

# Social Impact Assessment for Miranda Dental Hospital

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Gentle Dental Care

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## **Gentle Dental Care**

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# 1 Introduction

## 1.1 Study background

SGS has been commissioned by Moran Corporation Pty Ltd on behalf of Gentle Dental Care to undertake a Social Impact Assessment (SIA) for the proposed development of Miranda Dental Hospital (MDH). The purpose of this study is to identify possible positive and negative social impacts of the proposed development during the construction and operational stages of the project. The outcome of the social impact assessment will be recommendations for the proponent, The Russo Family Trust, regarding likely social impacts and mitigation measures to address these impacts.

## 1.2 Scope of work

The scope of work as detailed by the client involves the preparation of a Social Impact Assessment (SIA). The SIA is to analyse all social impacts associated with construction and operational phases of the proposed dental hospital. In addition to assessing the social impacts, the study also provides a set of mitigation strategies to minimise any negative impacts on the local and wider community.

SGS has applied the following methodology to identification of MDH social impacts:

- consultation with the client to establish all relevant details about the proposed dental hospital
- strategy and policy literature review to identify the social impacts associated with this type of development
- baseline social profiling of relevant catchment areas to relate the analysis of likely social impacts and their relevance to the impacted population groups
- dental and oral health services analysis, including assessment of the demand for dental services, dental and oral health services and facilities audit, and analysis of existing facilities.

## 1.3 Overview of Miranda Dental Hospital (MDH)

The Russo Family Trust owns and operates Gentle Dental Care, which provides one-stop dental care in clinics located in Liverpool and Tahmoor. The clinics are open every day with extended trading hours to allow for same day or emergency treatment when required. Gentle Dental Care aim to provide world-class treatments utilising leading dentists and benchmark dental care facilities. Gentle Dental Care is headed by Dr Gen Russo.

MDH is intended to be a comprehensive dental clinic offering a broad range of dental and oral health services and treatments. The facility will be fully equipped to cater for patients with special needs as well as providing high level specialist treatment and surgery in addition to ancillary services including dental hygiene and therapy. MDH will also have the added advantage of being fully equipped to provide accommodation to both patients and carers when required.

## 1.4 Description of proposed development

The proposed MDH site is located on the corner of Kiora Road and Urunga Parade in Miranda, in the Sutherland Shire Local Government Area (LGA). Figure 1 shows the location of Miranda within Southern Sydney.

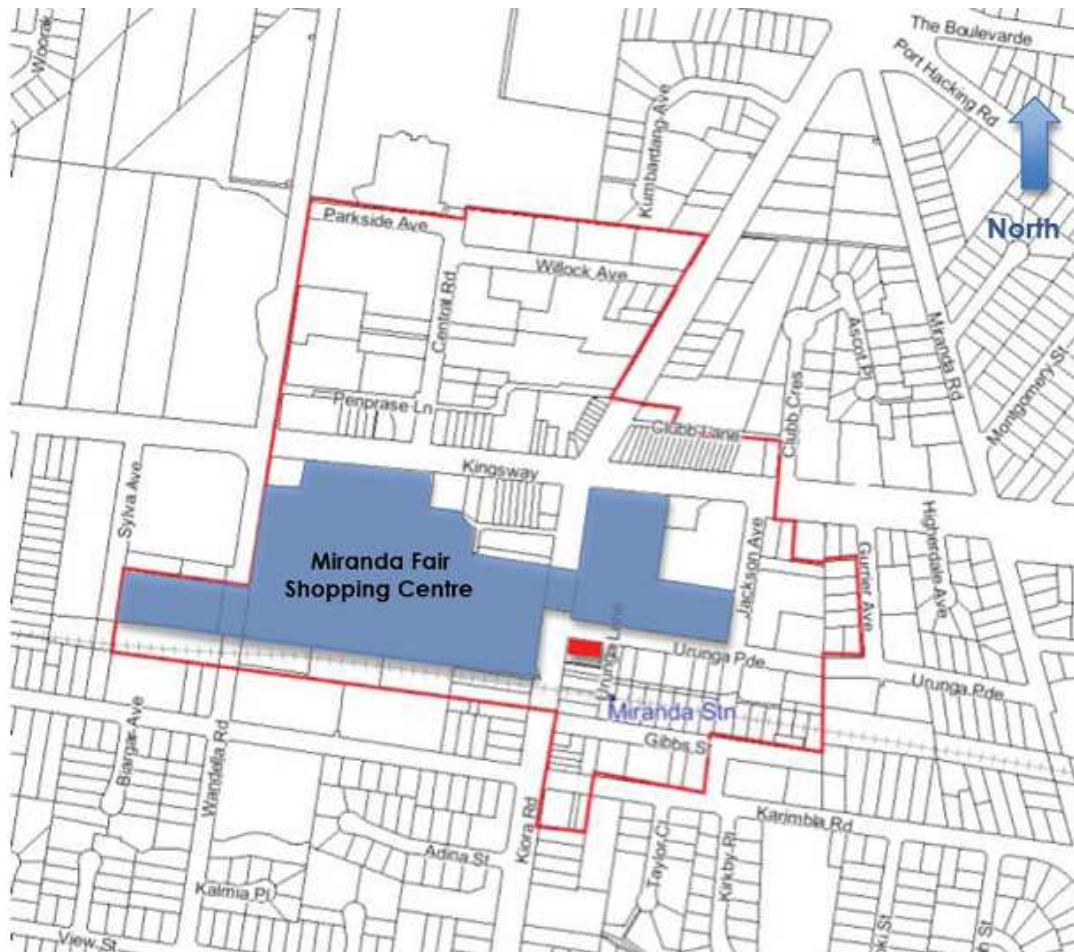
**Figure 1.** Location of subject site within southern Sydney



Source: Google Earth (2011)

The site is located within Sydney's Southern Subregion as identified by the NSW Government in the *Metropolitan Plan for Sydney 2036*. The site is approximately 22 kilometres south of the Sydney city centre and 14 kilometres south of Sydney Airport. The site is located immediately adjacent to Miranda railway station and Westfield Miranda, the largest retail destination in Sutherland LGA. Figure 2 shows the location of the subject site within Miranda town centre.

**Figure 2.** Location of the subject site in Miranda town centre(shaded red)



Source: Google Earth (2011)

The proposed development on the site will contain a state of the art, purpose built dental care hospital. The hospital will provide a one-stop professional dental care service to people admitted both as in-patients and out-patients and includes with the following facilities:

- day surgery, day procedures or health consulting rooms
- accommodation for persons receiving cosmetic dental care, facial reconstruction and so on
- accommodation for special needs patients and their carers
- shops or refreshment rooms
- educational purposes
- research purposes
- any other dental-related use.

## 2 Development context

### 2.1 Strategy and policy literature review

#### **Australia's National Oral Health Plan (National Advisory Committee on Oral Health 2004)**

The *Australia's National Oral Health Plan* (National Advisory Committee on Oral Health 2004) is a national action plan to improve dental hygiene in Australia. The plan is an advocacy document prepared by the National Advisory Committee on Oral Health. The plan highlights the current shortage of oral health specialists and dental care facilities in Australia and advocates for a greater number of dental specialists (as well as public and private oral health providers) to raise the level of dental hygiene in Australia. The plan promulgates a community based approach to oral hygiene through advancement of preventative oral health programs, increased attention on remote and Indigenous communities and building a greater community and clinical health workforce capacity.

Many of the supported policies in the plan are in line with proposed services at the proposed MDH. The plan promotes the development of research, education and diversity in oral health. MDH is planning to support both educational and research areas of oral health. Additionally, the plan promotes greater biological, clinical and combined oral and general health research in Australia as well as a greater educational focus and increased dental workforce. The plan calls for greater provision of general and specialist dentists, hygienists, therapists and other specialities. MDH is supporting the need for providing a broad range of clinical and ancillary health services.

#### **Narrowing the inequality gap in oral health and dental care in Australia (Australian Health Policy Institute 2004)**

*Narrowing the inequality gap in oral health and dental care in Australia*, produced by the Australian Health Policy Institute, outlines the polarisation of oral health care in Australia and identifies areas where improvement is needed to bring up to standard oral hygiene across Australia. The paper notes a widening socio-economic disparity between standards of oral hygiene. Additionally, the paper notes the importance of preventative health care and the need to increase oral health care provisions to make it more accessible, particularly to middle aged and older people. The paper also highlights issues including the increased expenditure as a proportion of income spent on dental health as well as the increased take up of private health insurance to cover dental care.

The second part of the paper identifies actions needed to bring up to standard the state of oral health of poorer Australians, especially adults dental care. The policy directions are relevant for the MDH proposal in terms of providing a greater number of combined dental services and making dental care accessible to a broader societal mix. Promotion of oral hygiene health as a critical health issue, the reshaping of the public funding arrangements and the need to expand the dental labour force are all in line with establishment of a broad dental service provision in Miranda.



### **Draft South Subregional Strategy (Department of Planning NSW 2007)**

The *Draft South Subregional Strategy* prepared by the NSW Department of Planning outlines the long term strategic vision for the south subregion, where the proposed dental hospital will be located. The strategy notes that Miranda is located very close to a major health precinct centred on Sutherland hospital at Miranda/Caringbah. This is important given the consideration for agglomeration and clustering of health services between Miranda and Caringbah. According to the strategy the area needs to improve on 'delivering better services, in the key areas of service delivery', including health and education. The strategy also marks the need to better integrate corridors and centres including Miranda with key services such as health. This is part of improving adoption of the TravelSmart program and encouraging use of more sustainable and healthy access means through increased service delivery in accessible centres. The proposed dental hospital is located in the centre of Miranda, which is identified as a town centre in the strategy. The proposed MDH will be also in very close proximity to Westfield Miranda and Miranda railway station.

### **NSW Health Priority Oral Health Program (Health NSW 2008)**

The *NSW Health Priority Oral Health Program* prepared by NSW Health outlines a system of dental priority measures prepared by the Australian Dental Industry Association. The program especially marks priorities for the extended dental needs of older Australians. The report notes the poor state of dental care available for older Australians. This is attributed to cost, complexity and inadequate distribution of dental services. Further, the report emphasises the importance of preventative dental care and the need to expand the range of dental and oral hygiene services to the population to improve oral health for Australians. The relationship between periodontal disease and relationship to other medical conditions including cardiovascular disease, stroke and pancreatic cancer is also noted.

### **Sutherland Shire Ageing Strategy (Sutherland Shire 2011)**

*Ageing Well in Sutherland Shire*, prepared by Sutherland Shire LGA, is a long term strategy to manage and provide for older residents in the shire. Oral hygiene and dental health are major priorities in the strategy. The strategy points out that existing dental services are a major concern for older residents in the shire. The lack of available and affordable dental services is noted as being raised during consultation. Consequently the strategy has policy directive to lobby for a greater number of dental services in the shire. Given the proposed dental hospital's wide provision of services, accessibility to Miranda centre and providing a range of clinical and non-clinical services, it is directly in line with meeting the prescribed policy directive in the strategy.

Other indirect policy directives in the ageing strategy are to increase the level of health and wellbeing, physical and mental health as well as providing available services. These are all inter-related and an important consideration, given the proposal of the dental hospital.

### **State of the Shire Report 2009/10 (Sutherland Shire 2011)**

Direction 3 *People of the State of the Shire Report 2009-2010* for Sutherland Shire Council outlines the health of the shire residents and where there are deficiencies in health services and provisions.

The report does not specifically cover dental or oral hygiene health. However, this can be considered an issue, given the aforementioned relationship between oral health and general health and wellbeing. A greater exposure and provision of oral health and hygiene are an important consideration in raising the levels of overall health in the shire. The report notes that health indicators for Sutherland Shire residents are generally higher than those in NSW as a whole.

### **The health of the people of New South Wales (Health NSW 2008)**

*The health of the people of NSW: Report of the Chief Health Officer* is produced by the NSW Department of Health to report on health indicators, inequalities and health priorities and initiatives. The latest 2008 report shows that the standards of oral health in NSW are high compared to global standards. There is, however, significant variance in the standard of oral health among age and population subgroups within NSW. The South Eastern Sydney and Illawarra health region compared favourably in terms of oral and dental health indicators compared to most other health regions in NSW. These included indicators on the total number of natural teeth remaining, regular visitation to dentist and dental caries. The report promotes oral health as one of the key priority areas for NSW Health.

General findings from the report were that among children:

- more than half have evidence of tooth decay
- more than one-third do not visit a dentist each year
- hospitalisations for the removal or restoration of teeth due to dental decay have not increased in recent years in older children
- an increasing proportion of hospitalisations for dental decay has been occurring in private hospitals.

The report noted that regarding oral health of adults in NSW:

- around 80 percent of adults report good oral health and have at least 20 teeth
- well over one-third have all of their natural teeth
- one in 17 have no natural teeth
- around three-quarters visit a dentist every two years
- around one-third have a filling each year
- hospitalisations for the removal or restoration of teeth due to dental decay have increased in recent years with an increasing proportion occurring in private hospitals.

### **Our shire, our future (Sutherland Shire 2007)**

*Our shire, our future: our guide for shaping the future to 2030* is a strategic planning document prepared by Sutherland Shire Council. The document is an update of the original strategic plan developed in 1999. Action three in the document 'A healthy and active community' identifies the need for more health services and understanding the importance of offering a comprehensive range of health facilities to maintain positive physical and mental health.

## **Caring Together - the Health Action Plan for NSW (Health NSW 2009)**

*Caring Together: The Health Action Plan for NSW* has been prepared by the NSW Department of Health as a response to the Garling Report. The Garling report was a comprehensive inquiry into the acute health system in NSW. The paper outlines an action plan and a longer term sustainability plan to improve the health system. The paper also outlines the commission's recommendations and the NSW Governments response to findings in the report.

