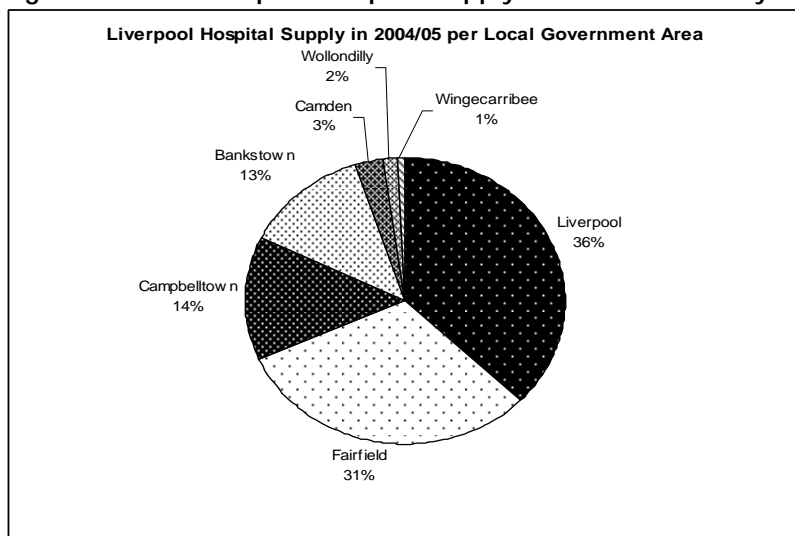
The following information has been collated to provide:

- General information on the Liverpool and South West Sydney community
- An understanding of health status
- An understanding of socio-economic status
- Information on key characteristics which relate to the impacts being examined in this HIA

The Liverpool Hospital Catchment

In 2003/04 90% of services provided by Liverpool Hospital (LH) were delivered to residents of the following Local Government Areas (LGAs) - Bankstown, Fairfield, Liverpool, Campbelltown, Camden and Wollondilly. This geographic area is referred to as the Western Zone (WZ) or South West. Figure 1 below shows the supply of services at LH by LGA of residence within the WZ.

Figure 1 Liverpool Hospital Supply of SW Residents by LGA



Source: FlowInfo Ver 7.0

Population Size, Growth and Diversity

- General information regarding population size, growth and diversity is provided in Table 1;
- The estimated population of the Western Zone (former South Western Sydney Area Health Service) in 2006 is 839,800. This is projected to increase to 959,000 by 2016. This is an increase of 119,200 or 14%;
- In 2006, the est. population of Liverpool LGA is 175,670, growing to 225,590 by 2016. This is an increase of 49,920 or 28%;
- In 2006, the Fairfield LGA has an est. population of 191,920, falling slightly to 191,460. This is a negligible reduction of 460;
- The significant growth in the population results in an increased demand for health services, including hospital services. The redevelopment of Liverpool Hospital is expected to meet much of this additional demand to 2016;

- At the 2001 census, 39% of the WZ population spoke a language other than English at home. In Fairfield the rate was 66%, in Liverpool 44%;
- Liverpool and Fairfield are home to a high number of humanitarian arrivals, who have unique health and social needs (see Table 2);
- 9,660 people across the WZ identified as Aboriginal or Torres Strait Islander in 2001. Aboriginal people are known to have poorer health than non-Aboriginal people;
- In Liverpool there are approximately 2,000 people identifying as Aboriginal or Torres Strait Islander and in Fairfield, approximately 1,100 people

Table 1 Western Zone Population Profile – Growth Projections & Diversity

LGA	Pop'n 2001 (Census)	Aboriginal identified (2001 census)		Language* (2001 census)	Projected Population		
		No.	% 2001 pop		2006	2011	2016
Bankstown	172,030	1,303	0.76%	46.2	174,990	177,850	180,060
Fairfield	189,020	1,118	0.59%	66	191,920	193,350	191,460
Liverpool	159,070	2,038	1.28%	43.7	175,670	197,440	225,590
Campbelltown	150,160	3,602	2.40%	19.4	154,310	164,050	179,280
Camden	45,450	525	1.16%	8.5	54,630	69,020	83,030
Wollondilly	38,460	577	1.50%	5.1	42,210	45,510	47,840
Wingecarribee	42,760	497	1.16%	4.2	46,070	48,970	51,740
Western Zone	796,950	9,660	1.21%	38.9	839,800	896,190	959,000
NSW	6,578.9	134,888	2.05%	19	6,872.5	7,164.9	7,434.0

