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4 July 2019

HCCD Response to DPE

University of Newcastle
University Drive
Callaghan NSW 2308

Attn: Carole Mandicourt-Jones

Dear Carole,

HCCD Concept Plan – Response to Department of Planning Comments

The following addendum to the *Response to RFIs - Department of Planning* document (**Attachment B**) has been prepared to address further concerns raised by the Department in relation to the Transport Access Strategy for the proposed Honeysuckle City Campus Development, as below.

Transport Access Strategy

While the Department supports the principle of reduced vehicle trips and increased model share for alternative modes of transport, the assumptions relied upon within the submitted Transport Access Strategy are considered unrealistic. The data for the Callaghan Campus and NeW Space development indicates a high percentage of students and staff continue to travel by car. In addition, the response to submissions fails to address all the comments raised by the City of Newcastle.

The Department does not accept the assumptions contained within the Transport Access Strategy and is concerned that potential future impacts are not adequately addressed. In order for the assessment to proceed, the Department requires an updated traffic assessment based on realistic mode sharing targets, which:

- identifies any impacts on street parking within the vicinity of the city campus and any mitigation measures
- details the current capacity of the Park and Ride service and identifies opportunities for its expansion to meet the demand of the new campus
- addresses the traffic and parking concerns raised by the City of Newcastle.

The traffic and parking concerns raised by the City of Newcastle in the letter dated 6th September 2018 have been addressed with the response provided in the Table in **Attachment A**. The remaining matters are addressed over.

Yours sincerely

Cathy Thomas

Director

Response to Department of Planning

Private Vehicle Usage

While the Department has acknowledged its support of the principles outlined in the TAS it references the data for the Callaghan Campus and NeW Space as indicating a high percentage of students and staff continuing to travel by car.

The inclusion of the Callaghan data was to allow for a comparison between the two campuses and to reflect the lower rates of private vehicle usage being experienced for the existing City campus, with the trend in private vehicle travel to the City campus showing a decline.

The mode of travel data provided for the Callaghan campus and the City campus must be treated uniquely with the higher percentage of students travelling by car for the Callaghan campus reflecting the location of the site and the high number of on-campus parking spaces provided coupled with its role as the parking hub for the Park and Ride service to NeW Space.

When the University was built in 1965 there was a vision for a bushland campus and the government settled on a patch of bush ten kilometres from town. Warabrook was then the home of the Newcastle abattoir and Shortland Waters Golf Club was a rubbish tip. Today the campus is still true to its bushland roots however the suburbs have grown west from the town and the campus is now surrounded by a mix of bushland and suburbia. Its location has always been seen by the community as one connected to by car as the primary mode of travel. In more recent years, as the surrounding roads have become more congested, staff and students are adopting alternate travel modes to Callaghan however car use is still high.

It is therefore unreasonable to use this data as evidence for high private vehicle demand for HCCD moving forward.

The opportunity to drive mode shift through sustainable travel choices and the control of parking supply has been demonstrated in the extension of other city-based Universities. Details of these have been included in the initial response to the Department in **Attachment B**. Targets of alternative modes of transport of up to 93% for students and 85% for staff have been adopted for recent UTS developments.

Impact on On-Street Parking

The mode share targets documented in the TAS have been adopted by the University to support the ongoing change in mode share across Newcastle. It is realised however that whilst accommodation and new commercial developments continue to be built the city is in a state of transition. During this transitional period, including whilst current Callaghan staff/students relocate to the HCCD, there is a lag in mode shift. This is reflected in the continuing demand for some to travel by private vehicle and hence a demand for parking.

Whilst the city has been in this initial state of flux the University has made use of the Civic West Carpark, with 150 carparks being dedicated to University staff/students at a rate of $10 per day. A review of usage data identifies this facility to have spare capacity, with peak usage of 102 vehicles in 2019 through to the beginning of May. As such the facilities provided by the University are not near capacity and may support additional travellers who use private vehicles in the near future.

Across the staging of HCCD there is also the opportunity to make use of the former railway station commuter parking which forms part of the development site. This parking will support mode share improvements and the trend towards alternative modes of travel to the City campus whilst more staff and students locate within the ATZ and as sustainable travel becomes well established.

