



RANDWICK CITY COUNCIL

Randwick Education and Health Specialised Centre Discussion Paper

APPENDICES



Appendix 1 Community Profile

1. Overview

This community profile is sourced primarily from the Australian Bureau of Statistics (ABS) Census of Population and Housing (the latest available data is from the 2006 Census) and supplemented by other data sources such as the annual Journey to Work (JTW) data released by the Transport NSW and Housing NSW Rent and Sales Report.

The Randwick Education and Health Specialised Centre, or 'the Centre' is analysed here based on the three suburbs of Kensington, Kingsford and Randwick. Randwick City refers to the Randwick local government area (LGA) and comparisons with Sydney relate to the Sydney Statistical Division (SD) as defined by the ABS. Some JTW data is also used, which is based on travel zone boundaries and can more specifically define the Centre as the area including and immediately surrounding the University and Health campuses.

A summary of this Community Profile is shown in Section 3.2.

2. Population

In 2006, Randwick City's population was 122, 373. Of this, 41.2% or 50,360 residents lived in the Centre.

Randwick City is a relatively highly populated area. The northern suburbs are the most densely populated (see Figure 1), with the Centre having a population density of around 42 persons per hectare (ppha) compared to 33ppha for Randwick City. By comparison the average density for Sydney overall was 3.3 ppha while other inner Sydney councils had similar densities, ranging from 40-65 ppha.

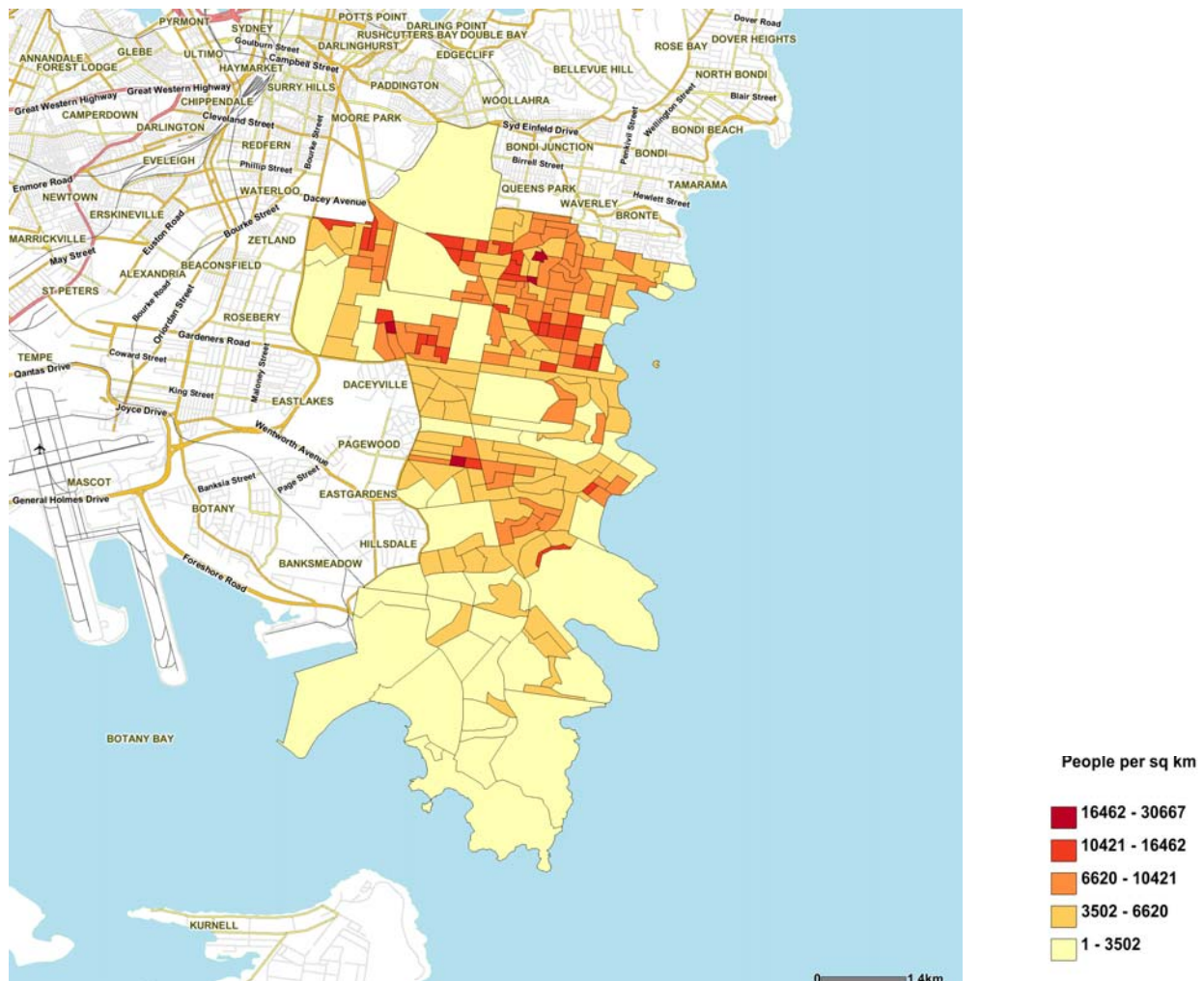


Figure 1 Population Density (ABS Census, 2006) within Randwick City

Age

A key feature of the Centre is the high proportion of young adults which can be attributed largely to the proximity of the University of NSW, but also to proximity to jobs nearby and in the CBD, the coastal lifestyle and diversity of housing opportunities. Figure 2 shows that the main concentration of young adults around the UNSW.

The proportion of people aged 18 to 24 years in the Centre in 2006 was 16.7%, similar to the overall figure for Randwick City (13.1%), yet significantly higher than the Sydney average of 9.9%. Within the Centre, the population of 18-24 years is particularly concentrated in Kensington (24.8%), followed by Kingsford (20.8%) and then Randwick (11.4%).

However, over the 10 years from 1996 to 2006, Kensington was the only suburb in the Centre where this age group increased in numbers, while the overall Centre numbers of 18-24 year olds reduced, likely to reflect housing affordability in this location and the lack of new student housing (which has subsequently increased since the 2006 Census).

The proportions in the next age categories of 25-34 years were also higher than the Sydney average (21% compared to 15.3%), while Randwick City overall was 18.8% (Figure 4).

In other age categories, the Centre had a smaller proportion of people in the younger age categories (0-17 years) (15.6%) and smaller proportions in the older age groups (60+) (15.6%) to the Sydney average (which were 23.6% and 16.7% respectively). Randwick City mirrored the Centre's lower proportion of younger ages, but was similar to the Sydney average for older persons.

Figure 3 though shows the trend over 10 years, that the numbers in the age groups are changing, showing potentially a trend to more older people (35+) and young children (under 4) likely to be families moving into the area and staying and reflecting the increasing housing costs and affordability issues in the area.

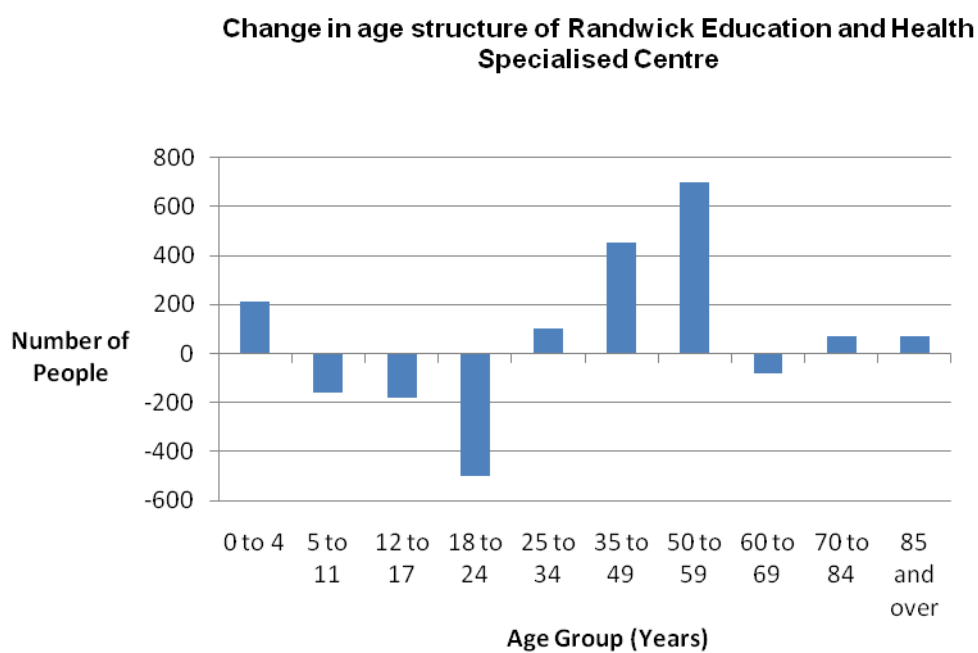


Figure 3: Change in age structure of Randwick Education and Health Specialised Centre, 1996-2006 (ABS Census, 2006).

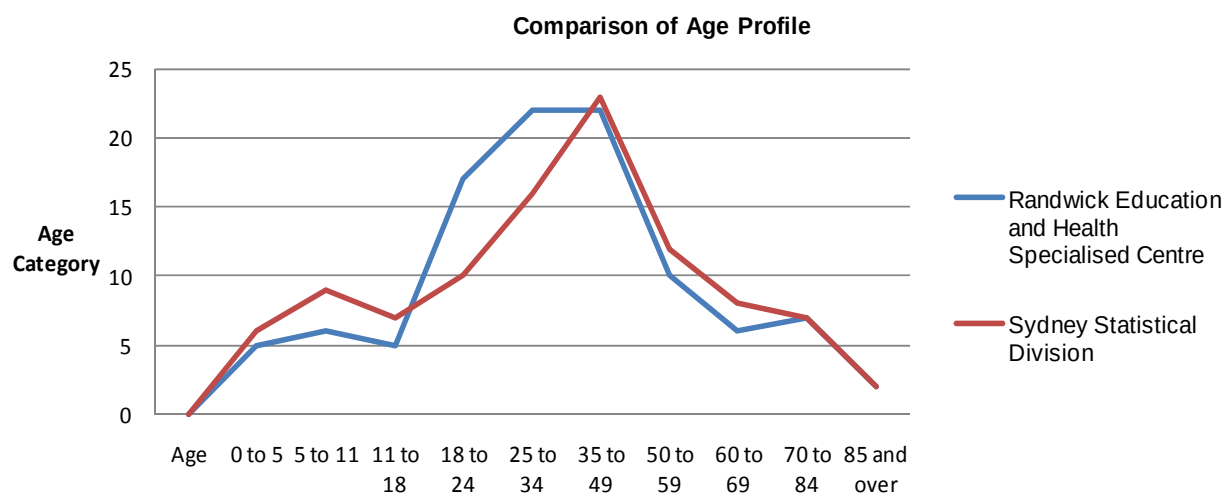


Figure 4: Age Structure of the Centre.

Education

With the presence of the UNSW and Randwick TAFE, a large proportion of Randwick City residents were attending tertiary institutions (11.8%) compared to the Sydney average of 6.9%. Within the Centre, the figure is higher again, with an average of 19.6% attending tertiary institutions. Kensington had by far the highest proportion within the Centre, with 26.1% of residents attending a tertiary institution, while Kingsford had 20.9% and Randwick 11.9%.

Figure 5 shows this significant concentration of residents attending tertiary institutions, living predominantly in and around the University of NSW and also in nearby town centres, including Maroubra Junction, and along main roads (presumably for good public transport access).

Local residents are also well qualified, with Figure 6 showing that the proportion of tertiary qualified residents was also strongly concentrated in the northern suburbs of Randwick City and within and close to the Centre.