### **Summary**

The strategic policy on oral and dental health in Australia, points to a need for greater resources, funding and exposure for oral and dental health in Australia. Strategy and policy literature review suggests that the current state of the oral and dental health system in Australia needs short term support and longer term funding and commitment. Current health and planning policy indicates a need for increased exposure for oral and dental health and greater integration and alignment with general health services and frameworks. Additionally, policy documents call for increased funding for services and increased workforce capacity for dental and oral health services in Australia. The majority of sources note that dental and oral health amongst middle aged and older adults is below an acceptable standard and performs poorly in comparison to other OECD countries.

Many of the policy documents advocate for a much greater presence and number of clinical specialists as well as professionals including dental therapists, hygienists and pathologists. This is to offer more specialist and ancillary services including maxillofacial surgery, periodontics, endodontics, prosthodontics as well as oral hygiene and dental therapy. Further funding and a greater allocation of resources to strengthening the research and education aspects of dental and oral health in Australia is emphasised. The literature highlights the need for a greater integration of dental care into the public health system helping to increase preventative dental care and reduce the dependence on the treatment based approach which currently predominates.

## **2.2 Identified issues and objectives and initial list of impacts**

The document review undertaken in the previous task allows identifying major oral health issues and objectives in the Sutherland Shire, NSW and Australia. These issues and objectives are summarised in Table 1. Potential social impacts that are relevant to MDH and can be associated with the identified issues and objectives are also listed in the table below.

**Table 1.** Identified issues and objectives and initial list of impacts

Identified issues	Identified objectives	Potential impacts
<ul style="list-style-type: none"> <li>Shortage of dental care and oral health services and facilities</li> <li>Shortage of public and private oral health providers</li> <li>Relationship between periodontal disease and other medical conditions, including cardiovascular disease, stroke and pancreatic cancer</li> <li>Poor state of dental care available to older people</li> <li>Significant shortage of facilities to service special needs patients</li> <li>Lack of school dental and oral health services</li> <li>Lack of preventative dental and oral health care programs for middle aged and older people</li> </ul>	<ul style="list-style-type: none"> <li>Need to increase availability of dental and oral health care services and facilities</li> <li>Need to provide a comprehensive range of high-quality dental and oral health services, including hygiene, therapy and surgery</li> <li>Need to incorporate private dental practitioners and practices into networks that deliver public dental care</li> <li>Need to provide for extended dental needs of older people</li> <li>Need for specific dental and oral health services and facilities to provide for people with special needs</li> <li>Need for expansion of school dental and oral health</li> <li>Need for preventative dental and oral health care</li> <li>Need to improve access to preventative dental and oral health care for middle aged and older people</li> </ul>	<p>Impact on availability of dental and oral health services and facilities</p> <p>Impact on capacity of dental and oral health services and facilities</p>
<ul style="list-style-type: none"> <li>Shortage of dental specialists</li> </ul>	<ul style="list-style-type: none"> <li>Need to expand the dental labour force</li> </ul>	Impact on employment
<ul style="list-style-type: none"> <li>Polarisation in standards of dental and oral health care</li> <li>Poor state of dental care available for older people and other low-income social groups</li> </ul>	<ul style="list-style-type: none"> <li>Need to achieve more equitable and accessible dental and oral health care services for lower income population groups</li> </ul>	Impact on financial accessibility of dental and oral health services
<ul style="list-style-type: none"> <li>Lack of dental educational (practical) facilities</li> <li>Limited dental and oral health research</li> </ul>	<ul style="list-style-type: none"> <li>Need for development of research and education in dental and oral health</li> </ul>	Impact on dental and oral health-related skills and education and research
<ul style="list-style-type: none"> <li>Disparities in allocation of dental and oral health services</li> </ul>	<ul style="list-style-type: none"> <li>Need to provide for more equitable geographical distribution of dental and oral health services</li> <li>Need for more accessible health services by more sustainable and healthy access means</li> </ul>	Impact on physical accessibility of dental and oral health services
<ul style="list-style-type: none"> <li>Limited integration of dental and oral health services with general health practice</li> </ul>	<ul style="list-style-type: none"> <li>Need for agglomeration and clustering of health services</li> <li>Need for a greater integration of dental and oral health services with general health practice</li> </ul>	Impact on agglomeration and clustering of health services

Source: SGS (2011)

### 3 Baseline social profile

A baseline social profile has been constructed using demographic data for an identified catchment area. The social profile establishes various indicators including age, health status, income, employment and mobility. The social profile assists in establishing social impacts of the proposed MDH and the likely reach of impacts and benefits.

#### 3.1 Identified catchment areas

To establish which areas are likely to be impacted by the proposed dental hospital, a catchment area needs to be identified. Based on the nature, scope and scale of the proposed development, a three tiered catchment area has been devised. The immediate catchment includes the suburb of Miranda, where there are likely to be the most impacts, both positive and negative, associated with the development. The secondary catchment is Sutherland local government area (LGA) where a considerable proportion of potential visitors are likely to come from. The broader catchment is the St George-Sutherland Statistical Subdivision (SSD).

For the purpose of this study, the above are the assumed catchment areas. It is, however, needs to be acknowledged that there are likely to be potential users coming from beyond St George-Sutherland SSD catchment area. The only current comprehensive oral and dental health facilities of this type in Sydney are located at Westmead Hospital (Westmead) and United Dental Hospital (Surry Hills). These are public hospitals and, consequently, there are significant waiting time periods, depending on the specialist services required. It is, therefore, expected that MDH will potentially attract patients from across the Sydney Greater Metropolitan Area (GMA) for some dental and oral health services, such as services for special needs patients.

#### **Catchment comparisons**

Gentle Dental Care clinics currently operate in Liverpool and Tahmoor, both in NSW. Gentle Dental Care has noted that the catchment area boundaries are similar in terms of client reach and broader catchments. The clinic in Tahmoor has a localised primary catchment area of Tahmoor, Picton, Thirlmere and Bargo. The secondary catchment area is recognised as being the wider Wollondilly LGA, Camden Valley and Appin. The broader catchment covers the Wollondilly LGA as well as surrounding LGAs, including Bowral, Moss Vale, Mittagong, Goulburn, Mount Pheasant, Harrington Park, and Cambelltown.

#### **Miranda**

Miranda is the local suburb and town centre where the proposed development is situated. Miranda is a significant centre for Sutherland Shire, with a major Westfield shopping centre and train station. The suburb is likely to be directly impacted by the development in terms of new dental and oral health services, built form, traffic, parking and employment opportunities. It is therefore identified as the primary catchment area, where the social impacts of the MDH will be most apparent. Figure 3 shows the state suburb of Miranda as defined by the ABS.

**Figure 3.** Miranda state suburb

Source: ABS (2006)

**Sutherland LGA**

The secondary catchment can be defined as Sutherland LGA. The LGA is fairly self sufficient in terms of services due to its natural boundaries, and lack of contiguous urban overlap with other LGAs, unlike most LGAs of Sydney. It is likely that a large portion of potential clients as well as staff at the proposed facility would come from Sutherland Shire. Figure 4 shows Sutherland LGA boundaries as defined by Sutherland Shire Council.

**Figure 4.** Sutherland LGA

Source: Sutherland Shire Council (2011)



## St George-Sutherland Statistical Subdivision

The broader catchment area is identified as the St George-Sutherland SSD. This area includes Sutherland LGA and the LGAs in the St George region of Kogarah, Hurstville and Rockdale. This forms the southern part and majority of the south subregion as defined by the *Metropolitan Plan for Sydney 2036*. For the purpose of data collation St George-Sutherland SSD is identified as the broad catchment region. This area, which incorporates Sutherland and Miranda LGA is likely to provide a large proportion of clients and staff and consequently be impacted by the MDH. Figure 5 below shows the boundary of the SSD catchment.

**Figure 5.** St George-Sutherland statistical subdivision



Source: ABS (2006)

## 3.2 Catchment areas profile

St George-Sutherland SSD is characterised by relatively high social mobility and economic affluence. This does vary, however within the catchment. Sutherland Shire is recognised as being in the highest socio-economic quintile in terms of relative disadvantage indicators (NSW Health, 2006). The LGA is characterised by higher incomes, motor vehicle ownership and proportion of professionals in the workforce than the Sydney and NSW averages. The socio economic indicators analysed in this report indicate that Sutherland LGA as a whole is more affluent than Miranda as a suburb as well as the broader statistical subdivision. Miranda and the St-George Sutherland subdivision are fairly comparable in terms of income, motor vehicle ownership and industry and occupation of employment. St George-Sutherland SSD in general more affluent than Sydney and NSW as a whole.

## Population profile

The total population of the broad catchment area (St George-Sutherland SSD) in 2006 was 423,832 (ABS, 2006). With adjusted figures from the Bureau of Transport Statistics (BTS) to 2009, the subregion had an estimated population of 440,244. Of this population, 205,450 people, or 48.5 percent lived in Sutherland LGA. Miranda in 2006 had a population of 13,078 people. This equated to just over six percent of Sutherland LGAs population and three percent of the broader catchment population.

According to the population projection published by Bureau of Transport Statistics (BTS), the broader SSD is expected to experience a population growth of around 63,000 from 2006 to 2036, at an average growth rate of 0.5 percent per annum. Resident population in both Miranda suburb and Sutherland LGA are also forecast to increase at a similar rate, with anticipated growth of 3800 and 26,000 residents respectively by 2036. Table 2 and Figure 6 show the expected increase in population in each of the three catchments.

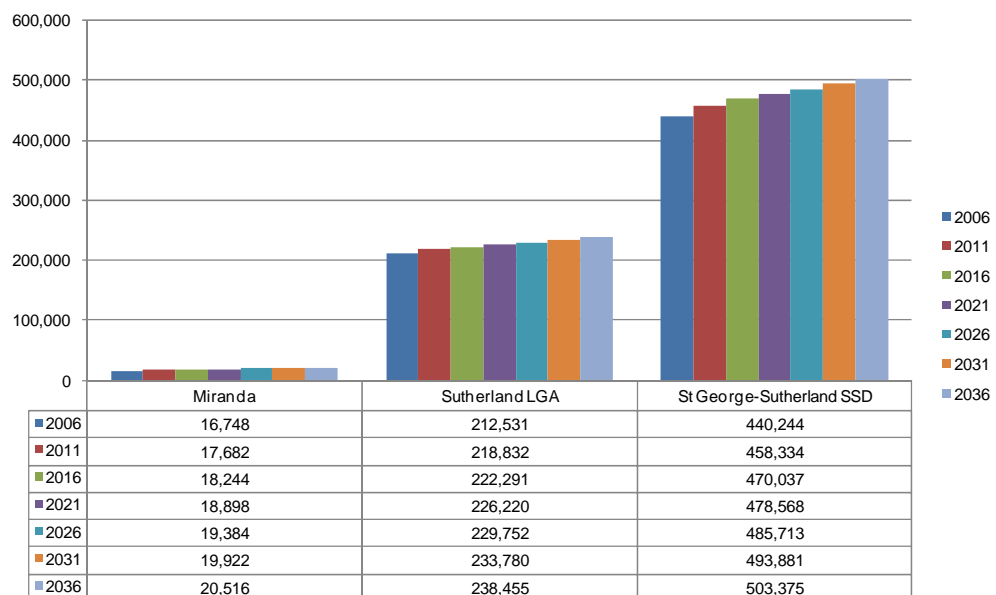
**Table 2.** Projected populations for each catchment area to 2036

Catchment area	2006	2011	2016	2021	2026	2031	2036	Exp Growth 2006-2036 (%)
Miranda	16,748	17,682	18,244	18,898	19,384	19,922	20,516	18%
Sutherland LGA	212,531	218,833	222,291	226,220	229,752	233,780	238,456	11%
St George-Sutherland SS*	440,244	458,334	470,037	478,568	485,713	493,881	503,375	13%

Source: BTS (2009)

\*SS for these calculations includes the cumulative total of Sutherland, Rockdale, Kogarah and Hurstville LGAs.

**Figure 6.** Estimated resident population forecasts, 2006 to 2036



Source: BTS (2009)



## Age profile

The age profile in the catchment is heavily skewed towards middle aged people. Table 3 below shows the population split for each of the three catchment levels. All three catchments are relatively similar in terms of age split and show a high proportion of people aged 25-54. This population group comprises the majority of the population in Miranda, Sutherland Shire (53 percent of the population for both) and the St George – Sutherland SSD (54 percent).

Sutherland LGA and Miranda have a slightly younger population than the SSD with a greater number of dependants aged 0-19 years, while the broader SSD has a higher proportion of elderly people over 65 years of age.