The potential impact by the development on on-street parking is considered minimal. Parking within the immediate surrounds of HCCD have been in a state of flux for many years due to the ongoing developments within the new Honeysuckle precinct, as well as the closure of the heavy rail and the subsequent light rail construction.

The management by Council of on-street parking through timed, paid parking spaces ensures appropriate supply of high turnover parking for visitors to the city. Such spaces are not suitable for use by employees and attendees of businesses in the city, including University staff and students. The ongoing availability of parking on the subject site during the early stages of the development will support the above demands.

Future Opportunities for Change

As the campus develops and new students enrol and choose to live close to public transport options and within active travel distance to the campus, the demand for private vehicle use and parking will continue to reduce, thus realising the mode share targets.

This shift is further supported by ongoing upgrades to public transport in the Newcastle area, including the Newcastle Bus Interchange currently under construction. The Newcastle Bus Interchange will provide improved connectivity between heavy rail, light rail, and buses. The development will include kiss and ride facilities and offer high quality public domain and pedestrian access.

This shall see further improvements to the public transport network in the Newcastle area, which has undergone significant changes with the introduction of light rail services in 2019. The light rail service provides premium access to the existing City campus and will also service HCCD.

The light rail has experienced very high patronage since its inception. Passenger journeys started on Sunday 17th February with this being an open day with free travel available (no Opal tap on/off required). Opal card data for services beginning Monday 18th February is available on the Transport for NSW website, with the following usage through February - April:

February = 47,073 trips = 4,279 trips per day (operational for 11 days)

March = 117,958 trips = 3,805 trips per day

April = 111,076 trips = 3,702 trips per day (includes 2 Easter public holidays)

The above figures are well in excess of the forecast patronage of 1800 passengers per day and 657,000 per year, indicating the service has been accepted by CBD employees and residents as a viable mode of travel.

Further development currently occurring in the vicinity of the corridor will likely see patronage increase, with this including HCCD. The implementation of a bus interchange adjacent to the rail interchange shall also see improvements in access and coordination of light rail trips and other alternate travel modes. The HCCD is in a prime location to take advantage of these upgrades, with the staging of the development over the course of 10 years to make use of the upgraded transport infrastructure to be implemented within this period.

Future planning for extension of the light rail is ongoing, with the University's Callaghan campus as well as John Hunter Hospital identified as important travel nodes.

The move to support sustainable travel also includes the provision of appropriate bicycle parking on the campus. Such parking shall be addressed at each stage of the campus development providing a suitable level of parking to meet the cycling targets.

NeW Space bike hub usage data shows a significant uptake in 2019 over 2018 figures. During the early period of Semester 1 2019 (March 4-17) usage totalled 1,638, with an average of 117 users per day. For the same period in March 2018, the number was 820, with usage during this period therefore doubling in a year.

Data for the second half of Semester 2 2018 (October 8-21) usage totalled 1265, with an average of 90 people per day.

The provision of further Bike Hub services in the City as part of the overall HCCD Masterplan shall see this mode of transport be supported and continue to offer a valid alternative to private vehicle use.

Park and Ride

Data provided by the University on the current utilisation of the park and ride service has been compared to 2018 data in order to determine changes in patronage and ongoing demand.

A comparison of the data from 2018 and 2019 (through to the end of April) shows a general uptake in shuttle usage, with a relatively even split of users maintained in each direction (Callaghan to City / City to Callaghan). It is noted that there is significant weekly variation in shuttle patronage, typical of University attendance patterns, which also see lower attendance as the semester progresses.

The peak usage recorded in 2018 occurred in the week starting 4th March, with 5,985 users. The peak usage in 2019 was 6,749 users, indicating a 12.8% uptake in peak utilisation of the service across this period (refer Figure 1 below). This significant increase in patronage reflects the acceptance of the shuttle service as an efficient and economical alternative mode of travel to driving and parking in the City.