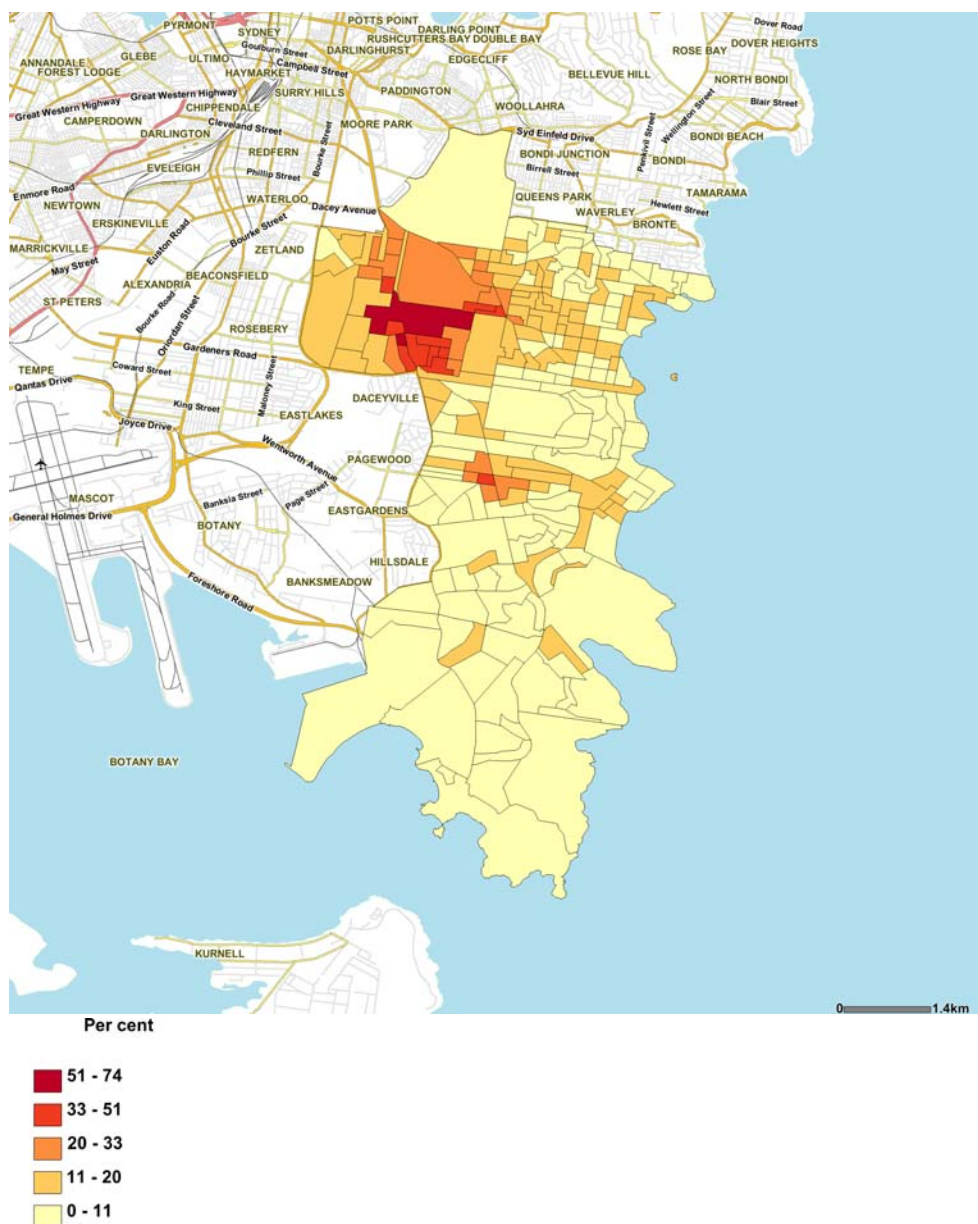


Figure 5: People attending Tertiary Institutions (Census 2006).

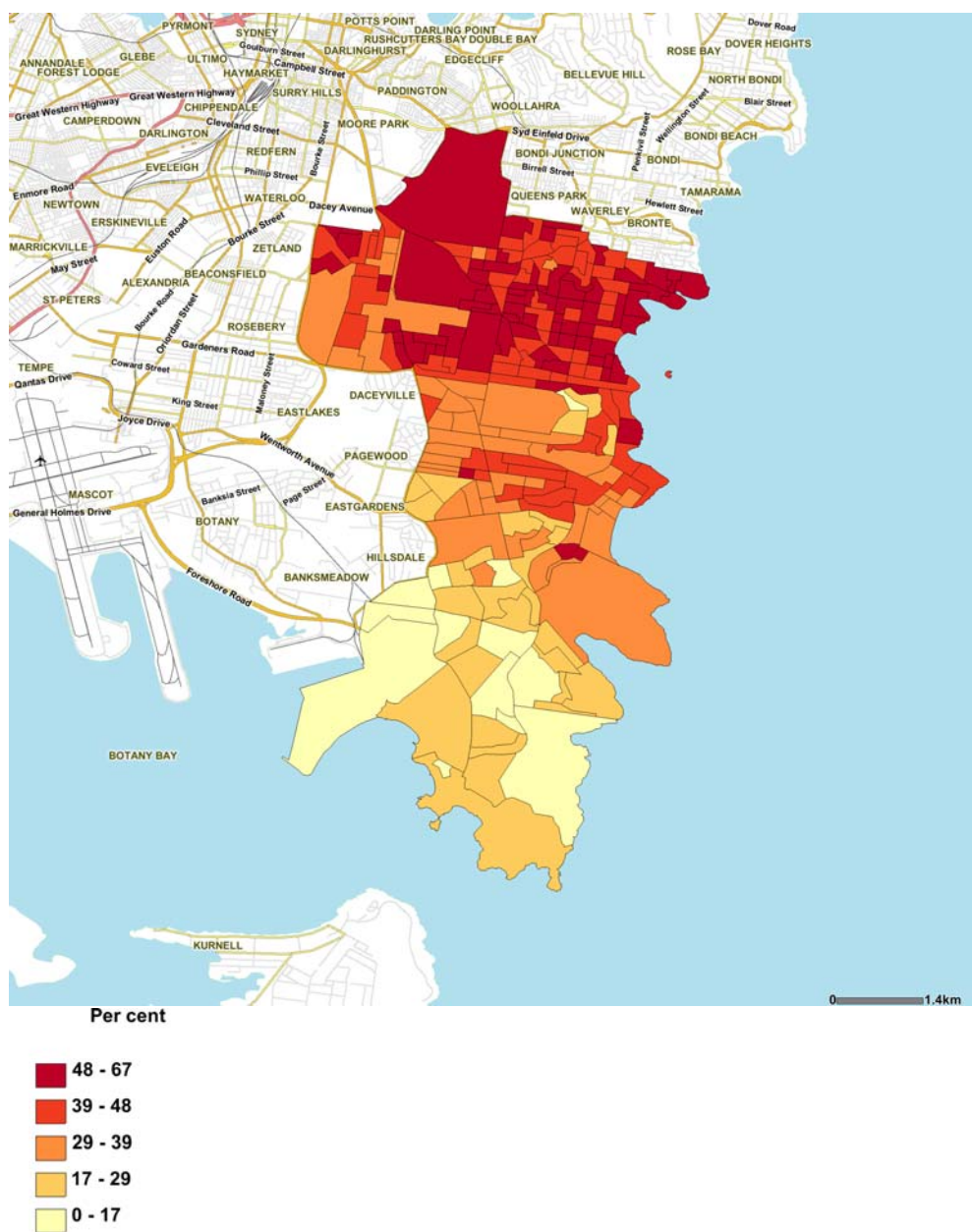


Figure 6: People in the labour force with university Qualifications (ABS Census, 2006).

Mobility

The Centre's population is highly mobile in comparison to other parts of Randwick City and the differences can be seen in Figure 7 where the more stable areas (where people had not moved address over the five years from 2001-2006) shaded red and orange and the areas with higher mobility shown light yellow.

Within the Centre, significantly, areas to the south of the UNSW in the suburbs of Kensington and Kingsford have relatively high rates of mobility. In Kingsford and Kensington the proportion of residents not living at the same address in the 5 years before the 2006 Census was 55% and 43% respectively. Within Randwick this was 50% while the average for Randwick City was 42% and for Sydney SD the figure was 37.3% (Figure 8).

This high level of transience of residents in Centre is likely to reflect the movement of students completing their studies and moving away, while other students move in. This has implications for local businesses in continually attracting and retaining new customers. It also has implications for new residents, needing to be able to easily navigate their area, feel safe and enjoy/contribute to the local community.

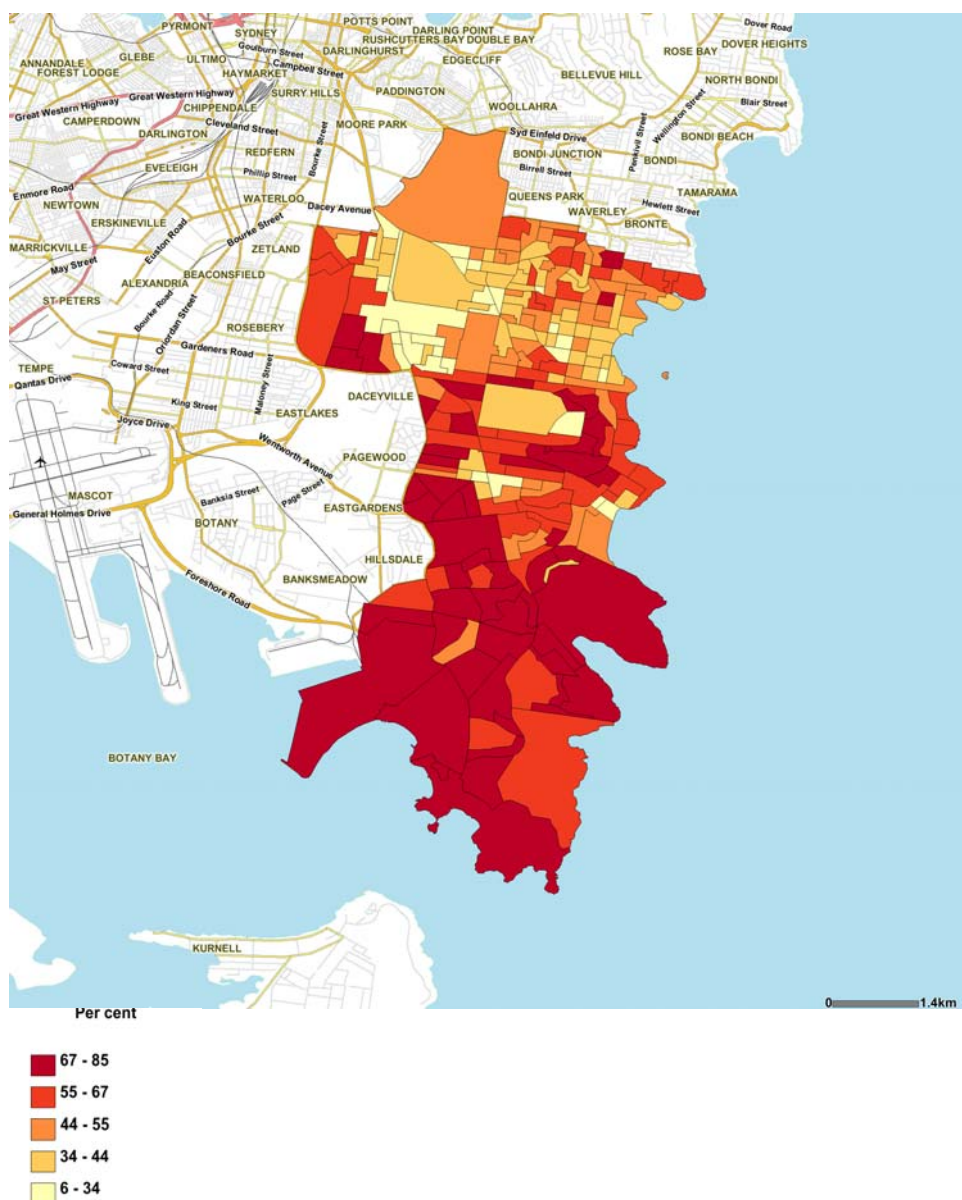


Figure 7: People living at the same address as 5 years ago (ABS Census, 2006).