Source: DIPNR Population Projections 2004 & NSW Regional Profile, 2004 ABS

Table 2 Migration to Western Zone by Visa Type 01/01/99 to 31/10/04

LGA	Visa Type				Total
	Family	Skilled	Humanitarian	Other	
Bankstown	3,506	1,316	466	1	5,289
Fairfield	5,579	887	4,231	2	10,699
Liverpool	3,092	1,890	3,180	11	8,173
Campbelltown	1,505	1,261	171	1	2,938
Camden	149	209	18	0	376
Wollondilly	0	0	0	0	0
Wingecarribee	146	69	0	0	215
Total WZ	13,977	5,632	8,066	15	27,690

Source: DIMIA Settlement Database 2005

Age and Gender Profile

- The WZ had a relatively young population compared to NSW in 2001;
- The population is ageing rapidly;
- Across the WZ a 129% increase in the 85+ population is expected between 2001 and 2016;
- At an LGA level, Liverpool is expecting a 173% increase in the population aged 85+ and Fairfield is expecting a 151% increase between 2001 and 2016;
- Detailed tables relating to population projections by LGA by age are provided as Appendix A;
- Detailed information relating to population projections for Fairfield & Liverpool by age and sex is provided as Attachment B;
- The number of children will remain relatively stable across Liverpool/Fairfield;

- The number of women of child-bearing age will decrease in Fairfield, but increase in Liverpool and generally across the WZ;
- In 2002, there were 2,692 total births recorded for residents of Fairfield, resulting in a fertility rate of 1.93. In Liverpool there were 2,988 births recorded resulting in a fertility rate of 2.16. These rates are both higher than the NSW average of 1.79 (NSW Regional Profile 2004).

Social Characteristics

- Detailed information on social characteristics of WZ residents is provided in Tables 3-5
- The majority of people in the WZ live in single household families'
- Fairfield LGA has the highest proportion of multiple family households in the WZ;
- The average household size in the WZ (notably Fairfield & Liverpool) is higher than that of NSW;
- The mean taxable income for the WZ is lower than for the State at \$35,740 (2001) compared to \$41,623 (NSW)
- In Fairfield the mean taxable income was \$33,185 and in Liverpool \$35,592
- Unemployment in the Fairfield-Liverpool statistical region in 2003 was higher than state average (4.9 compared to 4.2) for people with non-school qualifications, but lower for people without non-school qualifications (7.7 compared to 8.7). See Attachment C.
- Estimates indicate that the rate of private health insurance coverage in the WZ is lower than the state 44.2% compared with 52.9% for NSW
- Liverpool and Fairfield have a higher rate of home rental than the state average (30.2% and 28.8% respectively) compared to 27.5% for NSW
- There are a large number of public housing properties in Liverpool and Fairfield when compared to other LGAs in Sydney South West (almost 10,000 households)
- 29.1% of people living in Fairfield and 21% of people living in Liverpool were Centrelink customers in 2004, compared with 21.8% in NSW
- The majority of households in the WZ have at least one motor vehicle (see Attachment D)
- In Liverpool/Fairfield over 12,000 households do not have a motor vehicle (see Attachment D);
- In 2002, there were 1,430 motor vehicle accidents recorded in Fairfield. This is a rate of 7.6/1,000 population. In the same period in Liverpool there were 1,415 accidents recorded, a rate of 8.7/1,000. The rate of accidents in Liverpool was higher than the state rate of 7.6 (NSW Regional Profile, 2004);
- Of these recorded accidents there were 10 fatalities in Fairfield and 650 accidents resulting in injury. In Liverpool there were also 10 fatalities and 633 accidents resulting in injury;
- 2001 Index of Relative Socioeconomic Disadvantage (SEIFA) ranks Fairfield and Liverpool as having considerable disadvantage based on a range of indicators.