WEEK	DATE COMMENCING	2019 Callaghan	2019 NewSpace	Total	2018 Callaghan	2018 NeW Space	Total	Percentage change
week 1	31-Dec	0	0	0	94	84	178	
week 2	7-Jan	349	261	610	317	290	607	0.5%
week 3	14-Jan	320	283	603	412	362	774	-22.1%
week 4	21-Jan	360	354	714	311	324	635	12.4%
week 5	28-Jan	298	260	558	627	514	1141	-51.1%
week 6	4-Feb	589	497	1086	565	438	1003	8.3%
week 7	11-Feb	805	731	1536	620	581	1201	27.9%
week 8	18-Feb	1160	1027	2187	1097	885	1982	10.3%
week 9	25-Feb	3273	3202	6475	2676	2648	5324	21.6%
week 10	4-Mar	3551	3198	6749	2896	3089	5985	12.8%
week 11	11-Mar	3220	3102	6322	2825	2737	5562	13.7%
week 12	18-Mar	2928	3042	5970	2538	2477	5015	19.0%
week 13	25-Mar	3054	2782	5836	2319	1866	4185	39.5%
week 14	1-Apr	2923	2840	5763	310	275	585	885.1%
week 15	8-Apr	2658	2618	5276	654	541	1195	341.5%
week 16	15-Apr	485	421	906	2500	2370	4870	-81.4%
week 17	22-Apr	176	160	336	1936	1807	3743	-91.0%

Note: 2018 mid-semester break occurred between Weeks 14-15
2019 mid-semester break occurred between Weeks 16-17

The shuttle service has also been improved to provide greater connectivity throughout the Callaghan campus with 6 stops now provided over the previous two. The service will continue to be monitored and enhanced as appropriate to further encourage its utilisation as a mode of transport for current and future staff/students. The service is to be expanded in the future to incorporate the HCCD. The monitoring of this service now and in the future will allow for demand to be quantified and services to be provided to ensure these demands can be met.

There are two nominated parking areas at the Callaghan Campus, which are serviced by nearby Shuttle pick up points. In the order of 335 spaces are available in total, with recent observations of these parking areas confirming there remains spare capacity to cater for increased demands.

Conclusion

The proposed mode share targets are reasonable considering the strategic plan for the revitalisation of the City of Newcastle which sees large increases in residential development, as well as significant upgrades and integration of the future public transport network. Given the staged roll out of the campus, there is opportunity for interim solutions (parking on-site and within Civic West) to mitigate any short-term demand during the transition phase.

Support for the concept plan provides certainty for the University moving forward. By requiring each stage of the campus development to then be the subject of its own development application provides opportunities for each stage to be assessed for consistency against the concept and for any significant changes to be justified and assessed on their merit taking into consideration the ongoing development of the city and relevant circumstances at that point in time.

Attachment A - Approach to Newcastle City Council

The below table has been completed in response to comments issued by City of Newcastle Council in their letter dated 6th September 2018.

Newcastle City Council Comment	Response
The proposed strategy is based on the NeW Space strategy: • Availability of good public transportation in the ATZ • Availability of housing in Newcastle city centre and ATZ areas • Students. Teachers and staff will use public or alternate transport modes CN generally supports sustainable modes of travel and understands that change is essential for long term prospects, applying unproven NeW Space is a significant concern. In additional, despite the emphasis on alternative modes the strategy has not considered in detail the provision of motorbike or bicycle parking on the campus.	The sustainable mode share targets detailed in the *Response to RFIs Department of Planning* document (**Attachment B**) have been reviewed against the aims and objectives of the Greater Newcastle Future Transport Plan (GNFTP) and Greater Newcastle Metropolitan Plan 2036. The focus on more efficient and sustainable modes of transport (both public and active) requires not only ongoing development of public transport but also "reviewing parking provision and limiting parking in centres where strong public transport exists". Long term prospects rely on change and the proposed targets for HCCD are based on both government strategies and evidence from other significant developments which have applied similar approaches to sustainable travel and parking policies (eg: UNSW, UTS and Barangaroo). (Refer Case Studies section *Response to RFIs*) The move to support sustainable travel shall include the provision of appropriate bicycle parking on the campus. Such parking shall be addressed at each stage of the campus development providing a suitable level of parking to meet the cycling targets. NeW Space bike hub usage data shows a significant uptake in 2019 over 2018 figures. During the early period of Semester 1 2019 (March 4-17) usage totalled 1,638, with an average of 117 users per day. For the same period in March 2018, the number was 820, with usage during this period therefore doubling in a year. Data for the second half of Semester 2 2018 (October 8-21) usage totalled 1265, with an average of 90 people per day. The provision of further Bike Hub services in the City as part of the overall HCCD Masterplan shall see this mode of transport be supported and continue to offer a valid alternative to private vehicle use. The use of motorcycles over cars does not reflect a sustainable travel choice and should not be given priority over active transport measures through the provision of parking.
The overall transport and parking needs of a large precinct campus versus those of NeW Space (a part of the campus) is questioned.	The transport and parking needs of a city-based campus gain benefits due to its location. The opportunity for contained trips are supported given the broad range of services and facilities available within the city centre. The ongoing development of the campus shall see further opportunities