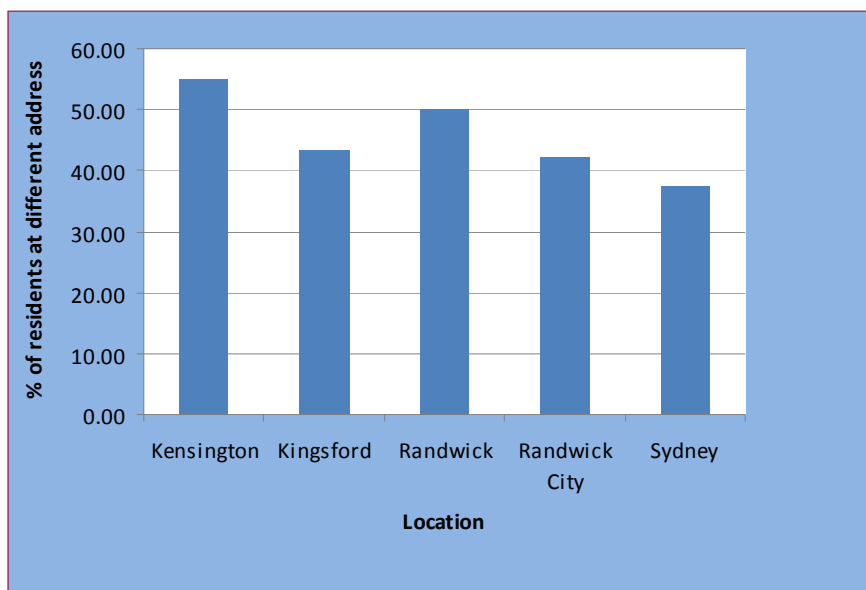


Figure 8 Proportion of residents who were at different address in 2001

Persons Born Overseas

Country of birth data is indicative of the level of cultural diversity in an area. The Centre has a significant proportion of people born overseas and since 1991 these numbers have exceeded the Sydney average. Prior to 1991, the Centre numbers were relatively low to those of Sydney. The gains are likely to be attributed largely to the desirability of living close to places of education, employment, the CBD and beaches/recreation, and to changes in government policy supporting overseas students in Australia.

In 2006, 35.8% of Randwick City residents were born overseas and 25.6% from a non-English speaking background, compared to 31.8% and 24% respectively for Sydney. In the Centre, a significant 40.9% of residents were born overseas and 30.6% from a non-English speaking background. Within the Centre, the highest proportion of overseas born were in Kingsford (47.9%), then Kensington (44.9%) and then Randwick (36.3%) (see Figure 9).

The dominant country of birth was the United Kingdom followed by New Zealand, while the dominant non-English speaking country was China, followed by Indonesia, Hong Kong, Malaysia and Greece, however this varied across suburbs. For example Kingsford had the highest concentration of Chinese with 7.1% of its population, and Randwick had the highest proportion from the UK, while Kensington equal numbers from Indonesia and China.

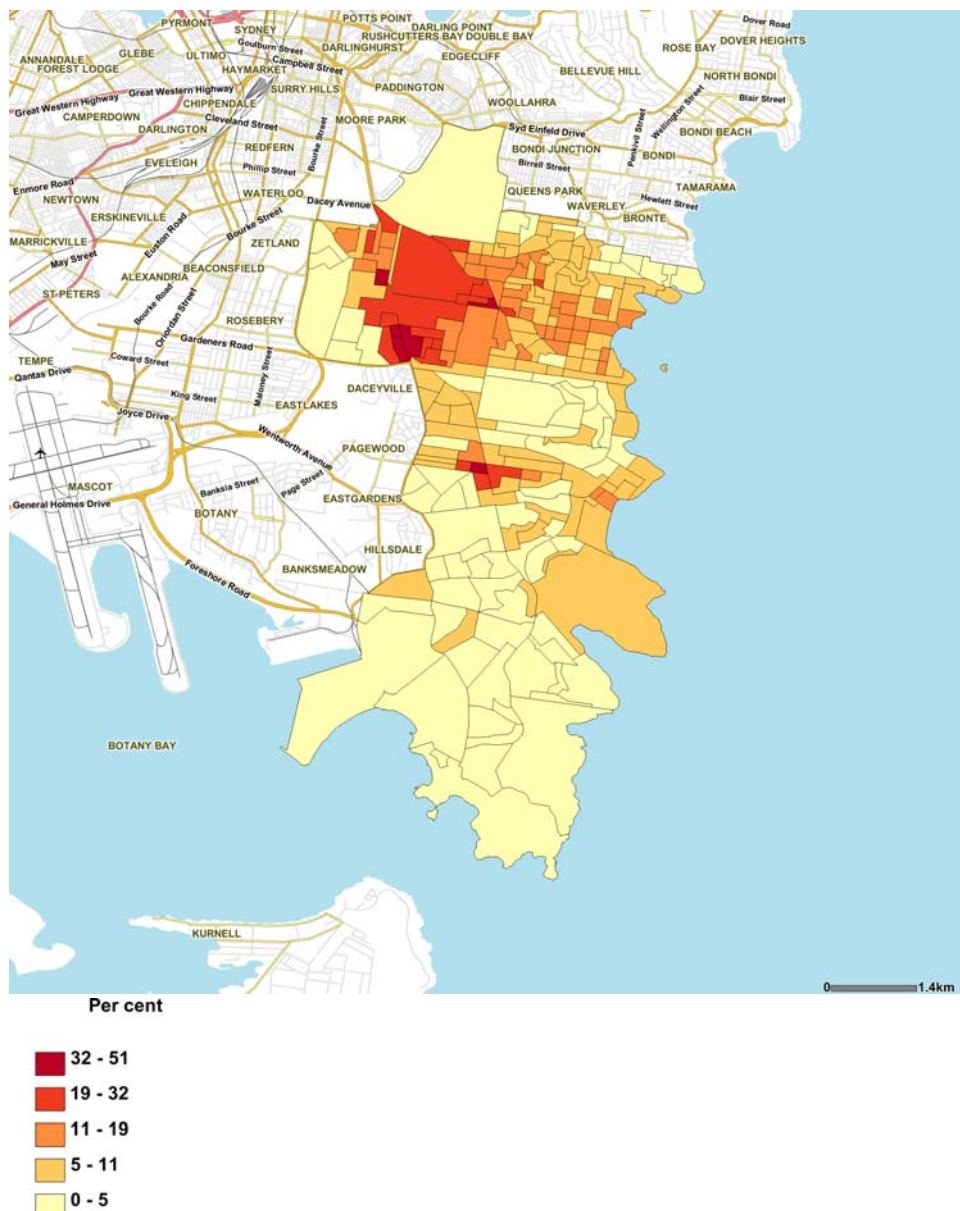


Figure 9: Persons born overseas arriving after January 2001 (ABS 2006 Census)

Income

Randwick City's generally high level of affluence is demonstrated in the 2006 data, with a larger proportion of persons earning a high income (more than \$1000 per week) (25.8%) and a smaller proportion earning low incomes (less than \$400 per week) (34.2%) compared to the Sydney average (21.7% and 38.1% respectively).

However, Randwick City showed marked variations in income levels from north to south. The northern and northern coastal suburbs of the City are generally more affluent, illustrated in Figure 11 which shows households in the highest income category of above \$2,500 per week.

The suburb of Randwick had the greatest proportion of individual high income earners (over \$1000/week) with 31.4% of the population, compared to 22.4% in Kensington and 17.9% in Kingsford, yet pockets of variation occur within these suburbs too. Randwick was the only suburb in the Centre with an increased number of high income households as well as a decrease in low income households over the period 1996 to 2006.

People on negative or nil income also showed marked variations across Randwick City and the Centre. The suburbs of Kingsford and Kensington had a much higher proportion of individuals with negative or nil income (i.e. 15.2% and 15% respectively), while Randwick had a lower proportion (7.3%), compared to Randwick City (9.1%) and Sydney (8.7%) (see Figure 10). This again is likely to reflect a high number of young people, workers and students in these suburbs.