**Table 3.** Age profile of current residents in the three catchment areas, 2006

Age groups	Miranda	Proportion	Sutherland LGA	Proportion	St George – Sutherland SSD	Proportion
0-4 years	837	6%	13,218	6%	26,464	6%
5-14 years	1,380	11%	26,693	13%	39,911	9%
15-19 years	713	5%	14,446	7%	27,406	6%
20-24 years	962	7%	13,439	7%	28,954	7%
25-34 years	2,171	17%	27,110	13%	60,237	14%
35-44 years	1,850	14%	30,197	15%	63,046	15%
45-54 years	1,516	12%	29,684	14%	58,495	14%
55-64 years	1,278	10%	23,309	11%	45,985	11%
65-74 years	1,128	9%	13,413	7%	45,985	11%
75-84 years	964	7%	10,577	5%	23,041	5%
85 years and over	279	2%	3,364	2%	8,565	2%

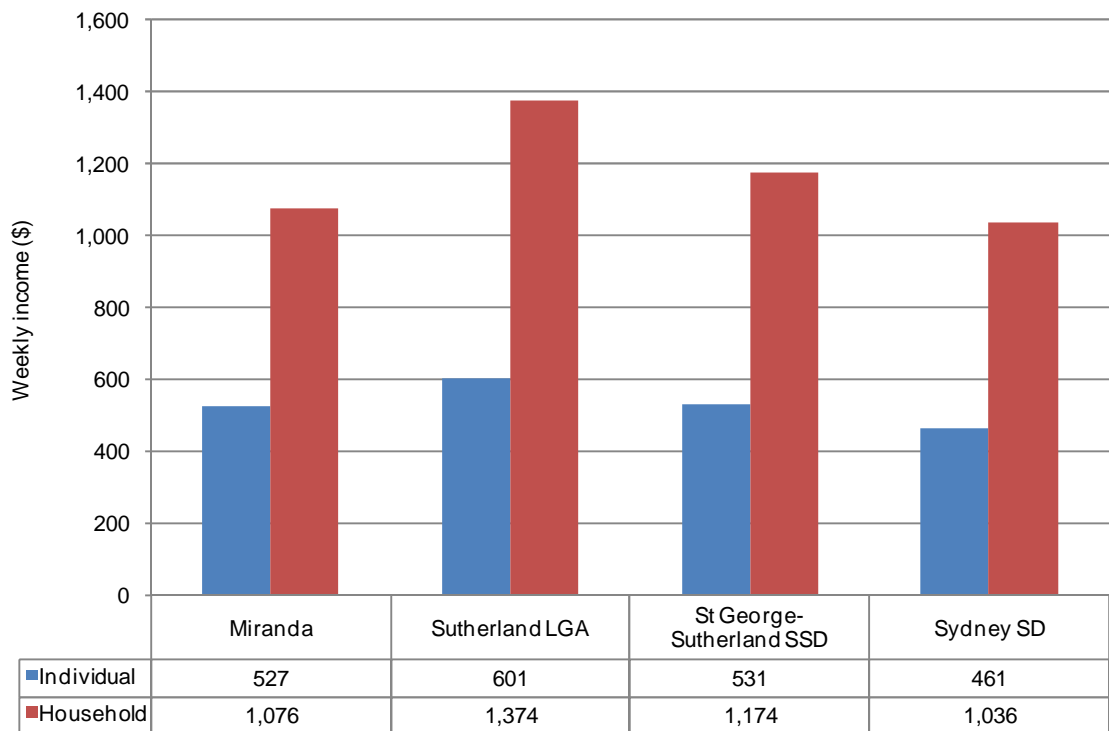
Source: ABS (2006)

The ageing population trend is expected to continue in all three catchment areas over the forecasting period. The share of resident population aged above 65 years in the SSD is projected to increase by five percent from 2006 to 2036. On average, it may suggest a possible decline in per capita demand for dental services, given that the edentulism rate is much higher in the older age group than the younger ones. However, the rate of decline in the edentulism rate has historically far exceeded the rate of shift in the age structure. Therefore, the dentate population is expected to increase at a greater rate than the general population as a whole (Spencer et al 2003).

## Income profile

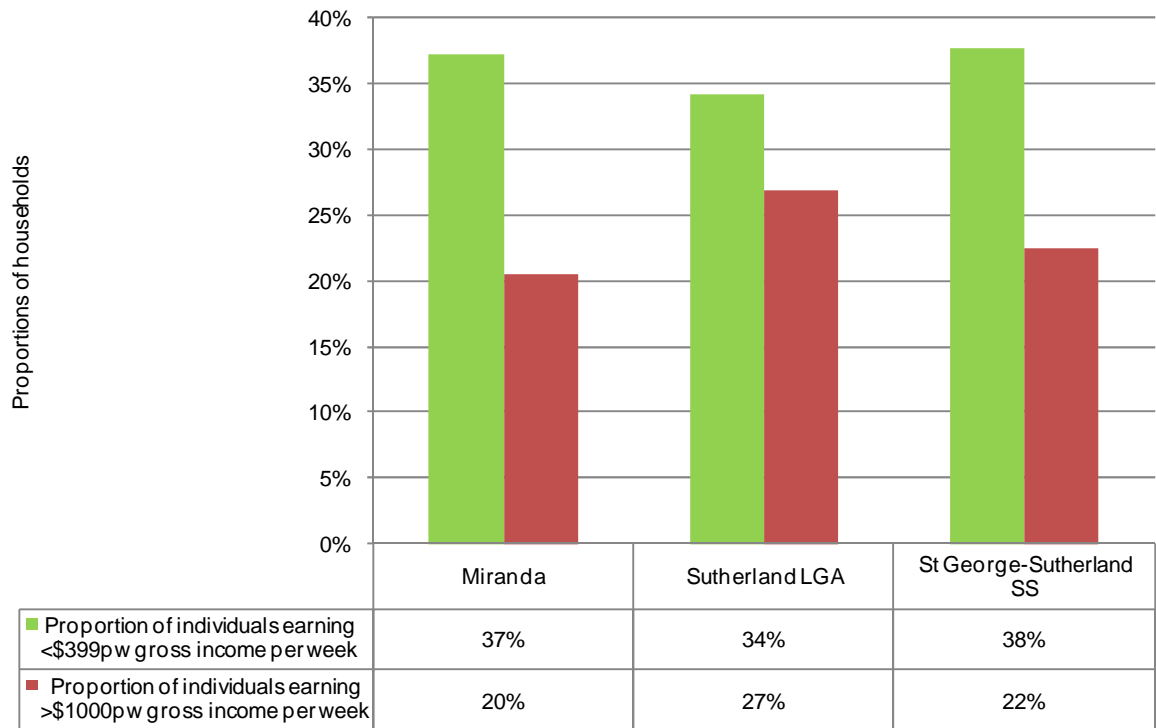
The income profile of the area indicates that the catchment is fairly affluent compared to the NSW median. Figure 7 shows the median income for each of the three catchment areas. Sutherland LGA has the highest median individual and household income, compared to the broader subregion. This infers that the other LGAs to the north are less affluent than Sutherland. The workforce in Miranda also has a significantly lower median individual and household income than the LGA, meaning that it is one of the less affluent parts of the LGA.

**Figure 7.** Median individual and household income for the three catchment areas in 2006



Source: ABS (2006)

All three catchment areas have a considerable proportion of high and low income earners as demonstrated in Figure 8. It needs to be taken into account that a significant number of low income earners (those earning less than \$399 per week) would be people working part time or in casual employment, thus the numbers are skewed. The proportion of high income earners, with an income greater than \$1000 per week is high in all three catchments. This is an important consideration, given the cost of dental and oral health services in Australia. The larger base of high income earners is likely to have the means to potentially patronise a number of services that will be offered at MDH.

**Figure 8.** High and low income earners in the three catchment areas in 2006

Source: ABS (2006)

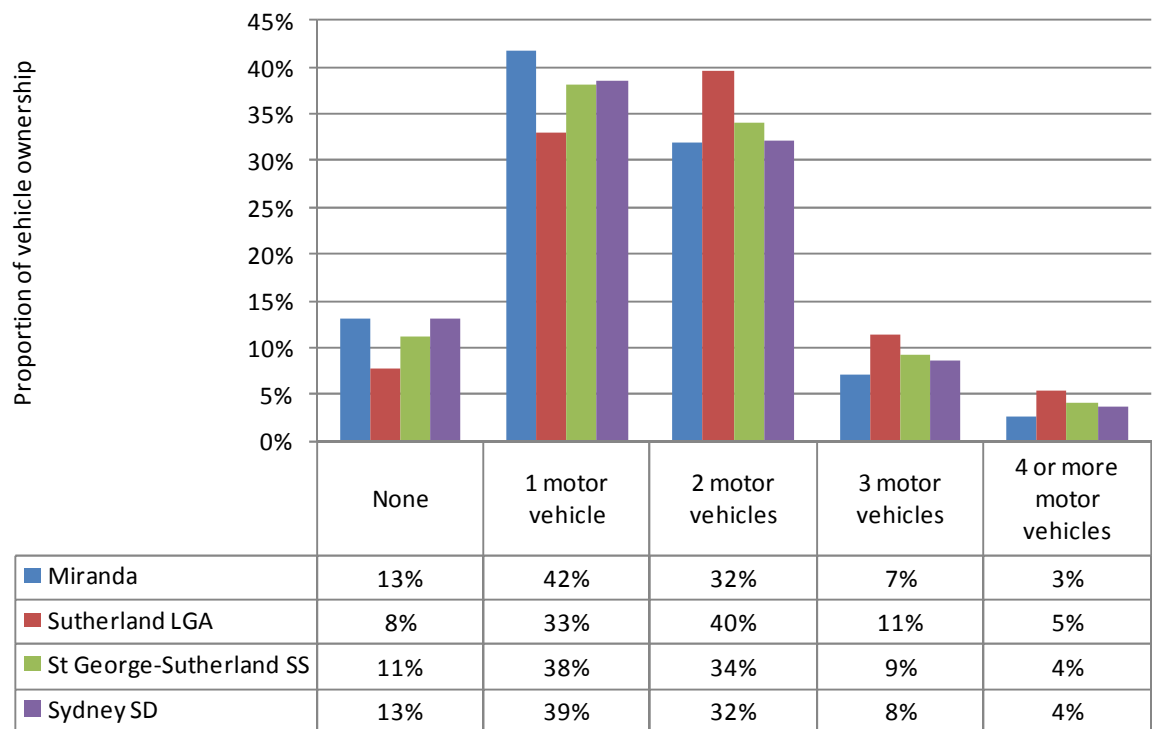
## Mobility profile

### Motor vehicle ownership

Figure 9 shows the proportion of homes by number of motor vehicles owned. In line with performance against other indicators of affluence, Sutherland LGA has the higher proportion of car ownership than Miranda and the St George-Sutherland SSD. The LGA has the greatest proportion of homes with two, three, four or more cars per household as well as the lowest proportion of households with no motor vehicle. Sutherland LGA and St George-Sutherland SSD have a higher proportion of car ownership than the greater Sydney area, whilst Miranda is fairly comparable.

The high proportion of vehicle ownership can also be attributed to the distance from the city centre as well as the lack of alternative transport options in the majority of the LGA. Miranda has the lowest car ownership of all the catchment areas as well as the smallest number of cars per household. Cumulatively the figures indicate that people in the catchment have very high mobility, and this would impact their ability to access services such as the proposed dental hospital. However, given that parking at the site will be minimal, the high rate of ownership and assumed use of private motor vehicles may have an impact. The location of the MDH, in very close proximity to public transport services, should therefore be utilised.

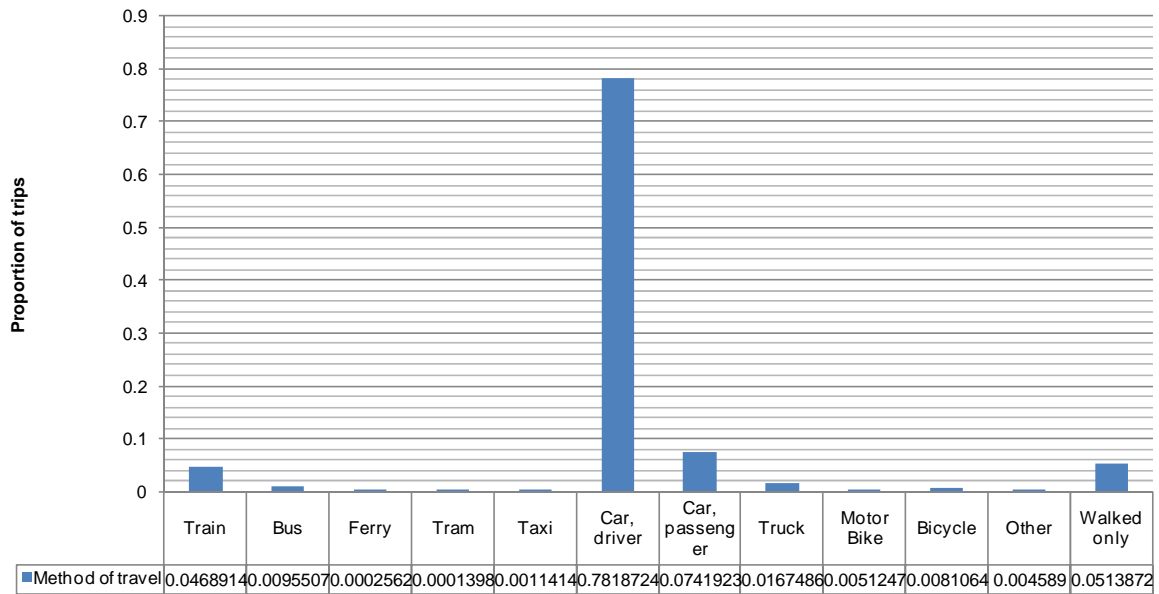
**Figure 9.** Household motor vehicle ownership and proportion in the three catchment areas



Source: ABS (2006)

### Public transport patronage

The majority of people travelling to work in Sutherland LGA do so as the driver of a private motor vehicle. This accounts for 78 percent of all commuter trips for workers within the LGA. The next most common modes of travel are as a car passenger and by train. Walking accounts for five percent of all trips. Figure 10 shows the methods of travel to work for all people working in Sutherland LGA.

**Figure 10.** Mode of travel to employment in Sutherland LGA

Source: BTS (2009)

## Employment profile

### Employment profile of residents

The employment profile of residents in the three catchments is diverse. Table 4 shows the split of employment by industry for residents who live in Miranda, Sutherland LGA and the SSD. The major sectors of employment are construction, retail, transport, manufacturing, professional services and public administration. This characterises the areas as having a large number of residents employed in skilled trades, transport and manufacturing, with smaller numbers of professionals and service workers. This is partly attributable to the diverse employment base of the LGA, as well as the income and lifestyle diversity within the LGA and broader SSD catchment.