	associated with scalability with shared services between the various campus hubs including the conservatorium and NeW Space. The *Response to RFIs Department of Planning* document (November 2018) references other universities that have undergone or are undergoing redevelopment of large city campuses, with these developments having been approved based on similar transport and parking strategies to that proposed for HCCD. (Refer Case Studies section *Response to RFIs*)
NeW Space was acceptable for the proposed use. The masterplan includes a range of uses and therefore NeW Space strategy cannot be applied.	The HCCD Transport Access Strategy is considered appropriate for all uses to be accommodated within the site. The analysis of the University of Technology Sydney (UTS) expansion works for the Broadway campus found that the overarching concept plan for this development proposed no additional parking. This expansion included significant increase to learning areas, as well as student accommodation for up to 720 beds. (Refer Case Studies section *Response to RFIs*) Support for the concept plan provides certainty for the University moving forward. By requiring each stage of the campus development to then be the subject of its own DA provides opportunities for each stage to be assessed for consistency against the concept and for any significant changes to be justified and assessed on their merit taking into consideration the ongoing development of the city and relevant circumstances at that point in time.
CN identify various campuses where off-street parking and servicing parking have been provided for specific purposes.	Refer Case Studies section and NeW Space Travel Patterns – Civic West car park section (**Attachment B)**. The masterplan allows for some parking for specific needs including the provision for disabled parking. Demands for servicing of the campus, including waste management, shall be generally contained within the site and addressed specifically in conjunction with the various stages of the development. Consideration is also being given to service access off Civic Lane for later stages of the campus development. The detailed design of the campus shall consider the on-street provision of bus stops, loading zones, taxi zones etc. This shall enable the inclusion of suitable pick up and drop off zones including for the shuttle bus. Many of these are already provided on the streets fronting the campus although the construction of the light rail has seen changes to these in response to changes in bus routes etc. Similar to other businesses within the city centre, on street loading zones within the immediate vicinity of the campus will be available for use by general delivery vehicles eg food delivery to a café whilst

	parking for contractors and service vehicles is provided through a mix of paid parking in parking stations or on-street. This is appropriate given the irregular demands for such services. The City of Newcastle is in a state of transition from a car driving, commuter based place of employment to a city where there is a suitable mix of residential, employment and education enabling people to live, work and study. This evolution will see the shift in mode share and support trip containment and active transport modes, Whilst the city has been in this initial state of flux the University has made use of the Civic West Carpark, with 150 carparks being dedicated to University staff/students at a rate of $10 per day. A review of usage data identifies this facility to have spare capacity, with peak usage of 102 vehicles in 2019 through to the beginning of May. As such the facilities provided by the University are not near capacity and may support additional travellers who use private vehicles in the near future. The early stages of the campus development also allows for the University to continue to make available the carpark near Civic. This commuter parking area previously associated with the heavy rail station has operated in recent times as a paid public parking area however now forms part of the new campus site. By enabling this area to be available in the short term the University acknowledges that the city is in a state of transition with new residential developments still being built and so there is still demand for private vehicle use rather than city based trip containment. This parking will support the community as a whole while more opportunities for people to live, work and study in the city develops and mode shift progresses.
Compliance with the relevant parking requirements should be the starting point.	The City Campus provides a unique use within the CBD offering a catalyst for change and revitalisation. With this comes the need for a different approach for future travel demands as outlined in the *Response to RFIs Department of document (***Attachment B***).* The DCP provides guidelines in meeting Council's objectives with the following aims: 1. To ensure that parking and service provision is adequate relative to the likely demand. 2. To encourage measures to reduce motor vehicle dependency and increase the use of public transport, walking and cycling. 3. To ensure that the design of parking, access and servicing areas is in accordance with best practice standards. 4. To provide adequate and safe vehicle access to sites without compromising pedestrian access and streetscape qualities.