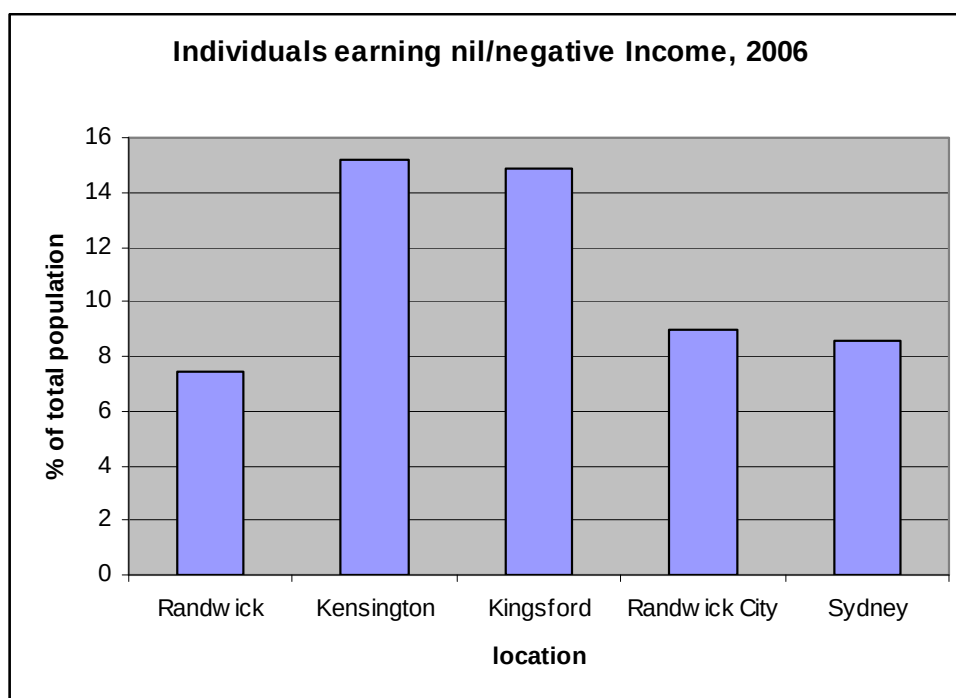


Figure 10 Individual earning nil/negative incomes

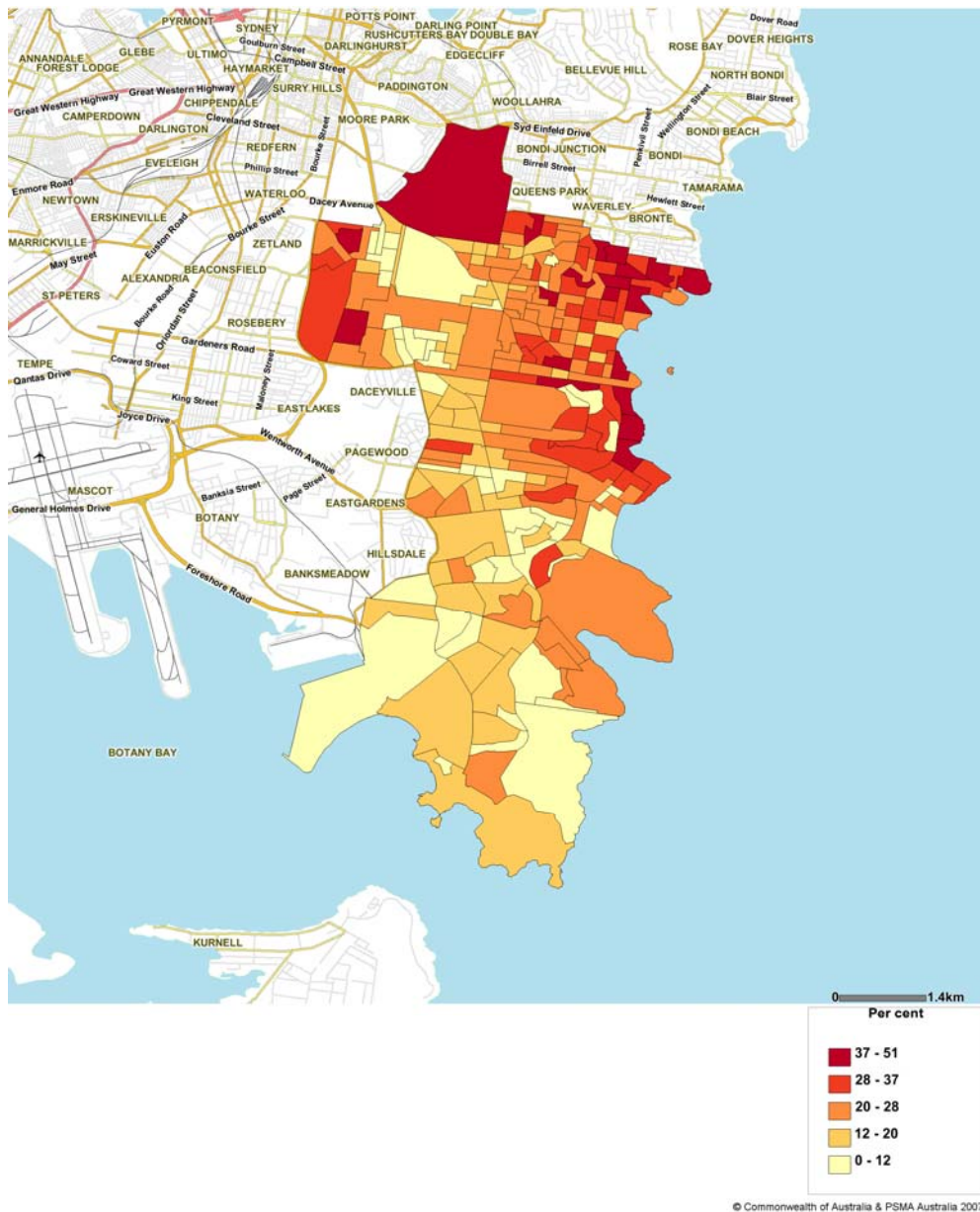


Figure 11: High Income Households above \$2500 per week (ABS Census, 2006).

Crime and Safety

Across Randwick City, trends in crime rates have declined in recent years for most offences, similar to trends occurring across Randwick City and Sydney (for details, see the Council's 'Safer Randwick City' Plan).

Nevertheless, the Centre is a busy precinct, bringing thousands of people daily for various purposes and of course, some for negative, opportunism. This underscores the importance of security and safety of people, particularly walking to and from the key institutions (which have their own security services), town centres and homes. Key safety issues and crimes experienced in the Centre, particularly with students around the UNSW, is robbery, especially when walking after dark (for items such as mobile phones and lap tops). Stealing from cars and homes is also relatively high in areas generally around the University. Council's Safer City plan includes various measures to work with the University and local businesses to reduce opportunities for crime and to increase information and awareness, especially among students.

3. Households

Household Size

Randwick City had a lower average household size of 2.35 persons per household in 2006, compared to 2.7 persons for Sydney. Variations in household composition occurred across the Centre, being lower in size in the suburb of Randwick (2.18 persons) and higher in Kingsford (2.53 persons) and Kensington (2.38 persons), illustrated in Figure 12.

Over the 10 years from 1996 to 2006, the average household size declined in both Randwick City (from 2.42 to 2.35 persons) and also in the Centre (from 2.37 to 2.31 persons). This is likely to reflect the higher number of student housing, increase in lone person households resulting from aging of the population and young adults leaving home.

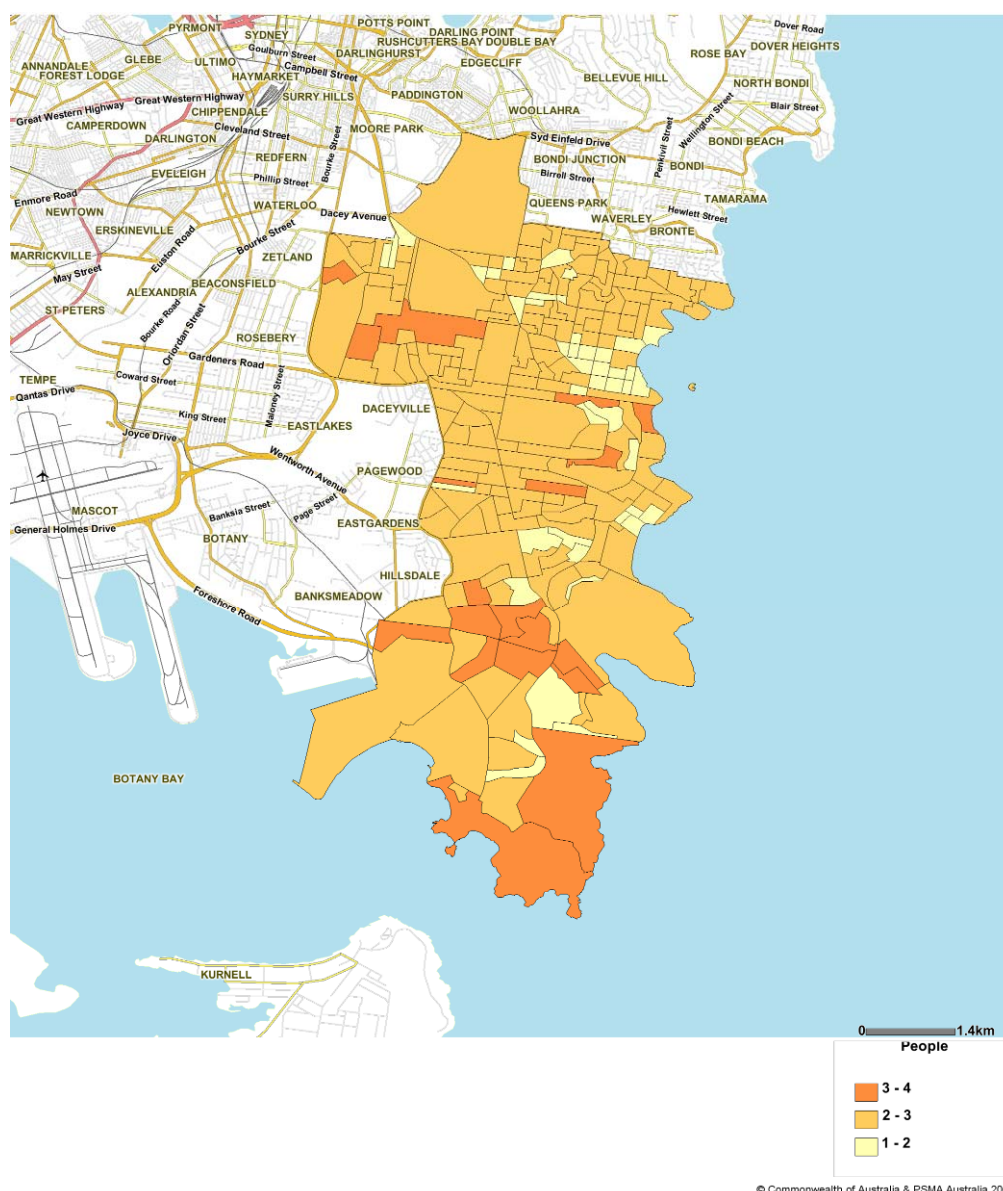


Figure 12: Number of people in a household (ABS Census, 2006).

Household Type

Not surprisingly, the household structure was also quite varied across the Centre.

Randwick City had a smaller proportion of family households (57.5% of total households) than the Sydney average (68.6%). The Centre was also lower than the Sydney average, with 55.3% family households.

Randwick City had a larger proportion of lone households (26.2%) than the Sydney average (21.8%) which also showed in the Centre, with 25.2% lone households.

Group households were also significant in the Centre. These made up 8.9% of Randwick City households and only 3.9% of Sydney's, while a substantial 12.4% in the Centre. Kensington had the highest proportion (13.2%) followed by Kingsford (12.7%), then Randwick (11.3%).

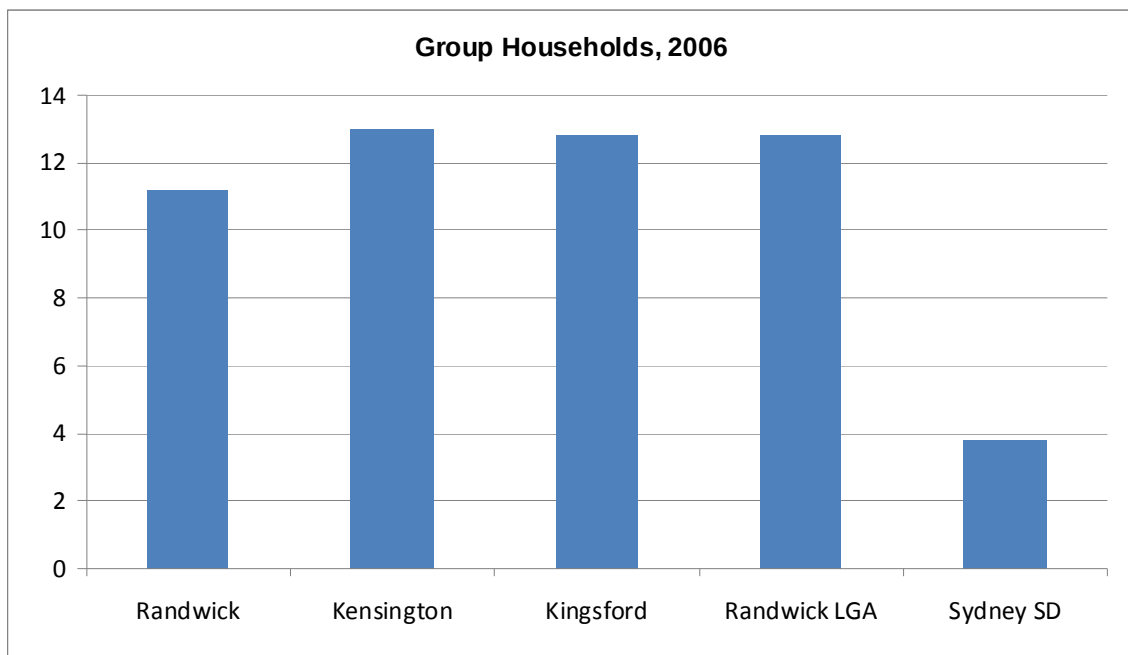


Figure 13: Number of group households by Suburb (ABS Census 2006).

Households - owners or renting

The Centre had a significantly higher proportion of rented dwellings (46.1%), as does Randwick City (42.2%), in comparison to Sydney (29.7%).

In contrast, the proportion of residents who owned or were purchasing their dwelling in the Centre was 44%, compared to 47.2% for Randwick City, both much lower than the 61.2% Sydney average.

Within the suburbs that make up the Specialised Centre (Figure 14) Kensington followed by Randwick had a considerably high proportion of rented dwellings, being 49.7% and 46.4% respectively.

