2016 Travel Survey

Analysis Summary

Never Stand Still

Introduction

The annual Travel Survey (the Survey) is a key element of the University's Transport Strategy outlined in the Kensington Campus Development Control Plan. The Survey completed its tenth year in 2016 and has become an essential database for the University's forward planning and operational activities. The Survey is conducted on-line by Facilities Management on a voluntary basis for staff and students that attend the Kensington campus – the main campus of UNSW. The Survey seeks to determine travel related trends such as the method of travel to and from the campus, arrival and departure points, where car driver's park, times of arrival and departure, the time taken to travel and the point of travel origin.

The Survey was conducted over a three-week period in April and received a very high of responses with around 2,337 staff and 7,481 students responding. The sample represents around 18% of staff and students attending the campus in semester 1, 2016. The sample percentages were then applied to the *daily population**** to derive the actual numbers and to fully understand the travel impacts of staff and students. The margin of error is assumed at 1%.

(Error margin based on values from: https://www.surveymonkey.com/mp/sample-size)

The survey results are analysed each year to assist in implementing measures to reduce car dependence and parking demand at the campus while at the same time improving sustainable transport access. The results also help Facilities Management with strategic planning for new retail, coffee and food opportunities and with improvements to the public domain such as open spaces and footpaths.

It is to be noted that only the key questions from the 2016 survey are analysed in this document.

For more information regarding the Travel Survey or a copy of the survey data, please contact Ms. Kuhu Gupta, Campus Planner at UNSW Facilities Management at kuhu.gupta@unsw.edu.au

Glossary:

Total campus population – recorded at 55,917 on Thursday, 19th May 2016 (7,983 staff and 47,934 student headcounts)

Data source: Student Info – Information Hub report50 and Staff Info – 2016 May HR Data

* **Daily population** – is derived from the total campus population and is approximated at 43,766 on the assumption that about of 90.1% of staff and 76.3% of students headcounts attend the campus Monday to Friday during a typical University semester, i.e. a typical semester day.

Data source: UNSW 2016 Travel Survey (Median attendance – Monday to Friday)

Method of Travel

Q1 - What is your usual method of travel to and from the Kensington campus?

Figures 1 and 2 demonstrate the changing trends in the method of travel to and from the campus since 2007. The total percentages of respondents (Figure 1) were extrapolated to average daily campus population to derive the actual number of staff and students and how they travelled to and from the campus on a typical semester day (Figure 2).

The results confirm a continuing trend to more sustainable methods of travel with public transport being the most obvious. Staff and students however, continue to drive to the campus. The key reasons for this are:

- Availability of free and unrestricted parking in streets immediately surrounding the campus
- Availability of staff parking at relatively low rates when compared to standard commercial prices
- Increased travel times to and from the campus for users of public transport
- Increased number of evening classes finishing at 9pm with limited transport to support commute past 8 pm
- Fragmented bicycle networks of poor quality in the campus environs

UNSW will be slow to achieve targets in sustainable travel modes while the above issues are not addressed. Further discussions are required with Randwick City Council and Transport for NSW on these issues.

Figure 1. Travel Trends 2007-2016 (Percentage of Respondents)

Figure 2. Travel Trends 2007-2016, extrapolated to campus population (staff and students on a typical semesters day)

Private Vehicles (car drivers, car passengers & motorbike)

In 2016 18.8% of respondents travelled in private vehicles, a 13.3% decrease in private vehicle usage since 2007. When the percentages were extrapolated to the average daily campus population, the results demonstrated a decrease from 10,552 daily private vehicles users in 2007 to 7,307 in 2016. This equated to an average decrease of 360 private vehicle users each year despite a growth in the total campus population of approximately 18,327 since 2007.

The results also demonstrated that 40.6% of staff and 12 % of students travelled by private vehicle in 2016, continuing the decrease in private vehicle users since 2007 when 59% of staff and 30% of students used this method of travel.

Public Transport (Bus, Train, Ferry)

In 2016, a majority of the respondents (59.8%) travelled by public transport, an 10.9% increase since 2007 when this method of travel was used by only 48.9% of staff and students. When the percentages were extrapolated to the average daily campus population the results demonstrated an increase from 14,113 daily public transport users in 2007 to 26,884 in 2016. This equated to an average increase of 1,419 public transport users each year.