**Table 4.** Catchment areas residents industry of employment

Industry	Miranda (total jobs)	Miranda (%)	Sutherland LGA (%)	ST George-Sutherland SSD (%)
Agriculture, forestry & fishing	12	0	0	0
Mining	8	0	0	0
Manufacturing	421	13	13	12
Electricity, gas, water & waste services	39	1	2	1
Construction	436	13	13	12
Wholesale trade	175	5	6	6
Retail trade	324	10	8	9
Accommodation & food services	183	6	5	6
Transport, postal & warehousing	331	10	10	10
Information media & telecommunications	78	2	2	3
Financial & insurance services	146	4	5	5
Rental, hiring & real estate services	44	1	2	2
Professional, scientific & technical services	208	6	8	8
Administrative & support services	88	3	2	3
Public administration & safety	287	9	7	7
Education & training	120	4	4	4
Health care & social assistance	126	4	3	4
Arts & recreation services	44	1	1	1
Other services	158	5	4	4
Inadequately described/Not stated	86	3	2	3

Source: ABS (2006)

## Jobs profile

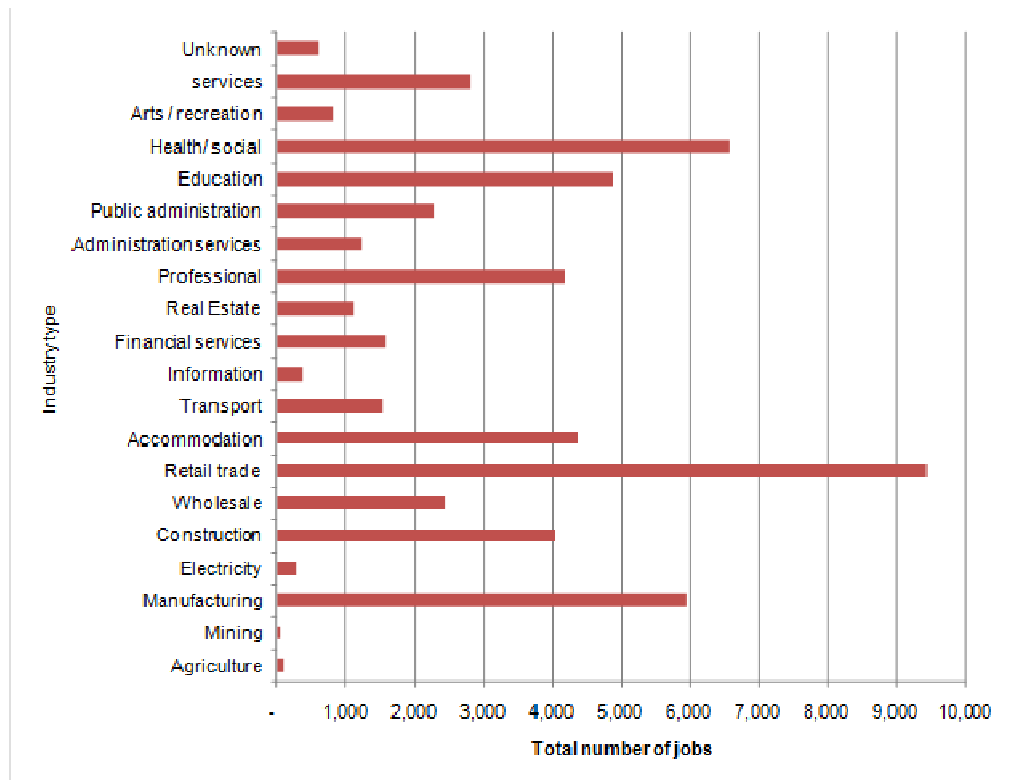
In 2009, there were a total of 8183 jobs in Miranda and 54,561 jobs in Sutherland Shire (BTS 2009). Table 5 below shows the existing number of health and administration jobs in Miranda. This is displayed as the majority of jobs in the proposed MDH are likely to consist of health and health support professionals and clerical and administration staff. Currently these two industry sectors make up nearly 14 percent of jobs in Miranda.

**Table 5.** Health and administration jobs in Miranda, 2009

Occupation type	Number of jobs	Proportion of total jobs
Clerical and office support workers	29	0%
General clerical workers	148	2%
Inquiry clerks and receptionists	273	3%
Office managers and program administrators	156	2%
Other clerical and administrative workers	144	2%
<b>Total admin and support jobs</b>	<b>750</b>	<b>9%</b>
Health professionals	346	4%
Health and welfare support workers	57	1%
<b>Total health and related jobs</b>	<b>403</b>	<b>5%</b>
<b>Sub-total</b>	<b>1153</b>	<b>14%</b>
<b>Total jobs in Miranda</b>	<b>8138</b>	<b>100%</b>

Source: BTS (2009)

Figure 11 shows the breakdown of jobs by industry for people who work in Sutherland Shire LGA. The figure shows that in 2008 over 6500 people were employed in health/social services, which was second only to retail. This highlights the high number of social and health services in the LGA, serving a very large population and a greater catchment.

**Figure 11.** Industry of jobs in Sutherland Shire

Source: BTS (2008)

## Summary

Based on the profiling of each of the catchment areas, it is clear that the St George-Sutherland SSD, incorporating Sutherland LGA and Miranda, is relatively affluent and mobile and has a diverse employment base and occupation split amongst residents.

The catchment areas have a dominant population of middle aged people who on average earn more than the Sydney and NSW average. The relative affluence and age of the residents in each of the three catchments infers that there is likely to be a considerable market for private dental services.

Personal mobility in the catchment areas is high, with a very high proportion of people travelling to and from work in private motor vehicles. Miranda has slightly lower population dependent on motor vehicles than the LGA and SSD. The proportion of car ownership and choice of access means suggest that there is likely to be demand from clients and staff of the MDH for on-site parking spaces.

There is a sizeable proportion of working people within the catchment areas, including Miranda, that are employed as health professionals and health support workers. MDH will potentially be complementary to this labour pool with opportunities for further clustering of health services.



## 4 Dental and oral health services analysis

### 4.1 Demand for dental services

Based on the population forecast, we have estimated the likely demand for dental services in each catchment area. A number of national level assumptions have been drawn from the *Dental labour force in Australia* report (Spencer et al 2003), namely:

- projected edentulism (people with no remaining teeth) rate for each applicable age group in 2019 (refer to Table 6)
- 1.83 dental visits per dentate person per year, assuming continued growth from the rate observed in 1995
- around 2600 visits per year supplied by every dentist on average, observed in 1998-99.

**Table 6.** Edentulism rates by age group in Australia

Age groups:	Edentulism rates
45–54 years	2%
55–64 years	5%
65–74 years	12%
75 years and over	23%

Source: Spencer et al (2003)

We applied the edentulism rate to the BTS population projection by age cohort to derive the number of dentate persons within each catchment area. Assuming the edentulous persons demand little dental services, the total demand for the dental services was estimated by multiplying the number of dentate persons in each area by 1.83 visits per year.

Dividing the demand of dental visits by the average visit per year per dentist suggests that the residents living in the SSD would require access to 339 dental practitioners by 2036 to maintain the level of services observed in the past. Table 7 depicts the estimated demand from those residing in Sutherland LGA and the SSD at each five year interval.

**Table 7.** Estimated demand for dental services, 2006-2036

Years	Number of dentists		Population per dentist	
	Sutherland LGA	St George –Sutherland SSD	Sutherland LGA	St George –Sutherland SSD
2006	145	300	1,466	1,467
2011	149	312	1,469	1,469
2016	151	319	1,472	1,473
2021	153	324	1,479	1,477
2026	155	328	1,482	1,481
2031	158	333	1,480	1,483
2036	161	339	1,481	1,485

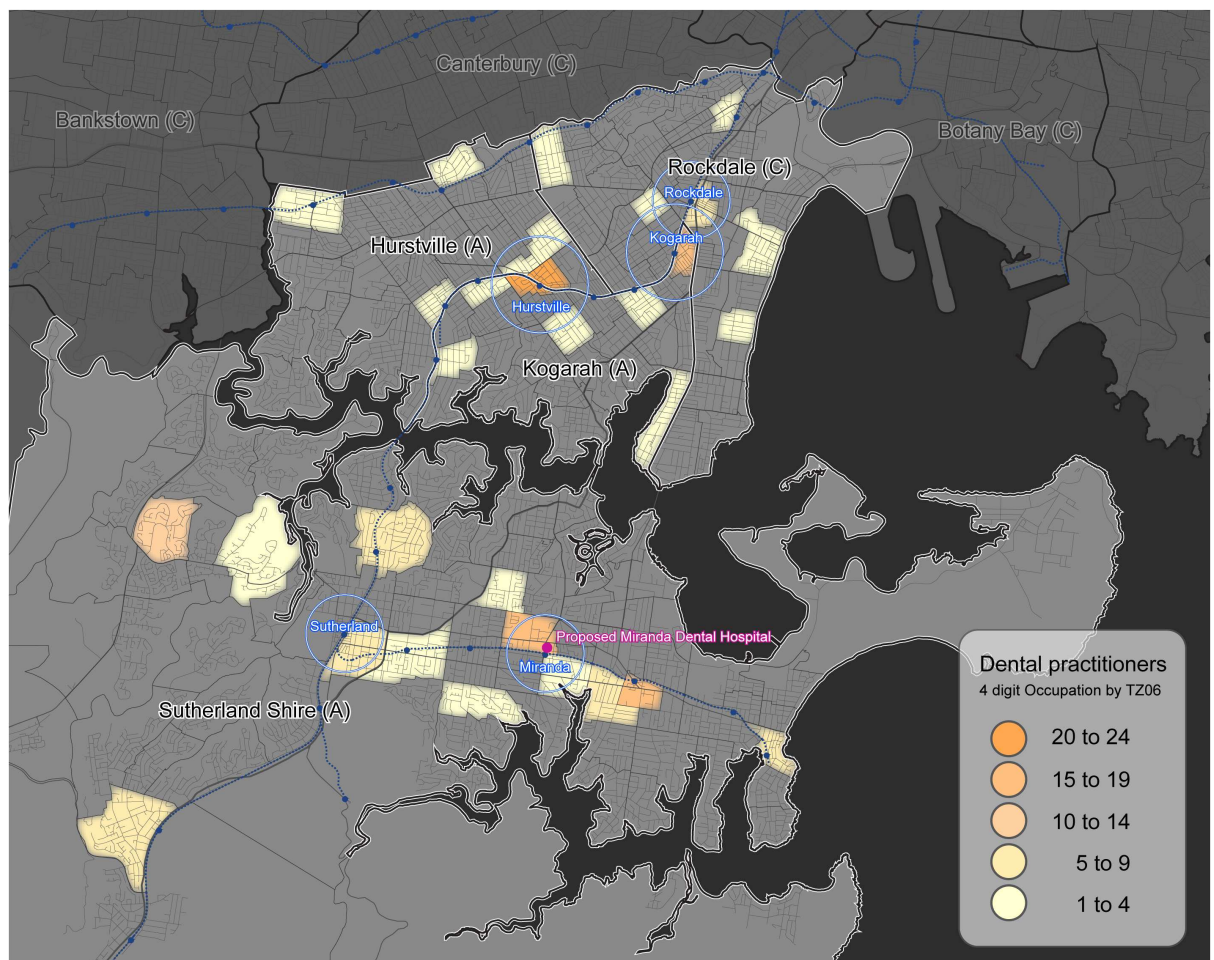
Source: SGS Estimates (2011) based on assumptions Spencer et al (2003)

## 4.2 Dental and oral health facilities and services audit

The 2006 destination employment data by occupation from the BTS was used to illustrate existing dental facilities within St George-Sutherland SSD. The maps below illustrate clusters of dental related employment by travel zone.

Figure 12 shows a distribution of dental practitioners employed within the SSD region. Most of these jobs concentrate in the areas with greater transport access, especially within the Hurstville, Kogarah and Miranda centres. Within the broad SSD region, 210 dental practitioners were working in 2006, with almost half of them (95 jobs) in Sutherland LGA.