Table 3 Family Household Structure

LGA	Population 2004 (est)	No. Households	% of Households				Average Household Size
			Single Family	Multiple Family	Lone Person	Group	
Bankstown	176,761	53,397	75.7	2.6	19.6	2.0	2.9
Fairfield	189,184	53,341	79.3	4.2	14.3	2.0	3.2
Liverpool	167,505	46,807	80.4	2.7	15.0	2.0	3.1
Campbelltown	152,975	45,195	80.1	1.8	15.3	2.2	3.0
Camden	51,055	13,985	83.2	1.3	13.5	2.0	3.0
Wollondilly	41,050	11,796	82.0	1.6	14.8	1.7	3.0
Wingecarribee	44,996	14,546	74.1	1.0	23.1	2.1	2.5
Western Zone	823,526	239,067	79.0	2.6	16.3	2.0	3.0
NSW	6,769,213	2,232,828	71.5	1.3	23.4	3.8	2.6

Source: NSW Regional Profile 2004, ABS.

Table 4 Housing and Income

LGA	Popn. Density Persons / km ²	% Living in same LGA 5 years ago	% in rented dwelling	Public housing tenants ¹	Centrelink Income Support Customers ²	Centrelink Customers as % 2004 popn.	Mean Taxable Income \$
Bankstown	2,256.7	74.1	26.4	6,431	45,121	25.5	35,688
Fairfield	1858.0	78.5	28.8	4,665	55,129	29.1	33,185
Liverpool	535.3	61.2	30.2	4,867	35,188	21.0	35,592
Campbelltown	482.5	75.9	30.3	6,998	30,720	20.1	35,581
Camden	237.8	58.5	17.8	358	6,009	11.8	39,282
Wollondilly	15.2	70.2	13.7	142	6,605	16.1	37,884
Wingecarribee	16.2	69.7	19.7	382	8,754	19.5	40,582
Western Zone	129.2	N/A	26.9	23,843	187,526	22.8	35,740
NSW	8.3	69.4	27.5	125,401	1,474,412	21.8	41,623

¹Includes households receiving rental subsidy and those not.

²Includes age pension, disability support pension, Newstart allowance, parenting payment single, youth allowance, austudy, carer payment, double orphan pension, exceptional circumstances, mobility allowance, Newstart mature age allowance, parenting payment partnered, partner allowance, sickness allowance, special benefit, widow allowance, wife pension and widow class B. People receiving more than one payment type are only counted once using the main payment type.

Source: NSW Regional Profile 2004, ABS.

Table 5 Index of Relative Socio-Economic Disadvantage

LGA	SEIFA Value
Bankstown	954.05
Fairfield	849.22
Liverpool	948.93
Campbelltown	940.61
Camden	1040.92
Wollondilly	1022.85
Wingecarribee	1028.43

Source: ABS SEIFA 2001

Mortality and Morbidity

- The age standardised death rate for both males and females is higher in SSW than in NSW;
- The infant mortality rate is defined as the number of deaths of children aged under 1 year of age. In the 3 year period 2000 – 2002 the infant mortality rate in Fairfield was 4.3 and in Liverpool 4.9. These are both lower than the state average of 5.0;
- Between 2000 & 2002, the following causes of death were higher in Liverpool than NSW – all heart disease, respiratory illness, accidents, assault. In Fairfield, cerebro-vascular disease and assault.
- The 2 most common cancers for men (1998-2002) in both Liverpool and Fairfield were prostate and lung.
- The 2 most common cancers for women (1998 – 2002) in Liverpool and Fairfield were breast and colorectal
- Further details are provided in Tables 6 – 11 below

Table 6 Deaths, Death Rates, by LGA - Males, 1998-2002

LGA	Number of deaths	Crude rate per 100,000 pop	Age-standardised rate per 100,000		
			Rate	Lower 95%	Upper 95% CI
Bankstown	3,128	741.5	693.1	668.7	718.2
Fairfield	2,457	521.4	693.0	664.9	722.0
Liverpool	1,707	446.5	722.0	685.9	759.5
Campbelltown	1,569	423.3	776.0	734.7	818.8
Camden	510	481.1	747.3	681.8	817.2
Wollondilly	464	489.6	678.8	616.5	745.4
Wingecarribee	793	777.3	670.3	623.8	719.3
NSW	1,16,614	724.0	709.1	705.0	713.2

Note: Data are reported by year of death. Numbers for 2002 include an estimate of the small number of deaths that were registered in 2003, data for which were not available at the time of production. Death rates were age-adjusted using the Australian population as at 30 June 1991. Upper and lower limits of the 95 per cent confidence interval for the point estimate are shown. Crude death rates were calculated based on ABS estimated resident population 1998-2002.