The results demonstrated that 40.3% of staff and 65.9% of students travelled by public transport in 2016, continuing the increase in public transport users since 2007 when 28% of staff and 50.3% of students used this method of travel.

Question 1a - Which bus service do you usually use to and from the campus?

In 2016, 54.5% of those who used buses to travel to and from the campus used the UNSW express buses services (890, 891, 892 and 895). The percentages extrapolated to average daily population suggest that over 31,800 [1]*daily person trips* are completed using the UNSW express buses on a typical semester's day

Other bus services that were less used, but still notable with more than 2,000 daily trips included the M50, 400, and 370 services (Figure 3).

Figure 3. Arrival and Departure by Bus on a Typical Semester Day

Bicycles

Despite being the least popular mode of transportation, bicycle usage continues to gain popularity and demonstrates an increasing trend which has more than doubled as a typical mode of transportation since 2007. This trend mirrors that recorded for the Sydney CBD, where cycling as a method of travel to work has nearly tripled since 2001.

The percentage of respondents cycling to and from the campus increased from 2.7% in 2007 to 4.1% in 2016. When extrapolated to the average daily campus population, this is a significant increase from 922 daily riders in 2007 to 1,613 daily riders in 2016, becoming more popular amongst staff and post graduate students as a mode of daily commute.

Pedestrians

Walk from surrounding neighbourhoods

Walking to and from the campus has been fairly consistent over the years with 12.1% of all respondents walking to campus in 2016. When extrapolated to the average daily campus population, the results demonstrate that approximately 5,322 staff and students walked to/from the campus in 2016 on a typical semester day.

[1] *Daily person trips* include travel by one person to and from the campus, i.e If a student uses bus number 370 to travel to campus and also back home, this student makes 2 daily trips using the 370 service

Live on Campus

The 2016 survey responses show a significant increase from 2007 (3.3%) in the number of students living on the campus with 5.2% living on campus in 2016. However, it is known from other new housing data that the increase in the number of beds on the campus over the last eight years results in significantly higher figure at 7.5%. This difference could be due to the lower survey participation rate among students living on the campus as they see no need to participate in a "travel survey", not having the need to travel to and from the campus each day.

Figure 4 shows the increase in the actual numbers of beds on the campus from 1,335 in 2007 to 3,893 in 2016.

Figure 5 shows the increase in the percentage of students able to access on campus student accommodation in the same period. It demonstrates that despite the significant increase in student enrolments from 32,280 in 2007 to 46,063 in 2016, the percentage of students able to access on campus housing has doubled.

It can therefore be safely assumed that both the increase in the actual numbers of beds available on the campus and the beds per student ratio have contributed to the reduced dependence on private vehicles as well as public transport for travel to and from the campus as demonstrated by the line graph in Figure 1.

Figure 4. Actual Number of Beds on Campus 2007 – 2016

Figure 5. Percentage of enrolled students able to access beds on campus, 2007 – 2016

Points of Arrival and Departure on Campus

Q2- Typically, which gate/entrance do you use to arrive/depart the campus?

Understanding the number of staff and students movements at the points of arrival and departure of the campus is valuable for campus planning. Since the introduction of the questions in 2013, the results have been used to inform the enhancement of existing retail outlets, the location of new retail outlets, public domain improvements and most significantly to inform the design and location of the future UNSW light rail stops at Anzac Parade and High Street.

Arrival

The University Mall entrance on Anzac Parade and Gates 2, 8 and 9 on High Street continue to be the major arrival points on a typical semester day in 2016. This is a consequence of the morning drop-off locations for the express buses to the campus. Gates 11 and 14 continue to be the major arrival points for those driving to and parking on campus as they facilitate a direct route into the two multi-storey (and largest) car parks on campus.

Figure 6. Point of Arrival and Method of Travel to the Point of Arrival

Departure

University Mall/Anzac parade is the most popular departure point with over **18,500** staff and students departing from this location on a typical semester's day. Gate 9 on High Street is the second most popular departure point with over **6,400** staff and students departing from this location. This is a consequence of the afternoon pick-up locations for the express buses connecting the campus to central station. It is to be noted that these pickup locations are different to the morning drop-off location (Gates 2, 8 and 9).