**Figure 12.** Dental practitioner employment distribution, St George–Sutherland SSD, 2006



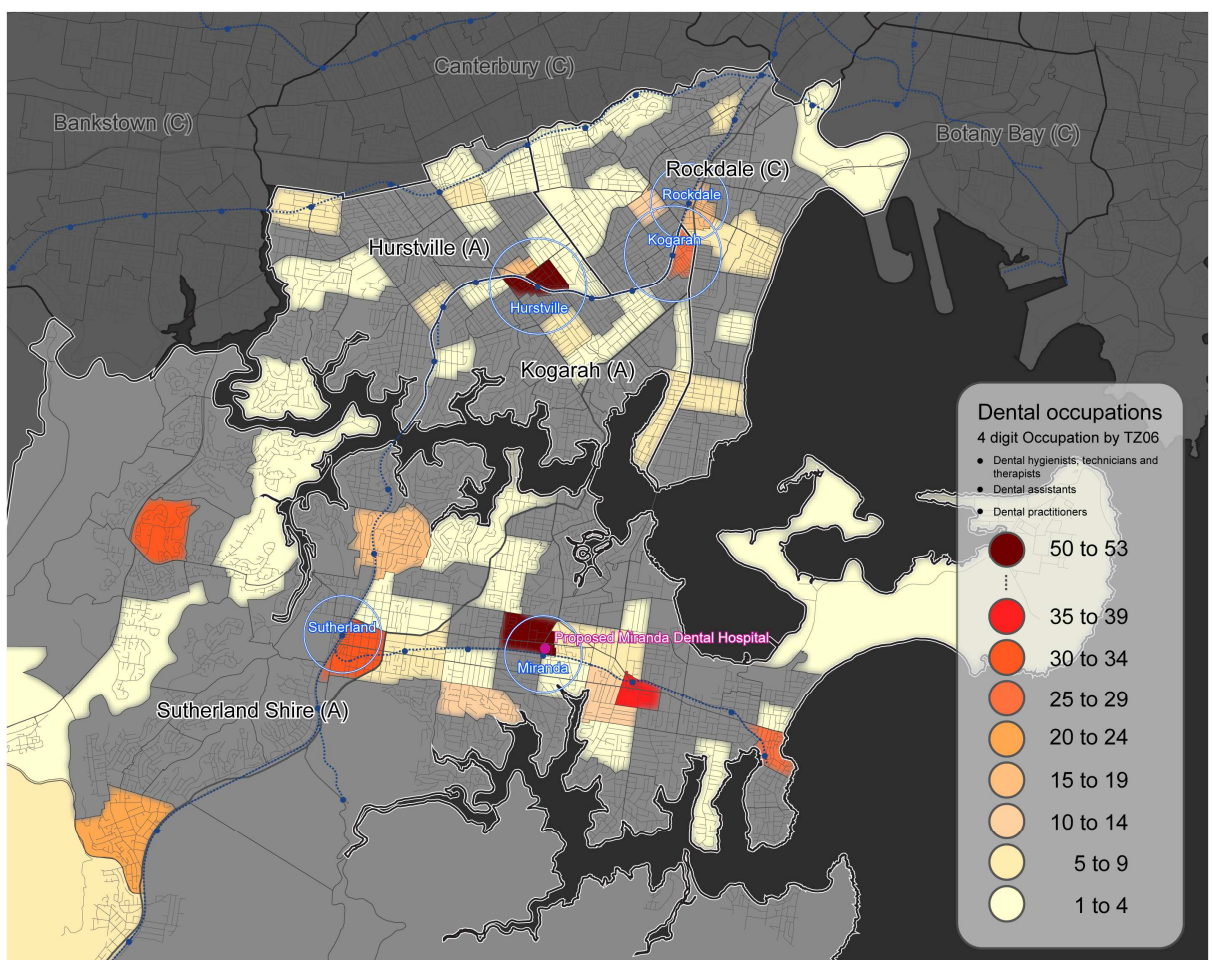
Source: SGS based on Bureau of Transport Statistics (2009)

Contrasting the existing supply of the dental services and professionals with the demand estimated in Section 3.2 of this study, *Catchment area total demand for dental services*, we found that both Sutherland LGA and the broader SSD region were experiencing a shortage of dental services and

practitioners to meet the demand of local residents. Over time, the shortage in both catchment areas will increase to around 65 and 130 dental practitioners by 2036 respectively, should the MDH not proceed.

Further, a distribution of dental related employment in 2006 is shown in Figure 13. These occupations include dental practitioners, dental assistants and dental hygienists, technicians and therapists. These jobs were found to be more evenly spread across the SSD region, although it appears that both Miranda and Hurstville centres still hold highest dental related employment. Overall, there were more than 600 dental related jobs in the SS region in 2006. Again, half of professionals were employed in Sutherland LGA.

**Figure 13.** Dental related employment distribution, St George –Sutherland SSD, 2006



Source: SGS based on Bureau of Transport Statistics (2009)

Comparing the total number of dental related jobs with the 2001 data, there has been an increase of 32 dental related jobs (or 5.5 percent increase) in the SSD region from 2001 to 2006, however, only four (or a 2 percent increase) more dental practitioners were working in the area. The increase in dental practitioners is considered to be low given an increase in the resident population of 14,000 persons (or 3.5 percent increase) recorded by the Census data over the same period.

## 4.3 Analysis of existing facilities

Dental and oral health specialist services to be offered by MDH and dental facilities equipped to provide these services within the Sydney GMA are listed in the table below. The list of services includes different level of services.

**Table 8.** Specialist services of MDH and main competitors, Sydney GMA

Level of service	Service	Dental specialist	Public provider	Private provider	Proposed MDH
Basic	<ul style="list-style-type: none"> <li>• Clean</li> <li>• Filling</li> <li>• Extraction</li> <li>• Single crown</li> </ul>	Restorative	<ul style="list-style-type: none"> <li>• Westmead Hospital</li> <li>• United Dental Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• All local dental GP's</li> </ul>	MDH
Low level Specialist	<ul style="list-style-type: none"> <li>• Single wisdom tooth extraction</li> </ul>	Restorative	<ul style="list-style-type: none"> <li>• Westmead Hospital</li> <li>• United Dental Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• Most local dental GP's</li> </ul>	MDH
Medium Level Specialist	<ul style="list-style-type: none"> <li>• Gum surgery</li> <li>• Root canal</li> </ul>	Periodontist Endodontist	<ul style="list-style-type: none"> <li>• Westmead Hospital</li> <li>• United Dental Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• GDC* Tahmoor</li> <li>• GDC Liverpool</li> <li>• Parramatta</li> <li>• City</li> <li>• Chatswood</li> </ul>	MDH
Medium Level Specialist	<ul style="list-style-type: none"> <li>• Surgical wisdom tooth removal</li> </ul>	Maxillofacial Surgeon	<ul style="list-style-type: none"> <li>• Westmead Hospital</li> <li>• United Dental Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• GDC Tahmoor</li> <li>• GDC Liverpool</li> <li>• St George Private</li> <li>• City</li> <li>• Liverpool</li> </ul>	MDH
Medium Level Specialist	<ul style="list-style-type: none"> <li>• Childrens dental</li> </ul>	Paedodontic	<ul style="list-style-type: none"> <li>• Westmead Hospital</li> <li>• United Dental Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• GDC Tahmoor</li> <li>• GDC Liverpool</li> <li>• Miranda</li> <li>• Liverpool</li> <li>• Bondi Junction</li> </ul>	MDH
Medium Level Specialist	<ul style="list-style-type: none"> <li>• Braces</li> </ul>	Orthodontic	<ul style="list-style-type: none"> <li>• Westmead Hospital</li> <li>• United Dental Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• GDC Tahmoor</li> <li>• GDC Liverpool</li> <li>• Miranda</li> <li>• Engadine</li> <li>• Menai</li> <li>• Hurstville</li> <li>• City</li> <li>• Several in Sydney GMA</li> </ul>	MDH
High Level Specialist	<ul style="list-style-type: none"> <li>• Implants and fixed prosthetics</li> </ul>	Oral surgeon	<ul style="list-style-type: none"> <li>• Westmead Hospital</li> <li>• United Dental Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• GDC Tahmoor</li> <li>• GDC Liverpool</li> <li>• City (Dr Dunn)</li> <li>• Chatswood (Dr Chang)</li> <li>• Balmain (Dr Ho)</li> <li>• Burwood (Dr Willey)</li> </ul>	MDH

Level of service	Service	Dental specialist	Public provider	Private provider	Proposed MDH
High Level Specialist	<ul style="list-style-type: none"> <li>Intravenous Sedation</li> </ul>	Anaesthetist	<ul style="list-style-type: none"> <li>Westmead Hospital</li> <li>United Dental Hospital</li> </ul>	<ul style="list-style-type: none"> <li>GDC Tahmoor</li> <li>GDC Liverpool</li> <li>Burwood (Dr Willey)</li> </ul>	MDH
High Level Specialist	<ul style="list-style-type: none"> <li>General Anaesthetic</li> </ul>	Anaesthetist	<ul style="list-style-type: none"> <li>Westmead Hospital</li> <li>United Dental Hospital</li> </ul>	<ul style="list-style-type: none"> <li>GDC Tahmoor</li> </ul>	MDH

Source: Advised by the client (2011)

\* GDC – Gentle Dental Care

While basic and low level specialist services (such as restorative dental surgeon) or medium level specialist services (such as periodontic and endodontic) for able bodied patients are offered by a majority of dental practitioners, there are only a small number of comprehensive and high level specialist dental clinics in Sydney. Based on the existing services available, there is a thin geographic distribution of specialised dental services as well as clinics which offer a comprehensive range of oral and dental health services. The MDH will offer a very diverse range of services including high level surgical procedures including maxillofacial surgery, dental services for special needs patients as well as offering a comprehensive range of oral and dental health services. Figure 14 shows the distribution of high level specialist dental services, dental services for special needs patients and integrated dental clinics and hospitals in Sydney.

### Highest level specialist services

There are only a small number of dental facilities in Sydney that offer high level specialist dental and oral health services such as maxillofacial surgery. These are spread thinly throughout Sydney. The MDH will be one of only a very small number present in the South of Sydney.

### Services for special needs clients

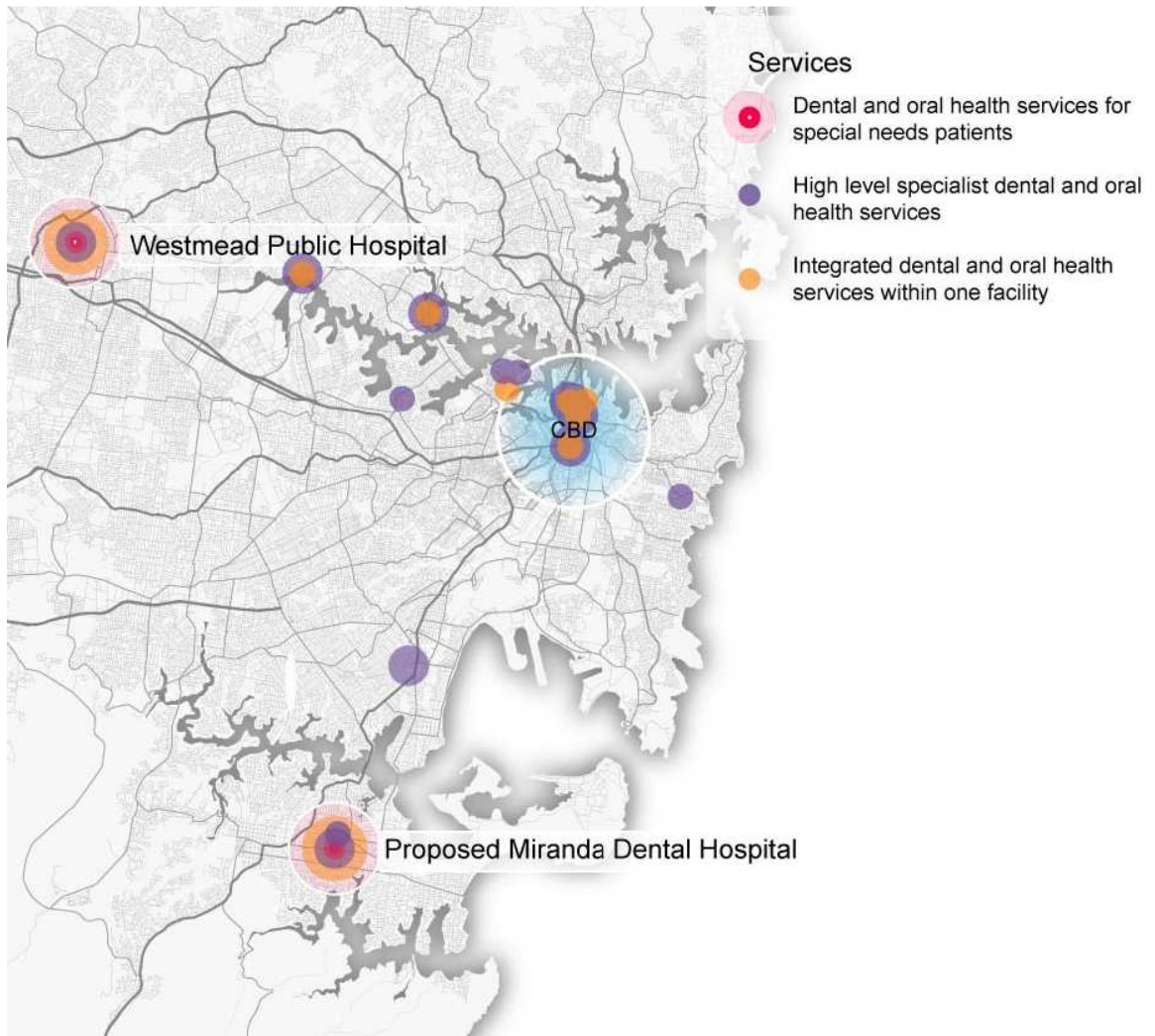
There are currently very few facilities offering dental and oral health services to special needs patients. There are services at some larger hospitals, Westmead Hospital and United Dental Hospital, as well as a small number of paediatric dental hospitals offering some special needs services. MDH will be one of the very few private dental facilities in the Sydney GMA offering dental services for special needs patients in conjunction with a broad range of general services.

### Integrated services in one facility

MDH will be one of only a handful of comprehensive integrated dental and oral health facilities in Sydney. These are facilities offering an integrated range of general dental services, surgical procedures, cosmetic dentistry and ancillary services. The majority of these facilities are located close to the Sydney city centre or north of the CBD. MDH will be rare in offering a broad range of oral and dental health services as well as visitor and patient accommodation within one facility.



**Figure 14.** Specified dental services in Sydney



Source: SGS (2011)

## 5 Potential social impacts analysis

This section summarises key potential social impacts associated with the development of the proposed site from a two-storey commercial building with a 'bottle shop' and 'cosmetic surgeon' into a one-stop dental hospital, which is MDH. The section outlines the expected impact on the community groups in Miranda, Sutherland LGA, Sydney South Subregion and wider Sydney GMA.