Source: ABS mortality data 1997-2002, HOIST, Epidemiology and Surveillance Branch, NSW Department of Health.

Table 7 Deaths, Death Rates, by LGA - Females, 1998-2002

LGA	Number of deaths	Crude rate per 100,000 pop	Age-standardised rate per 100,000 pop		
			Rate	Lower 95% CI	Upper 95% CI
Bankstown	2,722	635.0	435.9	419.2	453.1
Fairfield	2,148	456.2	467.7	448.1	488.0
Liverpool	1,555	414.1	507.7	482.4	533.9
Campbelltown	1,409	372.9	512.7	485.6	540.8
Camden	560	516.6	511.6	468.1	557.8
Wollondilly	372	399.7	444.7	400.1	492.9
Wingecarribee	732	688.6	414.0	383.0	446.7
NSW	107,555	658.2	443.2	440.5	446.0

Note: Data are reported by year of death. Numbers for 2002 include an estimate of the small number of deaths which were registered in 2003, data for which were not available at the time of production. Death rates were age-adjusted using the Australian population as at 30 June 1991. Upper and lower limits of the 95 per cent confidence interval for the point estimate are shown. Crude death rates were calculated based on ABS estimated resident population 1998-2002.

Source: ABS mortality data 1997-2002, HOIST, Epidemiology and Surveillance Branch, NSW Department of Health.

Table 8 Death rates by LGA and cause of death - 2000-2002

LGA	Causes of Death (rate) ¹							
	Malignant Neoplasms	All Heart Disease	Cerebro Vascular	Respiratory System	Accidents	Intentional Self Harm	Assault	All Causes of Death
Bankstown	178.7	183.1	61.4	63.8	16.8	8.9	1.6	663.2
Fairfield	184.3	175.1	84.0	50.4	19.1	8.8	2.8	668.1
Liverpool	182.8	196.8	65.4	63.2	28.9	6.9	2.2	697.2
Campbelltown	195.5	215.4	70.3	77.0	25.4	13.4	1.6	753.6
Camden	190.5	197.4	109.5	57.8	18.6	10.0	1.5	726.9
Wollondilly	188.2	206.3	78.6	52.9	29.0	9.2	1.8	694.3
Wingecarribee	167.8	165.5	78.3	52.0	26.4	10.9	0.0	628.4

LGA	Causes of Death (rate) ¹							
	Malignant Neoplasms	All Heart Disease	Cerebro Vascular	Respiratory System	Accidents	Intentional Self Harm	Assault	All Causes of Death
<i>NSW</i>	<i>184.7</i>	<i>177.5</i>	<i>68.0</i>	<i>57.3</i>	<i>23.9</i>	<i>11.1</i>	<i>1.6</i>	<i>669.4</i>

¹ direct standardized death rate, cause of death being the disease or injury that initiated the train of morbid events leading directly to death. Cause of death is classified according to ICD-10. Based upon deaths for the period 2000-2002, with the rate per 100,000 of the mid-year 2001 population.

Source: *NSW Regional Profile 2004, ABS.*

Table 9 Number of cancers and crude incidence for the common cancers by LGA, Males, 1998-2002

LGA	Colorectal	Lung	Melanoma	Prostate	Other Cancers	All Cancers	Crude incidence rate per 100,000 pop.
Bankstown	279	284	182	559	857	2,161	512.3
Fairfield	247	256	75	354	722	1,654	351.0
Liverpool	121	162	65	264	526	1,138	297.7
Campbelltown	121	137	120	224	482	1,084	292.5
Camden	48	45	47	72	165	377	355.7
Wollondilly	43	34	41	85	132	335	353.5
Wingecarribee	87	54	67	187	191	586	574.4
<i>NSW</i>	<i>11.273</i>	<i>9.180</i>	<i>8.595</i>	<i>19.103</i>	<i>32.304</i>	<i>80.455</i>	<i>499.5</i>

Source: NSW Central Cancer Registry data, HOIST, Epidemiology and Surveillance Branch, NSW Department of Health.