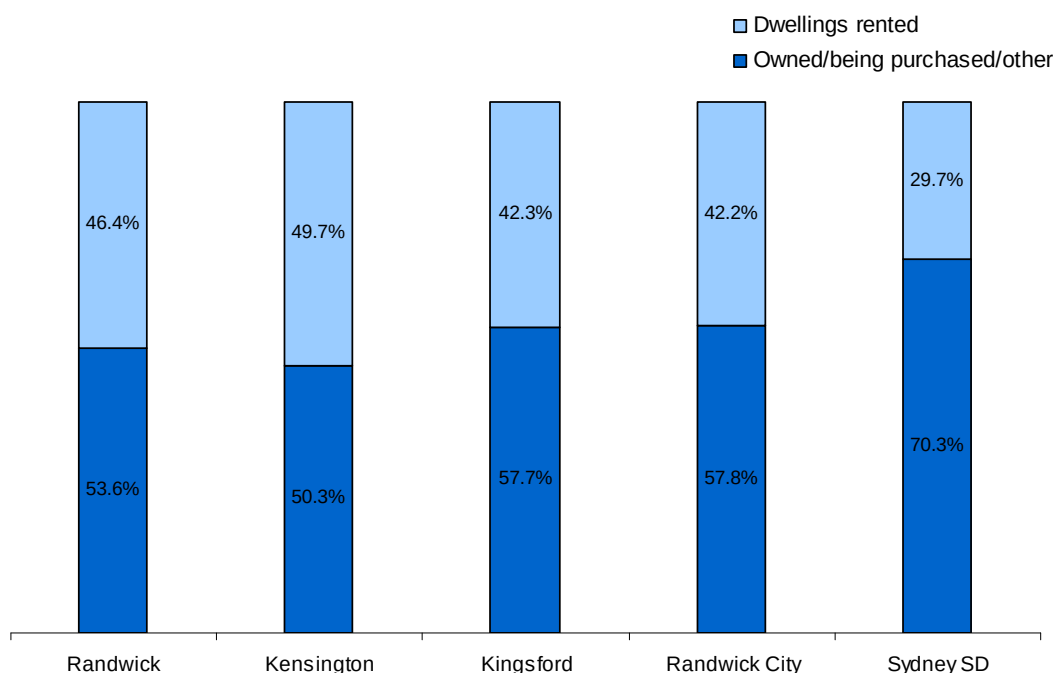


Figure 14: Percentage of total dwellings rented by suburb

Housing Affordability

Housing affordability is an issue across Randwick City and this is exacerbated by the tight vacancy rates and recent rapid increase in rents. From 2000 to 2010 median rents for a 2 bedroom unit increased from \$300/week to \$490/week. The cost of rental accommodation as at June 2010 in the Randwick LGA was above the median for Sydney for all housing types particularly separate houses as shown below in Figure 15:

	Sydney SD	Randwick City
Separate Houses (3 bedroom)	\$380	\$700
Separate House (4 bedroom)	\$530	\$1000
One bedroom flat	\$390	\$395
Two bedroom flat	\$420	\$490

Figure 15: Median rents per week Sydney and Randwick City, Housing NSW, Rent and Sales report June 2010

Average weekly rents have remained considerably higher in Randwick City than Sydney SD, particularly for separate houses and this has implications for attracting and retaining students and key workers. In relation to one bedroom flats, the postcode data shows that Kingsford has a fairly good supply of more “affordable” one-bedroom flats with a median rate of \$320/week which is below the Sydney rate of \$390/week. The smaller rental differences between Randwick City and Sydney for two bedroom flats may relate to older 2 and 3 storey walk-up flats across the LGA.

Car ownership

Given the accessible location and high levels of sustainable transport use, the Centre had relatively low rates of car ownership compared to the Sydney average. Specifically, the Centre had a larger proportion of households with no vehicle (21.4% compared to 12.6% for Sydney) and a smaller proportion of households with 2 vehicles (20.1% compared to 30.2%) and 3 vehicles or more (4.8% compared to 11.5%). The proportions did then, however, exceed the Sydney average for 1 vehicle per household (43.6% compared to 36.4%).

3. Workforce

Employment numbers and density

The workforce in Randwick City totalled 35,640 in 2006, with 13,216 working within the Centre itself (a significant 37% of the total workforce).

The Centre had an employment density of approximately 70 jobs per hectare in 2006. By comparison the City Education and Health Centre (University of Sydney and RPA) had 103 jobs/ha.

Employment types

Underpinned by the UNSW and hospitals complex, Randwick City's workforce contains a high proportion of professional (27.2%) compared to the Sydney average (21.2%).

Employment within the Centre is highest in the industries of Health Care (12.5%), Professional, Scientific and Technical (11.6%) and Education and Training (10.0%) and reflecting the large employers, the University and Health Campus and related opportunities in a range of health, research and education employment. As shown in Figure 15, these industry groups are higher than the Sydney average as is Accommodation and Food Services and financial/Insurance. Less represented in the Centre is retail trade as seen in Figure 15 as well as manufacturing, construction and wholesale trade.

Within the Centre, there are also differences in the dominant industry groups, for example, Kensington had the highest proportion of Accommodation and Food Services, Randwick had the highest proportion of Professional, Scientific and Technical personnel and Kingsford the highest proportion of health care workers.

Changes between 2001 and 2006 indicate that the health, education and finance industries are growing and manufacturing and wholesale trade are declining across Randwick City.

The suburbs of Kingsford (7.3%) and Kensington (6.5%) recorded higher unemployment rates than the Sydney average of 5.3%, reflecting the earlier statistics of high proportions on negative/nil incomes and likely to be students recently completed studies and looking for work or seeking to work while studying.

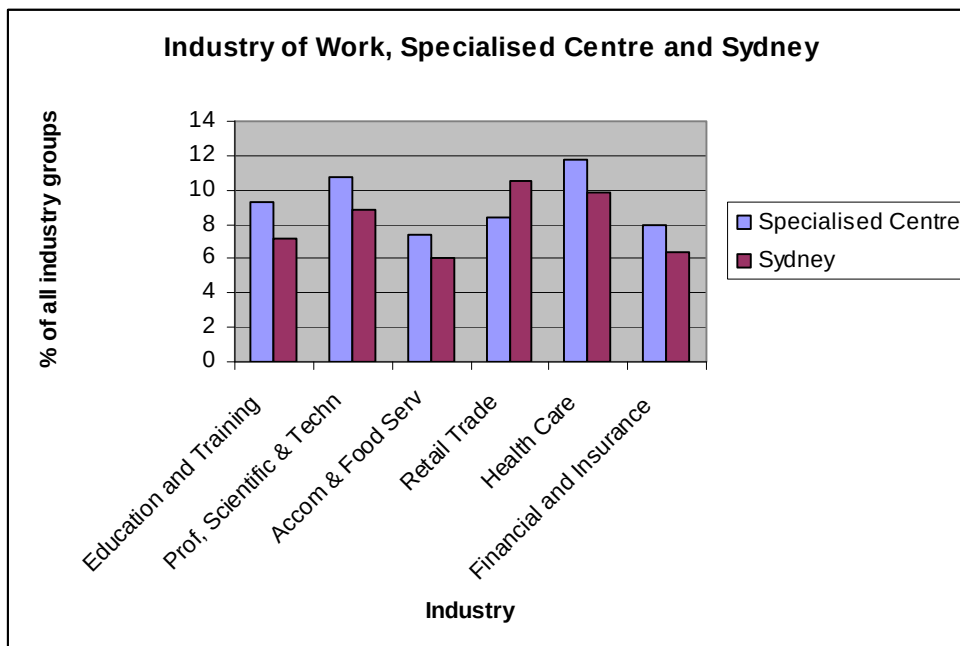


Figure 16: Industry of Employment (ABS Census, 2006)

4. Travel

Travel to Work

Randwick City had a high proportion of workers who are accessible to their workplace, and both live and work in within the City (42.2%) (Figure 17). This reflects the diverse employment opportunities available, particularly within the Centre (see Figure 16). The largest workplace location outside the LGA was the City of Sydney where close to 20,000 residents (or 33.2% of workers) commute to daily.

■ Live and work within the City
■ Live outside, but work within the City

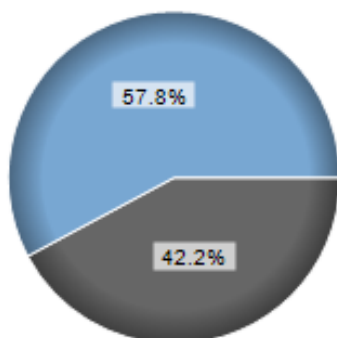


Figure 17: Residential location of workers (ABS Census, 2006).

Work trips into Randwick City

A significant 71% of the Randwick LGA's workers travel to work within Randwick City or the three adjoining council areas (City of Sydney, Botany Bay, Waverley). The proportion of workers that travelled into Randwick City and live in nearby LGA's are: Botany Bay (6.8%), Sydney (5.9%), Waverley (4.1%), and Rockdale (4%). Thus, more than 20% of the local workforce live close by and have short journeys to work.

Rank	LGA	Number	Percent (%)
1	Randwick (C)	15,030	42.2
2	Botany Bay (C)	2,425	6.8
3	Sydney (C)	2,111	5.9
4	Sutherland Shire (A)	1,852	5.2
5	Waverley (A)	1,465	4.1
6	Rockdale (C)	1,427	4.0
7	Marrickville (A)	985	2.8
8	Canterbury (C)	890	2.5
9	Woollahra (A)	782	2.2
10	Hurstville (C)	641	1.8
	Other areas	8,035	22.5
TOTAL	Total workers in Randwick City	35,643	100.0

Figure 18 Top 10 Local Government Areas of residence for workers in Randwick City Council, 2006.

Modes of travel

The Centre has a high level of sustainable transport use (public transport, walking and cycling) relative to Randwick City and the rest of Sydney.

The main modes of travel to work in 2006 were, in summary:

- The Centre - 24.8% by bus, 41.9% by car (driver/passenger), 9.8% walked, 4.6% by train, 1.5% cycled.
- Randwick City - 22.2% by bus, 49.3% by car, 6.3% walked, 3.5% by train, 1.3% cycled.
- Sydney overall – 5.4% by bus, 59% by car, 4.2% walked, 12.3% by train, 0.6% cycled.

The major differences between the mode of travel to work (Figures 19 and 20) in the Centre and Randwick City compared to Sydney were:

- A larger percentage of bus commuters (24.8% and 22.2% compared to 5.4%);
- A larger percentage of people who walked (9.8% and 6.3% compared to 4.2%);
- A smaller percentage of car commuters (41.9% and 49.3% compared to 59%), and;
- A smaller percentage of train commuters (4.6% and 3.5% compared to 12.3%).

Ministry of Transport Journey to Work data (Dec 2008), which is based on travel zone boundaries and thus more closely defining area around the University and Health campuses than does suburb data, notes that of all of metropolitan Sydney's employment centres, this Centre enjoys the highest percentage of workers walking to work (almost 15.1%), well above the Sydney average, and the highest non-car work-related travel (around 37%) of any centre outside central and North Sydney and Bondi Junction.

The areas with greatest access to public transport, in the northern part of the LGA, along Anzac Parade and around the University, Randwick Junction and the Health Campus had the highest public transport use (see Figure 21).

Most trips in Randwick City were of short duration, with the average work-related trip 27 minutes, and average non work-related trip 17 minutes. The average duration of daily travel per person in Randwick City is 84 minutes.

Of course, social/recreational purposes were also significant travel generators, with over 150,000 daily trips in all travel modes (27% of total daily trips) by residents of Randwick City.