Figure 7. Point of Departure and Method of Travel from Point of Departure

Parking

Q1(c) Where did you park?

In 2016, approximately 2,814 staff and students (45% of those who drove) parked on the campus while 3,459 staff and students (55% of those who drove) parked in local streets.

The results also demonstrated that 80% of the staff that drove parked on campus while 81% of students who drove, parked on the surrounding streets on a typical semester day. These results are comparable with previous years and are a consequence of on-campus parking being largely restricted to staff (at a low parking fee), and the availability of free parking in surrounding streets.

Figure 8. Parking Location

Further analysis of parking locations since 2007 (Figure 9) demonstrated a decline in the percentage of staff and students parking on campus. This is a direct consequence of the incremental price increase of parking permits and availability of free parking in surrounding streets.

Figure 9. Parking Trend 2007 - 2016

Q1(d) Which car park do you usually use?

In 2016, majority of those who parked on campus (45.1%) used the Botany Street Parking station. This is a consequence of the availability of the parking at the station and its proximity to staff offices, the library, retail offerings (food, bank and post office) and other public venues such as the Scientia and the Clancy Auditorium.

Figure 10. On Campus Parking Split

Q1(e) In which street do you usually find parking?

Figure 11. Surrounding Street Parking Split

In 2016, Barker Street, Doncaster Avenue, Day Avenue and Mooramie Avenue were the most popular streets for parking with over 34% of staff and students parking on these streets.

4.2% of those who parked on surrounding streets stated that they park anywhere they can find a parking spot.

Arrival and Departure Times

The peak arrival period occurred between 8.00 and 10.00am in 2016 where 60.8% of those who attended the campus on a typical semester's day entered the campus. Staff arrivals were concentrated between 7.00 – 10.00am whereas students continued to arrive after the peaking morning period, declining in numbers through the rest of the day.

The peak departure period is less concentrated and occurs over a three hour period with 19.5% departing between 4.00 – 5.00pm, 27.8% between 5.00 – 6.00pm and 17.4% departing between 6.00 – 7.00pm respectively.

It is noted that a significantly high number of staff and students (12.3% or 5,400 people) of those who attended the campus on a typical semester's day, left the campus after 7pm. The 2016 results are in line with the 2015 Travel Survey, where approximately 13% departed the campus after 7pm. This can be mainly attributed to timetabling changes in 2014 which increased the number of evening classes and the introduction of late night retail opportunities to complement the existing after hour uses, such as the University gym and library.

Figure 12. Arrival and Departure Times (Staff and Students on a Typical Semester Day)

Weekly Campus Attendance

78-80% of all respondents attended the campus each day Monday to Thursday in 2016, during a typical semester week. Consistent with previous years, attendance on Friday was significantly lower compared to the rest of the week with only 65.7% of respondents attending. However, a gradual increase in the percentage of people attending the campus on Fridays can be noted when compared

with previous years, with less than 60% attendance in 2007. It can be assumed that this is a direct result of the timetable changes, with more classes being scheduled on Fridays when compared with previous years.

Saturdays and Sundays were consistent with previous years, with only 7-10% of respondents attending the campus over the weekend.

It is noted that students living on the campus are not attending classes during the weekend and therefore account for the low percentage in the 2016 response, despite a significant increase in students living on the campus since 2007.

Figure 13. Weekly Campus Attendance (Percentage of Respondents)

Q7 What is the postcode of where you live?

The postcodes of where respondents lived identified where staff and students travelled from to the campus. The results showed that approximately 45% of staff and students lived within a 10km radius of the campus.

Significant numbers of staff and students travel from suburbs throughout the Sydney metropolitan area, including as many as 0.3% of respondents travelling from the Blue Mountains region.

Figures 14 -18 show where staff and students are travelling from in their typical method of travel. Figure 19 shows where the international students attending the Kensington campus lived in 2016.

Figure 14. Staff and Students Postcode of Origin in the Sydney Metropolitan Area

Figure 15. Postcode of Origin Using Public Transport (Staff and Students)

Figure 16. Postcode of Origin Using Private Vehicles (Staff and Students)

Figure 17. Postcode of Origin Using Bicycles (Staff and Students)

Figure 18. Postcode of Origin of Pedestrians (Staff and Students)

Figure 19. Postcodes where International Students Travel from to the Campus