Table 10 Number of cancers and crude incidence for the common cancers by LGA, Females, 1998-2002

LGA	Colorectal	Lung	Melanoma	Breast	Cervix	Other Cancers	All Cancers	Crude incidence rate per 100,000 pop
Bankstown	252	131	109	409	38	739	1678	391.4
Fairfield	181	105	70	396	49	628	1429	303.5
Liverpool	135	82	64	295	22	448	1046	278.6
Campbelltown	105	87	117	317	27	430	1083	286.6
Camden	47	25	46	107	9	143	377	347.8
Wollondilly	30	18	30	103	4	127	312	335.2
Wingecarribe	68	21	42	140	6	188	465	437.4
NSW	9.445	4.625	6.069	19.172	1.339	26.771	67.421	412.6

Source: NSW Central Cancer Registry data, HOIST, Epidemiology and Surveillance Branch, NSW Department of Health.

Table 11 Number of cancers and crude incidence for the common cancers, males and females combined, 1998-2002

LGA	Colorectal	Lung	Melanoma	Breast	Cervix	Prostate	Other Cancers	All Cancers	Crude incidence rate per 100,000 pop
Bankstown	531	415	291	412	38	559	1,593	3,839	451.4
Fairfield	428	361	145	397	49	354	1,349	3,083	327.2
Liverpool	256	244	129	298	22	264	971	2,184	288.2
Campbelltown	226	224	237	320	27	224	909	2,167	289.5
Camden	95	70	93	109	9	72	306	754	351.7
Wollondilly	73	52	71	103	4	85	259	647	344.4
Wingecarribe	155	75	109	141	6	187	378	1,051	504.5
NSW	20.718	13.805	14.664	19.333	1.339	19.103	58.914	1.47.876	455.8

Source: NSW Central Cancer Registry data, HOIST, Epidemiology and Surveillance Branch, NSW Department of Health.

Risk factors

- Rates of overweight and obesity are higher in Liverpool than the NSW average
- Rates of smoking during pregnancy are lower in Liverpool and Fairfield than the state average
- Rates of daily smoking are higher in Liverpool and Fairfield than the state average
- Rates of physical activity for Liverpool are below the state average and the rates for Fairfield residents are well below this average

Source: NSW Chief Health Officer's Report 2006. NSW Health

Disabilities and carers

- The proportion of people with a severe or profound disability requiring assistance in one or more three core areas of activity is very high in Fairfield (5.2%) and is below the average in Liverpool (4%)
- The proportion of carers aged over 15 years in Liverpool is almost the same as the Sydney average and in Fairfield it is slightly higher than the Sydney average

Source: Personal communication with Senior Planner SSWAHS 05/03/08

Liverpool Hospital Patients

- Liverpool Hospital is a major tertiary referral and teaching hospital for the South West of the Area and provides services mainly at role levels 5 and 6 – that is at the highest available/most sophisticated treatment levels in NSW;
- Day patients (such as those attending outpatient clinics) constitute a considerable amount of hospital activity
- According to 2005 estimates, 58% travel to the hospital as a car driver, 19% as a car passenger, 9% by train, 7% by bus, 5% walk or cycle and 2% through set-down/pick up or taxi
- With respect to patient visitors, 50% travel to the hospital as a car driver, 20% as a car passenger, 20% by train, 7% by bus, 1.5% walk or cycle and another 1.5% through set-down/pick up or taxi.

APPENDIX 3

Equity-focused Health Impact Assessment Workshop

Participants:

Facilitators:

Marilyn Wise	CHETRE	(Workshop facilitator)
Ben Harris-Roxas	CHETRE	(Co-facilitator)
Jane Lloyd	CHETRE	(Co-facilitator)

Members of the HIA Steering Committee:

Patrick Harris	CHETRE	(Co-facilitator & notes)
Michelle Maxwell	Population Health	(Notes)
Mark Thornell	Population Health	(Notes)
Gay Horsburgh	Health Services Planning	
Frank Tong	Capital Insight	
Matt Sydenham	Redevelopment Coordinator, Liverpool Hospital	
Peter Cavagnino	Public Health Unit	
Judy North	Community Representative	

Others:

Peter Sainsbury	Population Health	
Sharon Peters	Population Health	(Notes)
Chris Rissel	Health Promotion Service	
Myna Hua	Health Promotion Service	
Brendon Kelaher	Aboriginal Health	
Angela Manson	Multicultural Services	
Barbara Wright	Disability groups representative	
Karen Kenmir	Liverpool Hospital representative	

APPENDIX 4

**Potential health impacts for detailed design phase
(design development/implementation phase)**

Scope	Health issue	What is in the current proposal/plan?
Environmental effects	Building design promotes environmentally sound and sustainable development of health care facilities	The Green Star Guide is being used to guide the development and initiatives include rain water harvesting, CO monitoring in car parks, treatment of glass to reduce thermal loads, energy efficient lighting.
	Adequate facilities to provide for and promote the use of cycling as transport	Space adjacent to building has been assigned for secure bike parking and this has access to public lifts and staff showers.
	Re-use and cooling of water will not harm patients at risk	Harvested rainwater to be used for watering gardens only. Water cooling towers are designed to comply with relevant regulations.
	<i>Other issues raised:</i>	
Health promoting effects	Promoting walking and cycling - adequate lighting and safe places for pedestrians and cyclists to cross streets	Northern Road allows pedestrians and cyclists to access hospital from Warwick Farm Station. Detailed Design phase involves designing appropriate surfaces, locating lights, review of security, etc.
	Walking routes between places and public transport are clearly identified	Signage proposals: <ul style="list-style-type: none"> • Strategically placed; • Multi-lingual; • Simplified (e.g. use numbers for clinics, colour coding, symbols, line-marking on floors); • Touchscreen information kiosks • Updatable information screens; • Braille and tactile pad locations.
	Bus stops have information, seating and protection from the weather	Not part of project, however, it was noted from the Disabilities Forum that a combination of signage,

Scope	Health issue	What is in the current proposal/plan?
		touch-screen public information terminals and displays may assist getting people to use public transport. Suggestions are to be reviewed in Detailed Design.
	Appropriate provisions for people with disabilities and special needs to use public transport	<p>Issues raised in Disabilities Forum:</p> <ul style="list-style-type: none"> • Provide covered seating near the front entries of the hospital; • Make access from trains stations and bus stops as flat and level as possible; <p>Suggestions are to be reviewed in Detailed Design.</p>
	Adequate signage for breastfeeding facilities	Locate facilities appropriately i.e. adjacent waiting areas; Use of international symbols.
	Entrances allow easy access for wheelchairs and prams	All doors in public areas allow for wheelchairs and double prams.
	A coordinated “way-finding” strategy is developed and implemented including Braille and tactile directional signs	Refer “signage proposals” above.
	Workstations meet ergonomic and OH&S guidelines	Fixed furniture designed to comply. Loose furniture to be reviewed as part of selection process during commissioning.
	<i>Other issues raised:</i>	
Patient recovery and staff wellbeing	Lighting - screens, blinds and awnings are used to reduce glare and there is provision to vary lighting for patient comfort	Current proposed to have integral venetian blinds controlled from inside inpatient rooms.
	Lighting is appropriate for performing specific tasks safely	Lighting levels are to be designed to meet AS1680 / TS-11 standards. Lighting levels will be checked during commissioning and prior to handover.

Scope	Health issue	What is in the current proposal/plan?
	Décor - colours are appropriate for the function of areas and décor minimises a clinical feel	Interior décor to be reviewed in detailed design.
	Consultation occurs with specific groups regarding their needs for quiet/spiritual areas	User Reference Group for Pastoral Care includes multi-denominational input.
	Measures to reduce noise for patients - sound-absorbing ceiling tiles;	Sound-absorbing ceiling tiles planned for appropriate locations. anti-slamming devices on doors; floor surfaces have sound-dampening features; Solid core doors without vent grilles and door seals in appropriate locations.
	Water features retain a cool temperature and have no stagnation.	The reflection pool water feature has been deleted following the recommendations of the HIA report.
	Electrical and data connection points are provided on the corridor side of patient rooms	To be reviewed. At the moment – power is on both sides with data on the side closest window.
	Provision for short and longer term family accommodation on site	Medi-hotel facilities identified in PDP but not part of phase 1 works
	Future needs provided for eg increasing levels of obesity, need for adaptability of rooms	Bariatric beds include special requirements eg patient lifters, and standardisation of rooms allow for flexibility
	<i>Other issues raised:</i>	