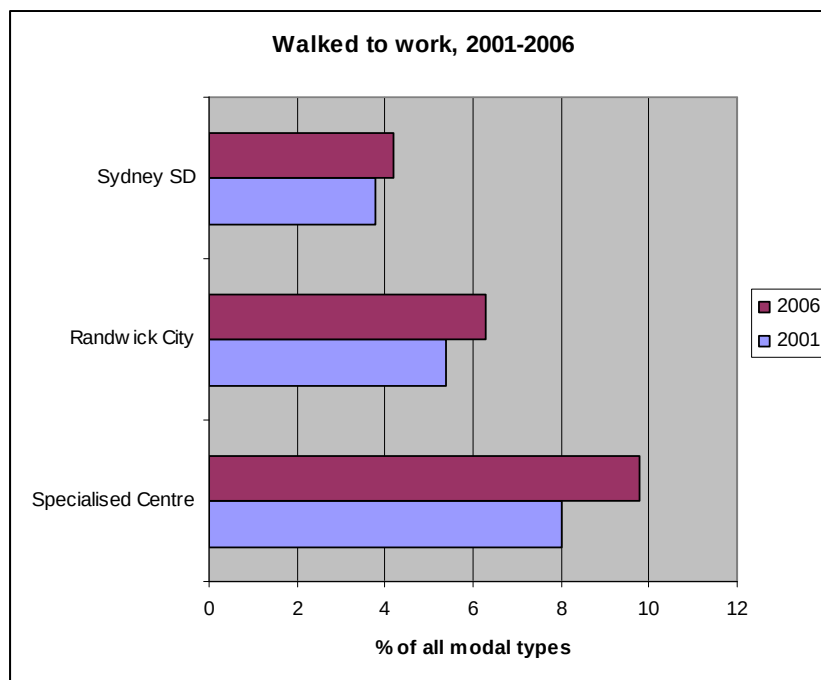


Figure 19 Proportion who walked to work, 2001&2006

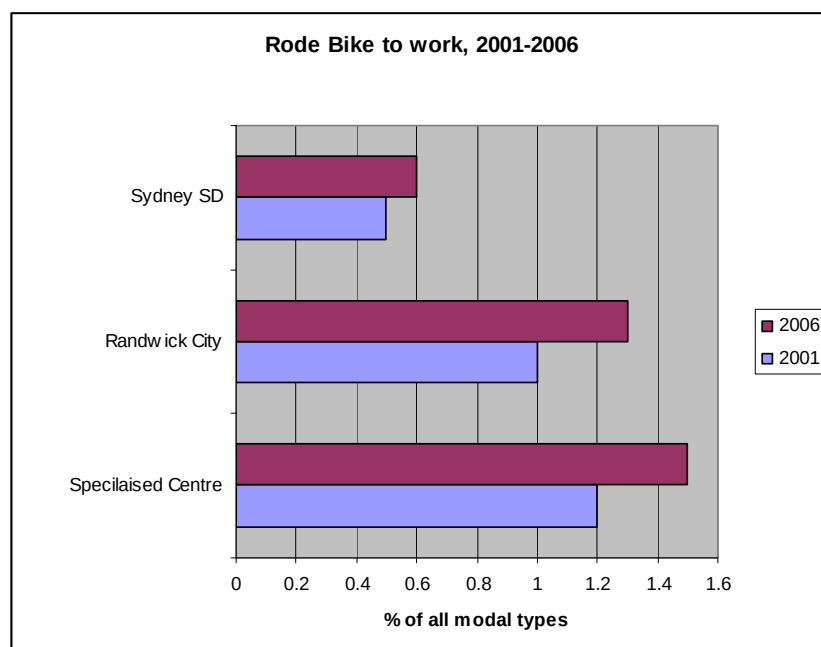


Figure 20 Proportion who ride a bike to work, 2001 & 2006

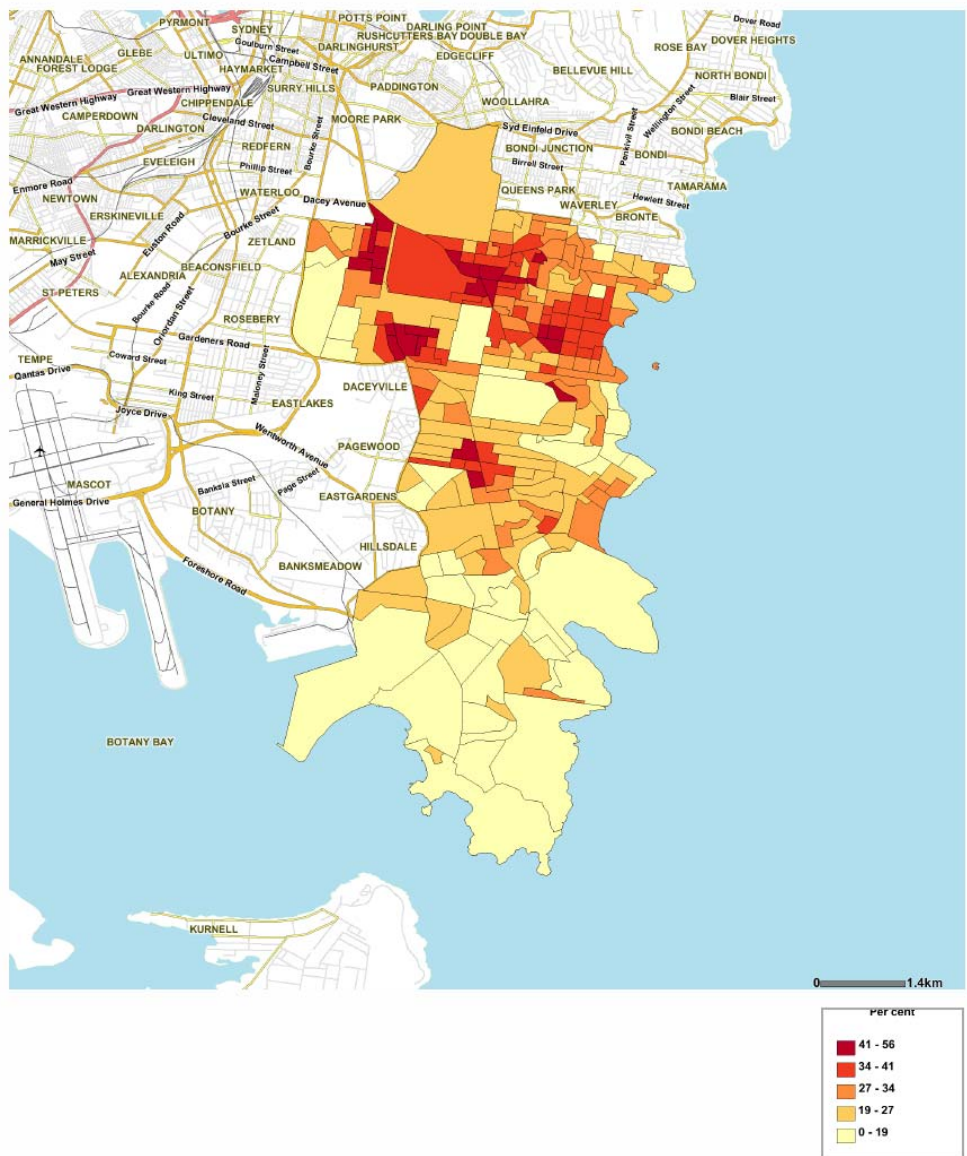


Figure 21: People who travel to work by public transport, ABS Census 2006

Travel within the Centre

The Centre's major trip attractors including the University, Hospitals, Racecourse and Town Centres that serve local, regional and metropolitan-wide catchments.

The Centre had a modal split in favour of sustainable travel when compared to Sydney, as shown in the Figure 22. Trips made by car are lower than the Sydney average whilst travel by bus, bike and walking is higher than the Sydney average.

The largest changes in the method of travel to work between 1996 and 2006 were for bus commuting (+1,032 persons) and walking (+455 persons), although car trips (as a driver) also increased during this period. These changes reflect the availability bus services to the Centre (although capacity constraints are increasingly an issue), distance to work/places of study and low number of vehicles per household (with a significant number of households with no vehicle, 21.4%, compared to 12.6% for Sydney).

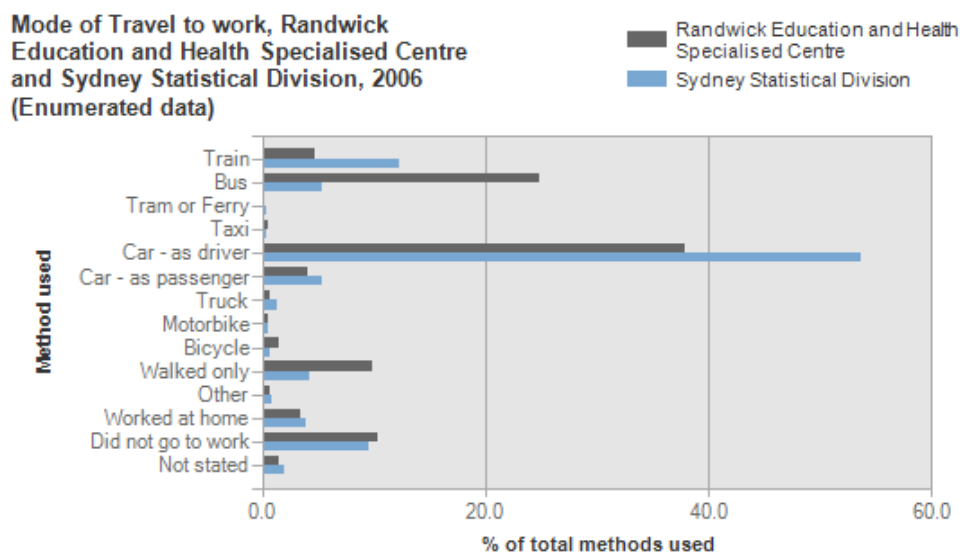


Figure 22: Mode of Travel to Work

Trips to specific attractors in the Centre – UNSW and Hospitals

Daily attendances for workers and students to the Centre exceed 43,000 people to the UNSW and around 1.3 million people visit the Health Campus for treatment every year, averaging around 3,700 people per day (excluding carers and visitors). It is estimated that around 50,000 people visit the Centre each day.

University students have a very high use of sustainable travel (public transport, walking and cycling) (75.8%), and collectively 64% of students and workers used a form of sustainable travel to the Centre. A high number of staff also walk to work, while a significant proportion drive (63%), which was much higher than the Randwick City average and also higher than the Sydney average. However, many staff live close and thus the length of these car trips is short. Given the proximity of students and staff to the University, there would appear to be opportunities for greater gains in sustainable transport. Over 32% of students live within 3km of the university.

While the details and breakdown of travel mode for hospital visits is not available, reliance on private vehicles would be higher than the University, reflecting need for patients to be accompanied by carers, lower ambulant ability and reduced ability by frail and aged persons to use public transport, and the shift-work hours of staff. Collection of data from hospital staff and visitors will have significant benefit in future planning in the Centre. Table 1 below shows the different modes of travel of staff and students and Table 2 shows the origin of trips.

	Walking	Cycling	Public Transport	Car	Total
Staff/workers	1995 (15.1%)	185 (1.4%)	2696 (20.4%)	8326 (63%)	13216
Students	5041 (16.9%)	776 (2.6%)	16794 (56.3%)	7219 (24.2%)	29830
TOTAL	7036	961	19490	15545	43046

Table 1: Trips and mode share of students and workers in the Specialised Centre (Census 2006 and UNSW)

Origin of Trips to UNSW	Students	Staff
Eastern suburbs	44%	48%
Inner west	14%	16%
North	15%	14%
Sutherland	7%	9%
North west	10%	6%
West	10%	7%

Table 2: Origin of university students and staff (UNSW)

Appendix 2 Public Transport Accessibility

Background

Public Transport Accessibility Levels (PTALs) are used to measure the public transport accessibility of a transport node. The PTAL calculation was originally developed by the London Borough of Hammersmith and was adopted by Transport for London. It is referred to in the State Government policy package for Integrating Land Use and Transport (IL&T) as a benchmark for analysing the level of public transport accessibility for a specified destination.

Integrating land use and transport aims to:

- improve access to housing, jobs and services by walking, cycling and public transport
- increase the choice of available transport and reduce reliance on cars
- encourage people to travel shorter distances and make fewer trips
- support the viable operation of public transport services

Commentary

PTAL calculations are a useful tool to provide an overview of public transport accessibility to a destination. However, they can only give a limited indication of the adequacy of public transport provision, and do not take into account key aspects affecting the effectiveness and availability of public transport:

- The PTAL gives an indication of the density of transport to the location rather than the capacity of the system to cope with actual passenger demand.
- The PTAL uses arbitrary cut offs to measure transport accessibility, for example it assumed that people are prepared to walk 640m to access frequent bus transport when the actual figures maybe higher or lower.
- The PTAL does not measure whether routes are providing appropriate access to destination points of interest that relate to demand.

Analysis

The tables below show the PTAL transport accessibility calculations for the Randwick Specialised Centre overall, based on bus services during the AM peak, the conventional period used to determine public transport accessibility, as well as at midday, to reflect the more widely distributed travel demand to the Centre.

A separate additional measure of accessibility for the Randwick Health Campus alone was calculated, which did not include the bus services located beyond 640m from the Health Campus.