Based on work undertaken in the previous tasks of the study the following potential social impacts have been identified:

- impact on availability of dental and oral health services and facilities
- impact on capacity of dental and oral health services and facilities
- impact on financial accessibility of dental and oral health services
- impact on physical accessibility of dental and oral health services
- impact on employment
- impact on skills and education and research
- impact on traffic and car parking
- impact on safety
- impacts on the amenity of the surrounding environment
- impact on agglomeration and clustering of health services.

A detailed description of these impacts is provided below.

### 5.1 Impact on availability of dental and oral health services and facilities

MDH is very likely to impact positively on the community through meeting a demonstrated and growing demand for dental and oral health services and facilities in Miranda, Sutherland Shire, St George-Sutherland SSD.

A review of strategic documents and relevant literature, undertaken as part of this study, have identified the need to increase availability of dental and oral health care services and facilities in Sutherland LGA, New South Wales and Australia.

The dental and oral health services analysis (Chapter 4 of this study) also showed that, over time, the already existing shortage of dental practitioners in Sutherland LGA and St George-Sutherland SSD catchment areas would continue to increase.

Both Sutherland LGA and the broader SSD have been experiencing a shortage of dental services, despite an increase in population. This has placed an additional strain on existing dental services. In 2006, 145 dental practitioners were needed to operate in the Sutherland LGA in order to meet the resident demand for these services. There were, however, only 95 dental practitioners operating, indicating a 34.5 percent shortage of dentists in the LGA. For the same year, 300 dental practitioners were required for St George-Sutherland SSD, while only 210 dental practitioners were operating in the area, representing a 30 percent shortage. Additionally, from 2001 to 2006 there

was only a two percent increase in dental practitioners operating in the SSD, while the population increased by 3.5 percent in the SSD over the same period.

Our assessment of the demand for dental services showed that the residents living in St George-Sutherland SSD would require access to 339 dental practitioners by 2036 to maintain the level of services observed in the past. To meet the demand for dental services in Sutherland Shire 161 dental practitioners will be required by 2036. Our estimations show that by 2036 there will be a shortage of approximately 65 dental practitioners in the Sutherland LGA and 130 dental practitioners in St George-Sutherland SSD, should the MDH not proceed.

The above indicates that there is a significant and growing gap between existing dental services and the population demand for these services. Taking this into account, dental and oral health services offered by MDH are very likely to have a positive social impact on the communities in Miranda, Sutherland Shire LGA, St George-Sutherland SSD and wider Sydney GMA.

Currently the Miranda workforce constitutes 24 dental practitioners and 41 other dental related workers (dental hygienists, technicians and therapists and dental assistants) operating in Miranda (BTS 2009). At its full operational capacity MDH will employ 28 doctors (dental practitioners) and 37 nurses (dental related service workers). Thus, MDH will significantly increase the availability of dental and oral health services in this catchment area. MDH will more than double the current availability of dental practitioners and will almost double other dental related workers.

In 2006, there were 95 dental practitioners and 212 dental hygienists, technicians, therapists and dental assistants working in Sutherland LGA. When fully operational, MDH is likely to significantly increase the existing dental and oral health workforce (2006 base) in the shire in both, dental practitioners (29.5 percent) and other workers (17.5 percent).

Within the broad St George-Sutherland SSD area, 210 dental practitioners were operating in 2006. MDH dental practitioners will be able to increase the offer of dental services in the subregion and, therefore, help meet increased demand for these services in the area. Based on the number of full time equivalent dental practitioners, the MDH has the potential to provide a 13 percent increase to the number of dental practitioners operating in 2006.

Additionally, MDH is planned to operate every day of the week and be available for emergencies. This increases accessibility and availability of MDH services and facilities for patients in all three catchment areas.

## 5.2 Impact on capacity of dental and oral health services and facilities

The need for a broader range of general and specialist dental and oral health care services in the Sutherland LGA, New South Wales and Australia was identified in the strategy and policy literature review.



MDH is likely to have a positive impact on the Miranda, Sutherland Shire and St George-Sutherland SSD communities by improving and expanding the availability of private services and facilities in dental and oral health care. It is also likely to impact positively on those community groups that use public services by reducing demand on these services and associated waiting times.

### **Basic and low level specialist services**

In terms of provision of basic and low level specialist dental and oral health services, MDH is likely to contribute to improving access to these services within Miranda and, therefore, have a positive social impact on the Miranda general community.

### **Medium level specialist services**

MDH is also likely to have a positive impact on the Miranda and Sutherland Shire communities by improving the access to medium level dental and oral health specialist services, such as periodontic and endodontic services, in these catchment areas.

### **High level specialist services**

Currently there are only a very small number of dental facilities in the south of Sydney that are equipped to provide high level specialist dental and oral health services. Such limited offer, especially combined with significant waiting periods for some specialist services offered by public dental facilities, demonstrates a shortage for these types of services. Therefore, the positive social impact of the proposed MDH is likely to occur for those within the Miranda, Sutherland Shire and St George-Sutherland SSD catchment areas who might need access to such services. This is due to an increase in availability of high level specialist dental and oral health services. Additionally, MDH could potentially attract clients from across the Sydney GMA for these type of services.

### **Special needs people services**

There are very few dental hospitals that offer dental and oral health services for people with special needs in the Sydney GMA (see Section 4.3 *Analysis of existing facilities*). People with special needs, such as young children with autism, need access to dental services; however, many dentists are not equipped to handle special needs patients. Currently Gentle Dental Care receives many referrals from hospitals and other dentists to care for special needs cases. MDH will offer all dental care and specialist services in-house, which are seen as being very important to this population group.

Services that will be offered by MDH are very likely to have significant positive social impact on people with special needs in the identified catchment areas and wider Sydney GMA. When operational, MDH will be able to offer basic, low level specialist, medium level specialist and high level specialist dental and oral health services to patients with special needs.

## Older people services

The *Sutherland Shire Aging Strategy* stresses that existing dental services are a major concern for older residents in the shire due to the lack of available and affordable dental services.

The ageing population trend is expected to continue in all three catchment areas over the forecasting period. The share of resident population aged above 65 years in the SSD is projected to increase by five percent from 2006 to 2036. On average, it may suggest a possible decline in per capita demand for dental services, given that the edentulism rate is much higher in the older age group than the younger ones. However, the rate of decline in the edentulism rate has historically far exceeded the rate of shift in the age structure. Therefore, the dentate population is expected to increase at a greater rate than the general population as a whole (Spencer et al 2003).

Given an expected ageing in population, the needs for this community group for dental and oral health facilities is likely to increase in Miranda, Sutherland LGA and St George-Sutherland SSD. If the MDH development occurs, the older resident population is likely to have a greater availability of choice and complexity of dental and oral health services and facilities that can be offered to them in the catchment areas. The more easily available dental and oral health care services for the ageing population that will be offered by MDH are likely to impact positively on this population group as well as their family members.

## Integrated (one-stop) services within one facility

MDH is planned as a world's best practice dental care hospital that could provide one-stop professional dental and oral health care services. Gentle Dental Care have worked with the Life Time Care and Support Association (LTCSA) which provides schemes for treatment to people severely injured in motor accidents, especially those with spinal cord injuries, brain damage and vision impairment. The dental hospital in Miranda will also be fully equipped to handle patients with such physical disabilities.

Currently there are only a few dental hospitals operating in the Sydney GMA that provide integrated (one-stop) specialist dental and oral health services within one facility. When operational, MDH will significantly increase the offer for this type of services and, thus, is likely to have a positive social impact on people who may require them in Miranda, Sutherland Shire and St George-Sutherland SSD.

## Preventative dental and oral health care

As described in Section 5.3 *Impact on financial accessibility of dental and oral health services*, MDH will participate in the *Medicare Teen Dental Plan* and will provide preventative services for young adults (up to 16 year old). This is likely to have a positive social impact on this population group in the catchment areas.

As part of the MDH marketing program, free educational seminars to target audiences will be held once a week. Educational seminars will cover the benefits of dental implants for the elderly and the benefits of infant oral hygiene for pregnant women. MDH nursing staff will also have regular visits

to pre-schools and provide free educational presentations on the benefits of good early childhood oral hygiene for children. These services are currently in place at the existing Liverpool and Tahmorr Gentle Dental Care centres and are likely to positively impact the elderly and families with children.

### 5.3 Impact on financial accessibility of dental and oral health services

MDH will be a private dental hospital that will provide specialised dental health care services and a higher level of amenity for patients. This section looks at financial accessibility of these services for different community groups.

MDH has the potential to meet the needs of higher income households who are able to afford the higher level amenity and care that will be provided at MDH. The baseline social profiling showed that the median individual and household income for Miranda, Sutherland Shire and St George – Sutherland SSD is higher than the median individual and household income for Sydney SD, reflecting the relative affluence of the population in the catchment areas. Among the SSD, Sutherland LGA has the highest individual and household median income, indicating that the other LGAs to the north are less affluent than Sutherland. Residents in Miranda also have a lower median individual and household income than the LGA average.

Sutherland Shire is recognised as being in the highest socio-economic quintile in the St George–Sutherland SSD in terms of relative disadvantage indicators (Health NSW 2006).

Low income earners (weekly income below \$399) also form a significant proportion of the population in three catchment areas. The baseline social profiling exercise showed that the proportion of people earning lower incomes living in Miranda is 37 percent, 34 percent in the Sutherland LGA and 38 percent in the St George–Sutherland SSD. It needs to be noted, however, that these figures include people working part time or in casual employment, who may choose or be able to work full time.

The demand for dental care in the low income and socio-economically disadvantaged (no insurance, lower incomes, less education) community groups in the catchment areas can be demonstrated by the number of people on public oral health waiting lists. As of September 2010, of all people (children and adults) registered on public oral health services waiting lists in NSW, 9.4 percent were registered in the South Eastern Sydney and Illawarra AHS (Health NSW 2010). This AHS had the third largest number of adults and children registered on public oral health waiting lists after the Sydney South West AHS (33.4 percent of all registered) and Sydney West AHS (17.6 percent).

The proposed dental hospital in Miranda is likely to have a positive impact on the low income and socio-economically disadvantaged community groups in the catchment areas in a number of ways as discussed in sections below. Also, meeting the demand of higher income households through provision of additional services by MDH will potentially reduce the strain on demand for dental and oral health services in the region.

**Private services**

There is a high proportion of high income earners (weekly income above \$1000) in all catchment areas – Miranda (20 percent), Sutherland LGA (27 percent) and St George–Sutherland SSD (22 percent). These high income earners are potentially more likely to have the means to patronise the services offered at the proposed private dental hospital. This implies that dental and oral health services offered by MDH are likely to be financially accessible to this population group.

**Pro bono services**

MDH will provide pro bono services that are likely to have a positive impact on the low income and socio-economically disadvantaged community groups in the Miranda and Sutherland catchment areas. It is planned that all MDH employees will be required to work allocated time per month pro bono for low income and socio-economically disadvantaged people. This will account for the equivalent of two chair days per month of the MDH facilities and staff for these population groups.

Additionally, MDH is planned to be an educational facility and will provide training for undergraduate and postgraduate students. Teaching clinics are planned to be held monthly and for three attendees at a time. MDH will provide lecture rooms and observation of surgeries to fee paying undergraduates for training days at least once a month. Fees collected from this program will enable MDH to provide free surgical procedures for low income and socio-economically disadvantaged patients and, therefore, will have a positive social impact on these community groups in the catchment areas.

**Reduced cost services**

MDH plans to employ dental therapists in place of dental practitioners to provide basic dental surgeries for children up to 16 years of age. This will allow reducing basic dental care costs by about one third, which will potentially have a positive impact on families with children in Miranda, Sutherland Shire and the St George-Sutherland SSD.

**Public/private services**

The existing Gentle Dental Care centres, as well as proposed MDH, participate in the Medicare Teen Dental Plan. Under the plan the centres provide preventative services for young adults. This program was initiated by the Australian Government and aims to help with the cost of an annual preventative dental check for young adults to make it more affordable for eligible families. It is, therefore, expected that families with children aged up to 16 in the catchment areas will be positively impacted due to reduction in costs covered by the Medicare Teen Dental Plan.

The proposed dental hospital in Miranda will participate in the Medicare Chronic Disease Dental Scheme. Both existing Gentle Dental Care centres in Liverpool and Tahmorr currently participate in the scheme. Under the Medicare Chronic Disease Dental Scheme, Medicare benefits are available for most services provided by a dentist, dental specialist or dental prosthetist in private dental surgeries. The benefits are available for people with chronic conditions and complex care needs, on referral from a GP. Eligible patients can access up to \$4250 in Medicare benefits for dental services

over two consecutive calendar years. Thus, the proposed MDH activities will potentially have a positive social impact on people with a chronic medical condition and complex care needs in the catchment areas.

### Community services

MDH will provide free educational seminars to the elderly and pregnant women as part of its marketing program. Free educational presentations on preventative dental and oral health care for children will be conducted by MDH nursing staff during visits to pre-schools. These community services will be free of charge and are likely to positively impact the low income and socio-economically disadvantaged community groups, especially among the elderly and families with children.

## 5.4 Impact on physical accessibility of dental and oral health services

The *Draft South Subregional Strategy* (Department of Planning NSW 2007) encourages the use of more sustainable and healthy transport options through increased service delivery in accessible centres. In line with the objectives of the *Draft South Subregional Strategy*, the proposed dental hospital is located in the centre of Miranda, in close proximity to Westfield Miranda and Miranda railway station.

The site is very well located in relation to access by public transport. The site is identified as having a high accessibility index value according to the Sutherland Shire Local Environmental Plan (SSLEP) 2006 Accessibility Index maps<sup>1</sup>, which means the site has good access to transport infrastructure services and commercial/retail centres.