**Potential health impacts for Commissioning phase
(Operational phase, policies and procedures)**

Scope	Health issue	What is in the current proposal/plan?
Environmental effects	Building design promotes environmentally sound and sustainable development of health care facilities	The Green Star Guide is being used to guide the development and initiatives include rain water harvesting, CO monitoring in car parks, treatment of glass to reduce thermal loads, energy efficient lighting.
	Adequate facilities to provide for and promote the use of cycling	Space adjacent to building has been assigned for secure bike

Scope	Health issue	What is in the current proposal/plan?
	as transport	parking and this has access to public lifts and staff showers. Hospital to update policy for use.
	Re-use and cooling of water will not harm patients at risk	Water cooling towers are designed to comply with relevant regulations. Hospital responsible for regular testing and annual certification.
	<i>Other issues raised:</i>	
Health promoting effects	Promoting walking and cycling - adequate lighting and safe places for pedestrians and cyclists to cross streets	Hospital to update Transport Access Guide (TAG) and provide updated information for safe access and storage of bicycles at the facility.
	Walking routes between places and public transport are clearly identified	<p>Issues raised in Disabilities Forum:</p> <ul style="list-style-type: none"> • Lobby State Rail for lifts at Warwick Farm Station and shuttle bus to hospital and other routes; • Lobby bus companies to provide wheelchair access for buses; • Provide public transport information within the hospital as well as outside of it; <p>Suggestions are to be reviewed in Detailed Design.</p>
	Bus stops have information, seating and protection from the weather	Proposed that Hospital upgrade it's Transport Access Guide (TAG) and provide these for public in reception areas during Commissioning phase.
	Adequate signage for breastfeeding facilities	Locate facilities appropriately i.e. adjacent waiting areas; Use of international symbols. Provision of appropriate chairs / screens and resources within the room.

Scope	Health issue	What is in the current proposal/plan?
	Entrances are clearly signed, especially to key areas such as Emergency and Outpatients	<p>Signage and delineation of areas to be further refined as part of the detailed design phase.</p> <p>Commissioning aspects include:</p> <ul style="list-style-type: none"> • Clearly define roles/ functions for receptionists; • Provision of appropriate hard-copy and electronic promotional and information material;
	A coordinated “way-finding” strategy is developed and implemented including Braille and tactile directional signs	<p>Way finding strategy to be developed in detailed design stage.</p> <p>Suggestions for Commissioning phase include:</p> <ul style="list-style-type: none"> • Training of staff for emergency exits and evacuation procedures; • Provision of Hospital Maps at Reception for the public • Provision of audible electronic content at information kiosks
	<i>Other issues raised:</i>	
Patient recovery and staff wellbeing	Screens/blinds/awnings used to lessen glare where appropriate	<p>Commissioning phase includes:</p> <ul style="list-style-type: none"> • enacting maintenance regime for curtains and blinds; • training patients and staff how to use controls.
	Décor has been chose to minimise a clinical feel	<p>Guidelines for use of new equipment to minimise damage to walls etc.</p> <p>Maintenance regime to be put in place to keep décor, curtains and finishes clean, hygienic and in good condition.</p>
	Consultation occurs with specific groups regarding their needs for	Provide staff / patient information on availability of pastoral services,

Scope	Health issue	What is in the current proposal/plan?
	quiet/spiritual areas	contacts etc.
	Provision for family members to stay with the patient	Provision of appropriate furniture (eg. fold-out beds in selected rooms).
	<i>Other issues raised:</i>	

Equity-focused Health Impact Assessment Workshop – Liverpool Hospital Redevelopment

Assessment Template

Scope:

Health issue:

1. Affected groups – who may be disadvantaged by the initiative or proposal?

	Whole population	Aboriginal	Low socio-economic status	Locationally disadvantaged	Age	Gender	Disability	Ethnicity	Chronically ill
Affected yes/no									
Positive or negative effect									

2. What is the evidence of inequality?

3. What are the unanticipated impacts?

4. Recommendations - what are the ways to reduce the negative impacts and improve the positive aspects of the initiative/proposal?