Calculation Process

The PTAL is a measure of transport accessibility reflecting:

- Access time by walking from a point of interest (POI) to a public transport service access point (SAP) such as a bus stop
- The frequency and number of services to each SAP
- The average waiting time and relative reliability of service mode (e.g.: trains or buses)

Walk access times were measured from the bus stops to the entrance to the institutions. Average wait time was measured using official Sydney Buses timetables. The bus route with the highest frequency in the morning peak was the 891 bus service from Central to UNSW High Street. The bus route with the highest frequency during lunchtime (midday) is the 400 bus service from Burwood to Bondi Junction. These two figures were given a weighting of 1, while all other services were given a weighting of 0.5.

These components are used to calculate a public transport accessibility index (AI) which is then converted to a PTAL grade from 1-6 through a banding system:

Accessibility Index	PTAL Band	Explanation
• 0 – 5	1	Low level of accessibility
• 5.01 – 10	2	
• 10.01 – 15	3	
• 15.01 – 20	4	
• 20.01 – 25	5	
• 25+	6	High level of accessibility

Results

The results are a PTAL accessibility index of 42 (Band 6) for the whole Centre during the AM peak and 18 (Band 5) for Midday, indicating the peak oriented nature of bus network in contrast to the relatively low accessibility of the Health Campus at midday.

Summary of Results	PTAL: AM Peak	PTAL: Midday
Randwick Specialised Centre	42 - Excellent	18 - Good
Randwick Health Campus	22	10

Conclusion

While the PTAL results indicate that there is a high level of bus service to the Centre in terms of frequency, accessibility mapping does not indicate if routes are appropriate to demand, or if the road infrastructure has the capacity to accommodate the service.

Services specifically to the Randwick Health Campus during the day are found to be less frequent, and at the lower end of the accessibility band, reflecting the peak hour and CBD orientation of the transport network.

Randwick Specialised Centre Table 1: AM Peak

ROUTE	ORIGIN	DESTINATION	SERVICE ACCESS POINT	POI	WALK ACCESS TIME	AVERAGE WAIT TIME	Total Access Time	Equivalent Doorstep Frequency	Weighting	Accessibility Index
10	Maroubra Junction	Leichhardt (via CBD)	Anzac Parade	UNSW	0	10	10	3	0.5	1.5
302	Eastgardens	Circular Quay	Anzac Parade	UNSW	0	NA	0	0	0.5	0
303	Sans Souci	Circular Quay	Anzac Parade	UNSW	0	15	15	2	0.5	1
316	Eastgardens	Bondi junction	Belmore Road	Hospitals	7	10	17	1.76	0.5	0.88
317	Eastgardens	Bondi junction	Belmore Road	Hospitals	7	10	17	1.76	0.5	0.88
348	Wolli Creek	Bondi junction	High, Botany, Alison	UNSW/Hospitals	3.5	30	33.5	1.12	0.5	0.56
357	Eastlakes	Bondi junction	Botany, high, Belmore	UNSW/Hospitals	3.5	30	33.5	1.12	0.5	0.56
370	Coogee	Leichhardt	High Street	UNSW/Hospitals	0	10	10	3	0.5	1.5
372	Coogee	Central	Belmore Road	Hospitals	7	10	17	1.76	0.5	0.88
373	Coogee	Circular Quay	Belmore Road	Hospitals	7	10	17	1.76	0.5	0.88
374	Coogee	Circular Quay	Alison Road	Hospitals	10	20	30	3	0.5	1.5
376	Maroubra Beach	Circular Quay	Belmore Road	Hospitals	7	15	22	1.36	0.5	0.68
377	Maroubra Beach	Circular Quay	Belmore Road	Hospitals	7	15	22	1.36	0.5	0.68
391	Port Botany	Circular Quay	Anzac Parade	UNSW	0	8	8	3.75	0.5	1.86
392	Little Bay	Circular Quay	Anzac Parade	UNSW	0	15	15	2	0.5	1
393	La Perouse	Central	Anzac Parade	UNSW	0	6	6	5	0.5	2.5
394	La Perouse	Circular Quay	Anzac Parade	UNSW	0	6	6	5	0.5	2.5
395	Maroubra Beach	Central	Anzac Parade	UNSW	0	15	15	2	0.5	1
396	Maroubra Beach South	Sydney CBD	Anzac Parade	UNSW	0	20	20	1.5	0.5	0.75
397	Maroubra	Circular Quay	Anzac Parade	UNSW	0	15	15	2	0.5	1
399	Little Bay	Circular Quay	Anzac Parade	UNSW	0	20	20	1.5	0.5	0.75
400	Burwood	Bondi junction	High Street, Belmore Road	UNSW/Hospitals	0	5	5	6	0.5	3
410	Rockdale	Bondi junction	High Street, Belmore Road	UNSW/Hospitals	0	20	20	1.5	0.5	0.75
890	Circular Quay	UNSW	High Street	UNSW	0	25	25	1.2	0.5	0.6
891	Central	UNSW	High Street	UNSW	0	3	3	10	1	10
892	Central/Circular Quay	UNSW	High Street	UNSW	0	NA	0	0	0.5	0
895	Central	UNSW	Anzac Parade	UNSW	0	3	3	10	0.5	5
										42.21

Randwick Specialised Centre Table 2: Midday

ROUTE	ORIGIN	DESTINATION	SERVICE ACCESS POINT	POI	WALK ACCESS TIME	AVERAGE WAIT TIME	Total Access Time	Equivalent Doorstep Frequency	Weighting	Accessibility Index
10	Maroubra Junction	Leichhardt (via CBD)	Anzac Parade	UNSW	0	15	15	2	0.5	1
302	Eastgardens	Circular Quay	Anzac Parade	UNSW	0	15	15	2	0.5	1
303	Sans Souci	Circular Quay	Anzac Parade	UNSW	0	15	15	2	0.5	1
316	Eastgardens	Bondi junction	Belmore Road	Hospitals	7	30	37	0.81	0.5	0.41
317	Eastgardens	Bondi junction	Belmore Road	Hospitals	7	30	37	0.81	0.5	0.41
348	Wolli Creek	Bondi junction	High, Botany, Alison	UNSW/Hospitals	3.5	30	33.5	0.9	0.5	0.45
357	Eastlakes	Bondi junction	Botany, high, Belmore	UNSW/Hospitals	3.5	30	33.5	0.9	0.5	0.45
370	Coogee	Leichhardt	High Street	UNSW/Hospitals	0	20	20	1.5	0.5	0.75
372	Coogee	Central	Belmore Road	Hospitals	7	20	27	1.1	0.5	0.6
373	Coogee	Circular Quay	Belmore Road	Hospitals	7	20	27	1.1	0.5	0.6
374	Coogee	Circular Quay	Alison Road	Hospitals	10	20	30	1	0.5	0.5
376	Maroubra Beach	Circular Quay	Belmore Road	Hospitals	7	30	37	0.81	0.5	0.41
377	Maroubra Beach	Circular Quay	Belmore Road	Hospitals	7	30	37	0.81	0.5	0.41
391	Port Botany	Circular Quay	Anzac Parade	UNSW	0	30	30	1	0.5	0.5
392	Little Bay	Circular Quay	Anzac Parade	UNSW	0	30	30	1	0.5	0.5
393	La Perouse	Central	Anzac Parade	UNSW	0	20	20	1.5	0.5	0.75
394	La Perouse	Circular Quay	Anzac Parade	UNSW	0	15	15	2	0.5	1
395	Maroubra Beach	Central	Anzac Parade	UNSW	0	30	30	1	0.5	0.5
396	Maroubra Beach South	Sydney CBD	Anzac Parade	UNSW	0	30	30	1	0.5	0.5
397	Maroubra	Circular Quay	Anzac Parade	UNSW	0	30	30	1	0.5	0.5
399	Little Bay	Circular Quay	Anzac Parade	UNSW	0	30	30	1	0.5	0.5
400	Burwood	Bondi junction	High Street, Belmore Road	UNSW/Hospitals	0	7	7	4.29	1	4.29
410	Rockdale	Bondi junction	High Street, Belmore Road	UNSW/Hospitals	0	NA	0	0	0.5	0
890	Circular Quay	UNSW	High Street	UNSW	0	NA	0	0	0.5	0
891	Central	UNSW	High Street	UNSW	0	10	10	3	0.5	1.5
892	Central/Circular Quay	UNSW	High Street	UNSW	0		0	0	0.5	0
895	Central	UNSW	Anzac Parade	UNSW	0		0	0	0.5	0
										18.53

Randwick Health Campus

ROUTE	ORIGIN	DESTINATION	S.A.P	POI	W.A.T	A.W.T (1)	A.W.T (2)	TAT (1)	T.A.T (2)	EDF (1)	EDF (2)	Wghtg (1)	Wghtg (2)	PTAL (1)	PTAL (2)
316	Eastgardens	Bondi junction	Belmore Road	Hospitals	7	10	30	17	37	1.76	0.81	0.5	0.5	0.88	0.41
317	Eastgardens	Bondi junction	Belmore Road	Hospitals	7	10	30	17	37	1.76	0.81	0.5	0.5	0.88	0.41
348	Wolli Creek	Bondi junction	High, Botany, Alison	UNSW/ Hospitals	3.5	30	30	33.5	33.5	1.12	0.9	0.5	0.5	0.56	0.45
357	Eastlakes	Bondi junction	Botany, high, Belmore	UNSW/ Hospitals	3.5	30	30	33.5	33.5	1.12	0.9	0.5	0.5	0.56	0.45
370	Coogee	Leichhardt	High Street	Hospitals	0	10	20	10	20	3	1.5	0.5	0.5	1.5	0.75
372	Coogee	Central	Belmore Road	Hospitals	7	10	20	17	27	1.76	1.1	0.5	0.5	0.88	0.6
373	Coogee	Circular Quay	Belmore Road	Hospitals	7	10	20	17	27	1.76	1.1	0.5	0.5	0.88	0.6
376	Maroubra Beach	Circular Quay	Belmore Road	Hospitals	7	15	30	22	37	1.36	0.81	0.5	0.5	0.68	0.41
377	Maroubra Beach	Circular Quay	Belmore Road	Hospitals	7	15	30	22	37	1.36	0.81	0.5	0.5	0.68	0.41
400	Burwood	Bondi junction	High Street, Belmore Road	UNSW/ Hospitals	0	5	7	5	7	6	4.29	0.5	1	3	4.29
410	Rockdale	Bondi junction	High Street, Belmore Road	UNSW/ Hospitals	0	20	NA	20	0	1.5	0	0.5	0.5	0.75	0
890	Circular Quay	UNSW	High Street	UNSW/ Hospitals	0	25	NA	25	0	1.2	0	0.5	0.5	0.6	0
891	Central	UNSW	High Street	UNSW/ Hospitals	0	3	10	3	10	10	3	1	0.5	10	1.5
892	Central/Circul ar Quay	UNSW	High Street	UNSW/ Hospitals	0	NA		0	0	0	0	0.5	0.5	0	0
														21.85	10.28

Notes

1. Denotes morning peak
2. Denotes midday

Appendix 3 Relevant Definitions

The definitions below are derived from relevant state planning instruments and the Standard Template LEP.