Good access to the site is likely to provide positive social impact on the MDH staff and potential patients. This is particularly relevant to people without private motor vehicles who will rely on other forms of transport. The analysis of demographic data for this study showed that Miranda has the lowest car ownership of the three identified catchment areas as well as the fewest cars per household (13 percent of households without a motor vehicle), followed by the St George-Sutherland SSD catchment area (11 percent) and Sutherland LGA catchment area (8 percent).

Currently 12 percent of people travelling to work in Sutherland LGA chose sustainable modes of travel such as public transport, walking or cycling. Capacity of MDH to meet the demand for a large range of dental and oral health services will likely reduce the need for people within three catchment areas to travel further due to increased locally available options for dental and oral health care. Additionally, most of the employment opportunities associated with MDH are able to be taken up by residents within Miranda, Sutherland LGA and St George-Sutherland SSD (see Section 5.6 *Impact on employment*). It is then likely that those working for MDH will not need to travel

<sup>1</sup> The Sutherland Shire Local Environmental Plan (SSLEP) 2006 Accessibility Index maps indicate the level of accessibility by walking and public transport for each parcel of land in the Sutherland Shire.

further to work as they will be based locally. The location of MDH also provides for generation of new jobs that are near transport and services. This has the potential to result in reduced passenger vehicle kilometres travelled (VKT) per year per capita which in turn will have social impacts associated with travel time savings, such as:

- reduced travel time (this may provide greater time for social and family activities)
- reduced vehicle operating costs (impact on financial accessibility)
- reduced vehicle accidents (impact on safety)
- reduced vehicle congestion (impact on community health and wellbeing)
- reduced greenhouse gas emissions and other pollutants such as noise (impact on community health and wellbeing)
- greater physical activity of the impacted community groups (impact on community health and wellbeing).

The development of MDH will support government investments in trains and buses in Sutherland LGA, which will also have a positive impact on greater physical accessibility of MDH services as well as greater general accessibility. Potential transport mode shifts in favour of public transport as a result of improved public transport accessibility can also divert private resources from non-productive car ownership and parking provisions to more productive investments, leading to additional benefits to the community.

The baseline social profiling showed that, in general, people in the catchment areas have very high mobility. In 2006, 87 percent of households in Miranda, 92 percent of households in Sutherland LGA and 89 percent of households in St George-Sutherland SSD owned one or more motor vehicles. These figures are higher than the Sydney Statistical Division (SD) where only 83 percent of households owned a private motor vehicle. The high proportion of vehicle ownership and high mobility of people in the catchment areas indicates the ability to access services such as the proposed dental hospital.

## 5.5 Impact on employment

In 2006, the majority of residents in the catchment areas were employed in skilled trades, transport and manufacturing; with smaller numbers being employed as professionals and service workers (see Section 3.2 of this study). By creating more jobs in health care and social assistance, MDH has the potential to further increase employment opportunities offered to the residents of Miranda and Sutherland LGA and contribute to further diversification of employment within these catchment areas.

MDH will generate both temporary and permanent employment during the construction and operational stages of the project. In the operational stage, it is anticipated that the proposed dental hospital will accommodate approximately 88 full-time employees comprising:

- 28 doctors
- 37 nurses
- 21 admin/support staff
- two retail shop staff.

Most of the employment opportunities associated with MDH will be able to be taken up by local residents. This potentially can lead to additional positive social impacts as local employment options will provide an opportunity for decreasing journey to work times, and, therefore, maximising leisure and discretionary time for the employees.

### **Employment during construction**

MDH will create temporary employment up to 12 months in construction related jobs during the construction stage. In 2006, 436 people or 13 percent of the Miranda working population were employed in construction. It is, therefore, likely that construction workers will be outsourced locally from Miranda and Sutherland Shire. It is also likely that MDH will have a positive social impact on people from Sutherland Shire employed in construction related industries by providing employment in these industries.

### **Dental practitioners**

According to the *Profile of the Dentist Workforce in NSW* (Health NSW 2008) 26.8 percent of people working in dentistry<sup>2</sup> in NSW worked in the South Eastern Sydney Illawarra Area Health Service (AHS)<sup>3</sup> in 2008. This was the highest concentration of dental practitioners for all AHS in NSW followed by the Northern Sydney Central Coast AHS (20.3 percent) and with the lowest concentration of dental practitioners being with the Greater Western AHS (2.4 percent). It is, however, important to note that despite this relatively high concentration of dental practitioners in the area when compared to other areas, both Sutherland LGA and the broader St George-Sutherland SSD have been experiencing a shortage of dental services. In 2006, there was a 34.5 percent shortage of dentists in the LGA as well as a 30 percent shortage in the SSD (see Section 4.2 *Dental and oral health facilities and services audit*).

It is likely that those dental practitioners who already operate within the South Eastern Sydney Illawarra AHS are more likely to be impacted by MDH through the additional employment created for 28 dental practitioners.

### **Other dental and oral health workers**

A cosmetic surgeon, a sole practitioner, currently operates on the first floor of existing facility. Should MDH proceed there is a potential negative social impact associated with this person losing his or her job.

In the operational stage, MDH will generate additional employment for dental and oral health workers and it is planned that 37 nurses will be employed by the dental hospital. In 2006, 126 Miranda residents, or 4 percent of the entire workforce, were employed in health care and social

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<sup>2</sup> Main job.

<sup>3</sup> Each Area Health Service is made up of a number of statistical local areas or local government areas. The South Eastern and Illawarra AHS covers Botany Bay, Hurstville, Kiama, Kogarah, Randwick, Rockdale, Shellharbour, Shoalhaven, Sutherland Shire, Sydney (part), Waverley, Wollongong, Wollahra.

assistance. The figure was 3 percent for Sutherland LGA and 4 percent for the St George-Sutherland Statistical Subdivision (ABS 2006). In 2008, health and social services was the second largest industry sector employing 6500 people in Sutherland LGA (BTS 2008). Health and health support professionals and clerical and administration workers took approximately 5 percent of all jobs in Miranda in 2009 (BTS 2009).

The above figures indicate that there have been more jobs offered in health care and social assistance in Miranda and Sutherland Shire than number of residents employed in this sector. Thus, a positive social impact associated with increased employment offered by MDH for this type of workers may not be significant.

### **Administrative/support services and retail workers**

This type of employment currently exists on the site, within an existing bottle shop and liquor store (employing up to six people). Should MDH proceed there is a potential negative social impact associated with job losses for the existing bottle shop staff.

When fully operational, MDH will employ 21 administrative and support staff and two retail staff. It is likely that these additional employment opportunities will be taken up by the local community of Miranda and Sutherland Shire. Thus, there is a potential positive social impact for administrative and support service and retail workers located with Sutherland LGA.

## **5.6 Impact on skills, education and research**

The need to expand the dental labour force as well as the need to prioritise dental and oral health related education and research was identified as a result of the strategy and policy review undertaken as part of this study. The proposed dental hospital in Miranda will increase educational training opportunities to students in dental and oral health related disciplines, serve as a collaboration base for dental and oral health professionals and will contribute to dental and oral health related research in Australia and internationally.

### **Dental and oral health related skills**

The *Profile of the Dentist Workforce in NSW* showed that the great majority of dentists in the private sector (95.5 percent of private dental providers) work in private rooms or being sole practitioners (Health NSW 2008). The MDH facility will create a significant base of dental and oral health practitioners working collaboratively in a single practice. MDH at full operational capacity will employ 65 dental practitioners and other dental and oral health related workers. This will facilitate collaboration and cross-learning between the staff. The location of the proposed dental hospital within Miranda town centre and close proximity to other health-related facilities will also increase such collaboration and clustering with other health professionals. This consequently will have a positive social impact on the dental practitioners and other dental and oral health workers that will be employed by MDH as well as employees of health-related businesses and facilities in Miranda town centre.



Postgraduate students from across the Sydney GMA area are also likely to be positively impacted by the MDH activities. Teaching clinics organised within the MDH facilities on a monthly basis will allow for practice by postgraduate students in dental surgeries.

### **Dental and oral health related educational training**

Monthly teaching clinics for up to three trainees will be provided to undergraduate and postgraduate students from across the Sydney GMA. MDH will provide lecture rooms and observation of surgeries to students at least once a month. Dental-related education and training opportunities provided by MDH are likely to impact positively on postgraduate and undergraduate students.

### **Dental and oral health related research**

MDH proposes to accommodate facilities for research purposes. The need for research in dental and oral health care has been highlighted in the literature review undertaken as part of this study. Gentle Dental Care is currently setting up research relationships with Colgate Palmolive, Charles Sturt University and Malo Clinic. Malo Clinic, based in Lisbon, Portugal, is the world's leading centre for implantology and fixed oral rehabilitation and the largest educational centre for dental professionals. The scientific research conducted at MDH will have the potential to contribute in the development of new materials and techniques aimed at improving dental and oral health services. This has the potential for a positive social impact on the wider general community in Australia and overseas by contributing towards dental and oral health research in Australia and internationally.

## **5.7 Impact on traffic and car parking**

Increased vehicle movement at the site during the construction and operational stages of the MDH may impact the Miranda town centre residents, visitors and businesses located in the area. Traffic impacts have been investigated in a separate study. The *Draft Transport and Accessibility Study* by Traffix Pty Ltd addresses the traffic, transport and parking issues and provides the traffic and parking assessment of the MDH site. The report concludes that 'the proposed use of the site as a dental hospital is a moderate traffic-generating use and the assessment undertaken has demonstrated that it is supportable on traffic/transport planning grounds'. The level of impact associated with traffic and car parking is dependent on the implementation of mitigation measures recommended in this study.

## **5.8 Impact on safety**

Increased potential for impacts on the safety of Miranda town centre residents and visitors as well as businesses located in the area may be associated with increased vehicle movement at the site and construction activity during the construction period. The assessment of these effects relating to safety has been undertaken by Traffix in the *Draft Transport and Accessibility Study*.

Crime and safety appears to be less of an issue in Sutherland LGA with the majority of the shire area having a low-ratio<sup>4</sup> of the rate of incidents compared with the overall crime statistics for NSW. Miranda, did however have a mid-ratio of the rate of incidents compared with NSW rates (Bureau of Crime Statistics and Research NSW 2010). During the operational stage, the proposed intensification of the MDH site is likely to provide for positive impacts in terms of crime and safety to MDH patients, employees as well as Miranda Town Centre residents and visitors. More people visiting the dental hospital, including 88 proposed staff in addition to patients, may equate with more people on Kiora Road, Urunga Parade and adjacent streets, which could improve passive surveillance. An associated shop/cafe is also proposed as part of the MDH development on the upper ground floor. The cafe will attract the general public, thus, likely to provide more activity and passive surveillance in the area. Such positive impacts are also likely to spread to adjoining businesses.

Additionally, increased availability of oral and dental health services offered by MDH are likely to reduce car distances travelled with a purpose of accessing these services. This means it is likely that MDH will also positively impact on road safety.

## 5.9 Impact on the amenity of the surrounding environment

The proposed site for MDH is zoned 8 *Urban Centre* under the *Sutherland Shire Local Environmental Plan* (Sutherland Shire 2006) and the objective of this zone is 'to create attractive, vibrant and safe establishments and facilities as a focus for community spirit'. Should the MDH development proceed, while the amenity of the surrounding environment is likely to change, it is likely to do so in a positive way.

In the short term, residents and businesses of adjoining properties in particular will be impacted by the construction activities on the site. The associated impacts in the construction stage of the project have been considered and assessed by the *Environmental Assessment Report* (Economia PDS 2011).

In the long term, MDH is likely to have a positive social impact associated with improved amenity on MDH potential patients and visitors, residents and businesses in adjoining to the site properties, and, to a lesser extent, overall Miranda town centre residents, visitors and businesses. It can be expected that the amenity in the location will be improved by demolition of existing aged and generally tired commercial built form and construction of a building that showcases exemplary contemporary architecture with environmentally sustainable design principles.

Geoform Design Architects have undertaken a comprehensive site analysis that is detailed in the *Architectural Design Report*. According to the report the existing public domain within the locality was described as 'low on quality, scale, articulation and visual interest'. The design for the MDH site aimed 'to specifically address and humanize the public domain, whilst creating a focal point of

<sup>4</sup> Ratios are a comparison of postcode rates per 100,000 population to the NSW rate per 100,000 population. A ratio of 1.0 indicates parity with the state rate. Low: Ratio rate 0.0 < 0.5. Mid: Ratio rate 0.5 < 2.0. High: Ratio rate 2.0 or more.

civic pride'. The *Architectural Design Report* described the proposed MDH building as 'more dynamic, fluid aesthetic' which addresses the predominant corner position as a taller form signifying a 'gateway' and also offering a counter point to the existing horizontal mass of Westfield's form. The proposed MDH building was described in the report as evoking 'a friendly, humanizing presence for the street intersection at this very busy pedestrian and transport hub'. The *Ecologically Sustainable Development Report* by Vim Sustainability also identified the proposed MDH building as being equal to or better than a Five-Star Green Star building.

In terms of impacts on the community associated with solar access, acoustic privacy, visual privacy, view loss and wind impact, these impacts were assessed as part of the environmental assessment prepared for the MDH development. Potential social negative impacts on residents and businesses from the adjacent properties can be defined as non detrimental and minimal.

Acoustic Logic assessed the impact of traffic and rail noise and vibration on the amenity of the future occupants of the proposed MDH development. The results of the investigation of vibration generated revealed, that 'the internal regenerated noise levels will comply with recommended noise level recommendations, and no additional vibration isolation treatment is needed'. In relation to construction noise emissions, a detailed assessment of noise emissions from construction activities will be undertaken at Construction Certificate Stage of the project.

## 5.10 Impact on agglomeration and clustering of health services

The development of MDH is compatible with state and regional strategic directions for development in the area. The proposed dental hospital will be located in the centre of Miranda, which is identified as a town centre in the *Draft South Subregional Strategy* and very close to a major health precinct centred on Sutherland Hospital at Miranda/Caringbah. According to the *Draft South Subregional Strategy* a long term strategic vision for the south subregion is better service delivery, including health and education, needs to be improved in the area. The draft strategy also stresses the need to better integrate corridors and centres including Miranda with key services such as health.

The close proximity of MDH to Sutherland Hospital is likely to contribute to agglomeration and clustering of health services and consequently have associated positive impacts on dental and general health professionals in Sutherland LGA. Agglomeration benefits associated with the proximity of the proposed development to other health-related businesses within Miranda town centre are also likely to have positive social impacts on health professionals in the area.

## 5.11 Conclusions

The proposed dental hospital in Miranda will offer a new a state of the art, purpose built dental hospital that could provide improved and expanded dental and oral health care services to the community in a one-stop facility. Dental and oral health services that will be offered by MDH will range from basic and low specialist services to high level specialist services, including integrated (one stop) services within one facility and services for people with special needs. MDH is very likely to impact positively on the community through meeting a demonstrated and growing demand for dental and oral health services in Miranda, Sutherland Shire, St George-Sutherland SSD as well as the Sydney metropolitan area for services for people with special needs.

The positive social impact of MDH is also linked to the hospital's capacity to meet the demand for private dental and oral health care, taking pressure off the wider public dental health care system. Additionally, MDH is likely to positively impact the low income and socio-economically disadvantaged community groups by providing pro bono and reduced cost dental and oral health services.

Increased locally available options for dental and oral health care provided by MDH will likely reduce the need for people within three catchment areas to travel further. Most of the employment opportunities associated with MDH will also likely to be taken up by residents within Miranda, Sutherland LGA and St George-Sutherland SSD. This, potentially, will lead to additional positive social impacts such as decreased journey to work times and increased leisure and discretionary time for the employees. Reduced car travel distances also mean a positive social impact on road safety.

MDH will generate both temporary and permanent employment during the construction and operational stages of the project. Positive social impacts are most likely to occur on workers in construction related industries in Sutherland Shire; dental practitioners operating within the South Eastern Sydney Illawarra AHS; other dental and oral health-related workers within Miranda and the shire; and administrative and support workers from Miranda and Sutherland LGA. Potential negative social impacts can be associated with job losses for the existing bottle shop staff and a sole cosmetic surgeon practitioner.

The proposed MDH activities are likely to have a positive impact on the dental practitioners and other dental and oral health workers that will be employed by MDH as well as employees of health-related businesses and facilities in Miranda town centre. MDH will bring dental practitioners and other dental and oral health related workers together in one facility; this has the potential to facilitate collaboration and cross-learning between staff members. Being located within Miranda town centre and close proximity to other health-related facilities will also increase collaboration and clustering with other health professionals.

Postgraduate students from across the Sydney GMA area are also likely to be positively impacted by the MDH activities due to teaching clinics organised within the MDH facilities.

There is also a potential positive social impact on the wider general community in Australia and overseas associated with scientific research that will be conducted at MDH. The scientific research

conducted at MDH could contribute to the Australian and international academic and research community with flow on benefits for the general community in Australia and overseas.

The MDH site is well accessible by walking, public transport and private transport. Increased vehicle movements at the site may, however, have a negative safety impact on the Miranda town centre residents, visitors and businesses located in the area, particularly during the construction stage.

The proposed intensification of the MDH site is likely to provide for positive social impacts on MDH patients, visitors and employees, as well as Miranda town centre residents, visitors and businesses, in terms of crime and safety due to improved passive surveillance.

## 6 Potential social impacts evaluation and mitigation measures

This section describes identified potential social impacts in terms of their likelihood to occur and magnitude on impacted community groups. The section proposes practical measures for minimising the identified negative social impacts. Monitoring and management of these impacts are also outlined.

To assess likelihood of social impacts associated with the MDH development SGS applied a 'low', 'medium' and 'high' ranking system.

The ranking system applied by SGS to assess the magnitude of social impacts of MDH on impacted community groups is outlined in Table 9.

**Table 9.** Ranking system to assess magnitude of social impacts of Miranda Dental Hospital

Rank	Impact magnitude description
0	No or minimal impact on individuals or communities
1	Impact on less than 5% of an impacted population group
2	Impact on 5-20% of an impacted population group
3	Impact on 20-50% of an impacted population group
4	Impact on more than 50% of an impacted population group

Source: SGS (2011)

The tables below summarise the possible social impacts associated with the dental hospital in Miranda that were identified in Chapter 5 of this study. The tables also show the assessed likelihood and magnitude of these impacts. Table 10 provides a summary of the potential positive social impacts and Table 11 summarises the potential negative social impacts.

**Table 10.** Potential positive social impacts

Impacts	Project stage	Impacted groups	Likelihood	Magnitude
<b>Impact on availability and capacity of dental and oral health services and facilities:</b>				
• Basic and low level specialist services	Operation	• Miranda general community	High	4
• Medium level specialist services	Operation	General community of: • Miranda • Sutherland Shire	High Medium	4 4
• High level specialist services	Operation	General community of: • Miranda • Sutherland Shire • St George-Sutherland SSD	High High Medium	4 4 4
• Special needs people services (all levels)	Operation	People with special needs within: • Miranda • Sutherland Shire • St George-Sutherland SSD	High High High	4 4 4
• Older people services	Operation	Older residents in within: • Miranda • Sutherland Shire • St George-Sutherland SSD	High High Medium	4 4 4
• Integrated (one-stop) services within one facility	Operation	General community of: • Miranda • Sutherland Shire • St George-Sutherland SSD	High High High	4 4 4
• Preventative dental and oral health care	Operation	General community of: • Miranda • Sutherland Shire	High Medium	1 1
<b>Impact on financial accessibility of dental and oral health services:</b>				
• Private services	Operation	General community of: • Miranda • Sutherland Shire • St George-Sutherland SSD	High High High	4 4 4
• Pro bono services	Operation	Low income and socio-economically disadvantaged people in: • Miranda • Sutherland Shire	High High	1 1
• Reduced cost services	Operation	Families with 0-16 children in: • Miranda • Sutherland Shire • St George-Sutherland SSD	High High Medium	3 2 2



Impacts	Project stage	Impacted groups	Likelihood	Magnitude
<ul style="list-style-type: none"> <li>Public/ private services</li> </ul>	Operation	Families with 0-16 children in: <ul style="list-style-type: none"> <li>Miranda</li> <li>Sutherland Shire</li> <li>St George-Sutherland SSD</li> </ul>	High High Medium	3 2 2
<ul style="list-style-type: none"> <li>Community services</li> </ul>	Operation	General community of: <ul style="list-style-type: none"> <li>Miranda</li> <li>Sutherland Shire</li> </ul>	High Medium	1 1
<b>Impact on physical accessibility of dental and oral health services:</b>				
<ul style="list-style-type: none"> <li>People with motor vehicle ownership</li> </ul>	Operation	General community of: <ul style="list-style-type: none"> <li>Miranda</li> <li>Sutherland Shire</li> <li>St George-Sutherland SSD</li> </ul>	High High High	4 4 4
<ul style="list-style-type: none"> <li>People without motor vehicle ownership</li> </ul>	Operation	General community of: <ul style="list-style-type: none"> <li>Miranda</li> <li>Sutherland Shire</li> <li>St George-Sutherland SSD</li> </ul>	High High High	2 2 2
<b>Impact on employment:</b>				
<ul style="list-style-type: none"> <li>Employment during construction</li> </ul>	Construction	Workers in construction related industries in: <ul style="list-style-type: none"> <li>Miranda</li> <li>Sutherland Shire</li> </ul>	High High	1 1
<ul style="list-style-type: none"> <li>Dental practitioner jobs</li> </ul>	Operation	Dental practitioners in: <ul style="list-style-type: none"> <li>Miranda</li> <li>Sutherland Shire</li> <li>St George-Sutherland SSD</li> </ul>	High High High	4 3 2
<ul style="list-style-type: none"> <li>Other dental and oral health jobs</li> </ul>	Operation	Other dental and oral health workers in: <ul style="list-style-type: none"> <li>Miranda</li> <li>Sutherland Shire</li> </ul>	High High	4 3
<ul style="list-style-type: none"> <li>Administrative &amp; support services jobs</li> </ul>	Operation	<ul style="list-style-type: none"> <li>Miranda admin/support workers</li> </ul>	High	1
<ul style="list-style-type: none"> <li>Retail jobs</li> </ul>	Operation	<ul style="list-style-type: none"> <li>Miranda retail workers</li> </ul>	High	1
<b>Impact on skills, education and research:</b>				
<ul style="list-style-type: none"> <li>Dental and oral health-related skills</li> </ul>	Operation	<ul style="list-style-type: none"> <li>Dental practitioners and other dental and oral health workers employed by MDH</li> <li>Employees of Miranda town centre health-related businesses</li> <li>Postgraduate students in Sydney GMA</li> </ul>	High Medium High	4 3 1

Impacts	Project stage	Impacted groups	Likelihood	Magnitude
<ul style="list-style-type: none"> <li>Dental and oral health-related educational training</li> </ul>	Operation	<ul style="list-style-type: none"> <li>Undergraduate and postgraduate students in Sydney GMA</li> </ul>	High	1
<ul style="list-style-type: none"> <li>Dental and oral health-related research</li> </ul>	Operation	<ul style="list-style-type: none"> <li>Australian and international academic and research community</li> </ul>	Medium	4
		<ul style="list-style-type: none"> <li>General community in Australia and overseas</li> </ul>	Low	4
<b>Impact on safety</b>	Operation	<ul style="list-style-type: none"> <li>MDH patients and employees</li> </ul>	Low	4
		<ul style="list-style-type: none"> <li>Miranda town centre residents, visitors and businesses</li> </ul>	Low	1
<b>Impact on the amenity of the surrounding environment</b>	Operation	<ul style="list-style-type: none"> <li>MDH patients and employees</li> </ul>	High	4
		<ul style="list-style-type: none"> <li>Miranda town centre residents, visitors and businesses</li> </ul>	High	1
<b>Impact on agglomeration and clustering of health services</b>	Operation	<ul style="list-style-type: none"> <li>MDH employees</li> </ul>	High	4
		<ul style="list-style-type: none"> <li>Sutherland Shire health professionals</li> </ul>	Medium	3

Source: SGS (2011)

Although the majority of the identified potential negative impacts in Table 11 have a 'high' likelihood to occur, most of these impacts will have magnitude '1'. This means that these impacts will be significant to only less than 5 percent of impacted population groups. Magnitude '4', or impacts on more than 50 percent of impacted population groups, was estimated for the traffic and car parking impact and the amenity of surrounding environment impact.

**Table 11.** Potential negative social impacts

Impacts	Project stage	Impacted groups	Likelihood	Magnitude
<b>Impact on employment:</b>				
<ul style="list-style-type: none"> <li>Other dental and oral health jobs</li> </ul>	Construction/ Operation	<ul style="list-style-type: none"> <li>Other dental and oral health workers in Miranda</li> </ul>	High	1
<ul style="list-style-type: none"> <li>Administrative &amp; support services jobs</li> </ul>	Construction/ Operation	<ul style="list-style-type: none"> <li>Miranda admin/support workers</li> </ul>	High	1
<ul style="list-style-type: none"> <li>Retail jobs</li> </ul>	Construction/ Operation	<ul style="list-style-type: none"> <li>Miranda retail workers</li> </ul>	High	1
<b>Impact on traffic and car parking</b>	Construction	<ul style="list-style-type: none"> <li>Miranda town centre residents, visitors and businesses</li> </ul>	Medium	1
	Operation	<ul style="list-style-type: none"> <li>Miranda town centre residents, visitors and businesses</li> </ul>	Low	1
<b>Impact on safety</b>	Construction	<ul style="list-style-type: none"> <li>Miranda town centre residents, visitors and businesses</li> </ul>	Low	1
<b>Impact on the amenity of the surrounding environment</b>	Construction	<ul style="list-style-type: none"> <li>Residents and businesses of adjoining properties</li> </ul>	High	4
		<ul style="list-style-type: none"> <li>Miranda town centre residents, visitors and businesses</li> </ul>	High	1

Source: SGS (2011)

Given the positive nature of a majority of identified impacts expected with the development of MDH, mitigation measures are proposed only to address potential negative social impacts.

### Potential impact on employment

Potential negative social impacts associated with job losses for the currently operational cosmetic surgeon and the existing bottle shop staff were identified. In order to minimise these social impacts, possibilities for employment of these people by MDH should be explored.

### Potential impact on traffic and car parking

The traffic, transport and parking were assessed in the *Draft Transport and Accessibility Study* by Traffix, which concluded that the use of the site as a dental hospital is supportable on traffic/transport planning grounds. The level of impact associated with traffic and car parking is dependent on the implementation of mitigation measures recommended in this study.

### Potential impact on safety

A potential negative social impact on the safety of Miranda town centre residents and visitors as well as businesses that may occur in the short-term is associated with increased vehicle movement at the site and construction activity during the construction period. This impact has been

considered and addressed as part of the mitigation recommendations for the impact on traffic and car parking.

### **Potential impact on the amenity of the surrounding environment**

A potential negative social impact on the amenity of the surrounding environment is likely to occur during the construction stage of the project. Residents and businesses of adjoining properties are most likely to be impacted. The assessment of effects relating to visual impacts, noise and overshadowing during both the construction and operational stages of the project have been investigated in separate studies, including the *Environmental Assessment Report* prepared by Economia PDS. Identified risks relating to any associated impacts will need to be mitigated in accordance with the recommendations of these studies.

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