Standard Template Definitions

entertainment facility means a building or place used for entertainment, exhibitions, displays or cultural events, such as:

- (a) sports stadiums, showgrounds and race courses, and
- (b) theatres, cinemas, music halls, concert halls, dance halls, open air theatres and drive-in theatres, and
- (c) entertainment centres, convention centres and exhibition centres.

health care professional means any person registered under an Act for the purpose of providing health care.

health services facility means a facility used to provide medical or other services relating to the maintenance or improvement of the health, or the restoration to health, of persons or the prevention of disease in or treatment of injury to persons, and includes the following:

- (a) day surgeries and medical centres,
- (b) community health service facilities,
- (c) health consulting rooms,
- (d) facilities for the transport of patients, including helipads and ambulance facilities,
- (e) hospitals.

home occupation means an occupation carried on in a dwelling, or in a building ancillary to a dwelling, by the permanent residents of the dwelling that does not involve:

- (a) the employment of persons other than those residents, or
- (b) interference with the amenity of the neighbourhood by reason of the emission of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil, traffic generation or otherwise, or
- (c) the display of goods, whether in a window or otherwise, or
- (d) the exhibition of any notice, advertisement or sign (other than a notice, advertisement or sign exhibited on that dwelling house or dwelling to indicate the name and occupation of the resident), or
- (e) the sale of items (whether goods or materials), or the exposure or offer for sale of items, by retail, but does not include a bed and breakfast establishment or sex services (home occupation).

hospital means a building or place used for the purpose of providing professional health care services (such as preventative or convalescent care, diagnosis, medical or surgical treatment, psychiatric care or care for people with disabilities, or counselling services provided by health care professionals) to people admitted as in-patients (whether or not out-patients are also cared for or treated there), and includes ancillary facilities for:

- (a) day surgery, day procedures or health consulting rooms, or
- (b) accommodation for nurses or other health care workers, or
- (c) accommodation for persons receiving health care or for their visitors, or
- (d) shops or refreshment rooms, or
- (e) transport of patients, including helipads and ambulance facilities, or
- (f) educational purposes, or

- (g) research purposes (whether or not it is carried out by hospital staff or health care workers or for commercial purposes), or
- (h) any other health-related use.

medical centre means business premises used for the purpose of providing health services (including preventative care, diagnosis, medical or surgical treatment, counselling or alternative therapies) to out-patients only, where such services are principally provided by health care professionals, and may include the ancillary provision of other health services.

mixed use development means a building or place comprising 2 or more different land uses.

recreation area means a place used for outdoor recreation that is normally open to the public, and includes:

- (a) a children's playground, or
- (b) an area used for community sporting activities, or
- (c) a public park, reserve or garden or the like, and any ancillary buildings, but does not include a recreation facility (indoor), recreation facility (major) or recreation facility (outdoor).

recreation facility (indoor) means a building or place used predominantly for indoor recreation, whether or not operated for the purposes of gain, including a squash court, indoor swimming pool, gymnasium, table tennis centre, health studio, bowling alley, ice rink or any other building or place of a like character used for indoor recreation, but does not include an entertainment facility, a recreation facility (major) or a registered club.

recreation facility (major) means a building or place used for large-scale sporting or recreation activities that are attended by large numbers of people whether regularly or periodically, and includes sports stadiums, showgrounds, racecourses and motor racing tracks.

recreation facility (outdoor) means a building or place (other than a recreation area) used predominantly for outdoor recreation, whether or not operated for the purposes of gain, including a golf course, golf driving range, mini-golf centre, tennis court, paint-ball centre, lawn bowling green, outdoor swimming pool, equestrian centre, skate board ramp, go-kart track, rifle range, water-ski centre or any other building or place of a like character used for outdoor recreation (including any ancillary buildings), but does not include an entertainment facility or a recreation facility (major).

Infrastructure SEPP – Definitions

Site compatibility certificates

- (1) An application for a site compatibility certificate for the purpose of clause 18, 57 (3) or 63C (2) (a) may be made to the Director-General:
 - (a) by the owner of the land on which the development is proposed to be carried out, or
 - (b) by any other person with the consent of the owner of that land.
- (2) An application under this section:
 - (a) must be in writing in the form approved by the Director-General, and
 - (b) must be accompanied by such documents and information as the Director-General may require, and
 - (c) must be accompanied by such fee, if any, as is prescribed by the regulations.
- (3) The Director-General may request further documents and information to be furnished in connection with an application under this section.
- (4) Within 7 days after the application is made, the Director-General must provide a copy of the application to the council for the area in which the development concerned is proposed to be carried out, unless the Director-General refuses, before those 7 days have elapsed, to issue a certificate.
- (5) Subject to subclause (6), the Director-General may determine the application by issuing a certificate or refusing to do so.

- (6) The Director-General must not issue a certificate unless the Director-General:
- (a) has taken into account any comments received from the council within 14 days after the application for the certificate was made, and
 - (b) is of the opinion that the development concerned is compatible with the surrounding land uses having regard to the following matters:
 - (i) the existing uses and approved uses of land in the vicinity of the development,
 - (ii) the impact that the development (including its bulk and scale) is likely to have on the existing uses, approved uses and uses that, in the opinion of the Director-General, are likely to be the preferred future uses of that land,
 - (iii) the services and infrastructure that are or will be available to meet the demands arising from the development, and
 - (c) is of the opinion that the development concerned is not likely to have an adverse effect on the environment and does not cause any unacceptable environmental risks to the land.
- (7) A certificate may certify that the development to which it relates is compatible with the surrounding land uses only if it satisfies certain requirements specified in the certificate.
- (8) A certificate continues to apply to the land in respect of which it was issued despite any change in the ownership of that land.
- (9) A certificate is valid for 5 years or such other period specified in the certificate.

Appendix 4 Schedule of submissions

Submissions

The following tables list submissions and requests relevant to the Centre from the community, stakeholders and State Government agencies, received as part of the overall Comprehensive LEP/DCP project. Some submissions are more relevant to other land use based discussion papers, including the Residential and Town centres Papers.

Organisation/Address	Issues Raised	Response/Comment
Submissions from Section 62 Consultation		
Waverley Council	No issue but would like to be kept informed of any proposed changes to the common boundary.	Noted.
Botany Bay Council	No issue	Noted.
Sydney Water	Request for zoning of Sydney water properties; minimum water efficiency requirements for LEP's - non residential development and Sydney Water treatment plants and buffer areas.	Noted. Sydney Water zoning recommendations have been reviewed and discussed in the Special Uses Discussion Paper. ESD initiatives to reduce long-term water demand are supported in the Plan.
Ministry of Transport	Request that the Plan implement state government transport directives and that Council prepare a local integrated land use and transport strategy.	Noted. A key strategy of this Paper is 'integrated transport' and 'local connectivity' as discussed in Section5: 'Vision and Strategy'. The Paper supports an integrated sustainable transport network with measures to reduce car reliance and balance the needs of pedestrians and cyclists. It further advocates short and long term improvements to public transport including route integration and increased capacity; and calls for a planning commitment for the establishment of a rail based mass transit system to the Specialised Centre.
Sydney Buses	Request for integration of land use and transport, planning protection for transport corridors and consideration for off-street parking rates in accessible locations.	Noted. A key strategy of the Paper is 'integrated transport' and 'local connectivity' as discussed in Section 5: 'Vision and Strategies'. These issues are also addressed within Section 8: .Investigation Areas. The Paper supports the integration of land use and transport in tandem with short and long term improvements to the public transport network including route integration and increased capacity. The establishment of a rail based mass transport system is also recommended. A review of car parking provisions will be undertaken as part of the preparation of the Randwick Comprehensive DCP. Consideration will be given to exemptions/variations for off-street car parking rates in accessible locations as part of the Review.
Sydney Ports	Highlights SPC Port Radar Issue - building heights which could interfere with SPC beam.	Noted. It is not envisaged that development within this planning horizon would exceed RL 120 in Block 4 ANZAC Parade UNSW.
Heritage Council of NSW	Request for provisions in relation to the conservation of heritage items/areas; heritage impact assessment, Prince Henry Hospital Heritage precinct, non-Aboriginal heritage items, Aboriginal items, rezoning of heritage items.	Noted. A number of items of heritage significance and conservation areas are located in the Centre including sites near Randwick Junction, Struggletown, Royal Randwick Racecourse and UNSW. State Heritage Items exist on the Inglis Sire: Newmarket sale ring, big stable and Newmarket House.

Organisation/Address	Issues Raised	Response/Comment
		This Paper proposes to retain all items of heritage significance and conservation areas and associated heritage provisions, with items noted for review in Section 9.1. The Paper supports the comprehensive assessment of potential impacts on the heritage significance of heritage items and conservation areas whenever a development is proposed in the Centre. A number of heritage items located within Randwick Junction will also be discussed in the Town Centres Discussion Paper.
RTA	Request for arterial road widening reservations, premiers council for active living, zoning for roads, public transport and developer contribution for regional transport improvements.	Noted. A key strategy of this Paper is 'Integrated Transport' and 'Local Connectivity' as discussed in Section 5: Vision and Strategy and Section 9: Planning Controls and Guidelines. The zoning of classified roads including Anzac Parade is addressed in the Special Uses Discussion Paper.
Submissions for specific addresses/locations		
Resident - 90 Barker Street Kingsford	Request to upzone land from residential 2B to 2C	This site has no significant impact on the Centre. The request will be discussed in the Residential Discussion Paper.
Resident - 94 St Pauls St Randwick	Request to upzone land from residential 2A	This site has no significant impact on the Centre. The request is to be discussed in the Residential Discussion Paper.
Resident - 88-90 Botany St Kingsford	Request to upzone from residential 2B to 2C	This site has no significant impact on the Centre. The request will be discussed in the Residential Discussion Paper. This site is located within the Botany Street investigation area which is discussed in more detail in Section 8: Investigation Areas.
Resident -34 Glebe St, Randwick	Request to upzone from residential 2A to 2C	This site has no significant impact on the Centre. The request is to be discussed in the Residential Discussion Paper.
Resident 2-4 The Avenue, Randwick	Request to rezone from 6A Open Space to 6B Private Open Space.	This site has no significant impact on the Centre. The request is to be discussed in the Open Space Discussion Paper.
Resident 149-155 Belmore Rd, Randwick	Increase density controls to facilitate redevelopment	This site is located within the East End investigation area which is discussed in more detail in Section 8: Investigation Areas and Section 9.
Resident Struggletown, Randwick	2A to 2B, reduce minimum lot size subdivision	This request is not supported. The Struggletown Investigation Area is discussed in more detail in Section 8: Investigation Areas. Struggletown has a low density character and fine grain subdivision pattern. The scale, character and heritage values of the area are to be protected under the

Organisation/Address	Issues Raised	Response/Comment
		Paper. Accordingly the existing low density residential zone is proposed to be retained and translated into an equivalent zone under the Standard Instrument.
Resident 17 Middle St, Kingsford	Request to up zone from residential 2B to 2C	This site has no significant impact on the Centre and is to be discussed in the Residential Discussion Paper.
Resident 26 Oberon St, Randwick	Request to up zone land from 2A to 2B/C	This site has no significant impact on the Centre and is to be discussed in the Residential Discussion Paper.
Resident 150-156 Barker St, Kingsford	Up zone Barker St shops	This site is located within the Barker Street investigation area which is discussed in more detail in Section 8: Investigation Areas. The Paper recognises the evolving neighbourhood centre on the south side of Barker Street. A suitable transition zone is considered between Newmarket and the existing medium density residential uses to the west. Options include the application of a Medium Density zone or retaining the Low Density Residential zone.
Resident 19 Howard St, Randwick	Request to upzone land.	This site has no significant impact on the Centre. This site is to be discussed in the Residential Discussion Paper.
Resident 210 Clovelly Rd , Randwick	Request to upzone land from 2B to a Business zoning.	This site has no significant impact on the Centre. This request is to be discussed in the Residential Discussion Paper.
Resident 70-72 Perouse Rd, Randwick	Part 2B/3B needs to be addressed	This site has no significant impact on the Specialised Centre. This request is to be discussed in the Residential Discussion Paper.
UNSW - 330 Anzac Parade Kensington	Request to individually list buildings as heritage items as opposed to a conservation area (e.g. Old Tote, White House and Fig Tree Theatre).	This request is not supported. The request for individual listing was made concurrently to the submission of a Development Application for Student housing in 2007 which is located in close proximity to the conservation area. The development has subsequently been completed. In review of the area it is recommended that the heritage conservation area be retained.
145-147 Alison Road, Randwick	Request to upzone land from 2B to 2C	This request will be dealt with in the Town Centres Discussion Paper.

Appendix 5 References

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Department of Planning: Standard Instrument (Local Environmental Plans) Order (2006)
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