	These aims, along with those of the GNFTP, have been the starting point in developing the masterplan strategy and its approach to sustainable travel and parking. The key element is shifting the demand away from car travel and as such the question becomes; What is the parking provision necessary to ensure that this will happen? The demand for parking shall always meet the supply, so it is only by reducing the supply that the "likely demand" can shift to a level consistent with the aims and objectives of Council's policies and guidelines for the future city, including the DCP. Alignment with City of Newcastle Strategic Policies – Parking section *Response to RFIs (***Attachment B)**
The assumption that the majority of 6500 students and staff will not drive a motor vehicle into the City Centre is unrealistic. The provision of the Light Rail and other developments in the City Centre has had a significant impact on the number of available car parking spaces. The development will have adverse impacts on the availability of on-street parking in the City Centre and adjoining residential suburbs	The high level of private car usage across the Hunter Region reflects ease of travel and distances involved. The assumption that the majority of students and staff will not drive is based on proximity to the city campus. This has been addressed in the *Response to RFIs Department of Planning* document -University of Newcastle Survey Data Section (**Attachment B).** The removal of parking in association with the Light Rail has been assessed as part of the REF for the light rail as well as the parking study undertaken by Council and the development of the Council transport policy. This comment assumes that students drive. As noted by Council the cost of parking is an impediment to students and so shall support the strategy for sustainable travel. On street parking in the city centre is charged in a manner similar to parking stations rates at $3.00 per hour or more and with short periods designed to provide for high turnover for visitors to the city. It is unlikely therefore to be suitable for use by students due to costings and time restrictions. NeW Space Travel Patterns Section - *Response to RFIs* The desire for free parking within surrounding residential suburbs is a matter for Council who have addressed this through the introduction of local parking plans to support residential parking needs eg residential streets in Cooks Hill, Wickham etc. The distance workers walk from currently used parking eg King Edward Park, Hamilton and Wickham demonstrates that people will walk much further than 800metres, let alone 400m to connect with work. This reinforces the suitability of the surrounding suburbs for staff and students to live and connect to the city through either walking or walking to public transport.

Figure 4.6 demonstrates that the greater catchment of Newcastle has 'poor or very poor' access to public transport.	This illustration from Council's Local Planning Strategy acknowledges the importance of transport links, particularly along rail corridors and down played access to bus services in determining the benefits of developing land within the LGA. Alignment with City of Newcastle Strategic Policies – Understanding travel behaviour *Response to RFIs* The GNFTP provides diagrams detailing the Public Transport Accessibility Level (PTAL) covering all public transport and confirms that there is good to excellent PTAL across much of the Newcastle LGA, particularly in the critical AM period, whilst across the wider area such a level is focused on key suburban hubs eg Belmont, Metford, Cardiff and Morisset. Such hubs become the focus for commuter travel with local connections to bus interchanges eg Charlestown, Williamtown and Glendale or railway stations eg Maitland, Fassifern and Morisset. This is outlined further in the *Response to RFIs Department of Planning* document.
Licensed agreement with Civic West carpark.	The University has use of the Civic West Carpark, with 150 carparks being available to University staff/students to use at a rate of $10 per day. Demands for this facility have varied but are consistently underutilised with absolute peak usage in 2019 (through to May) being 102 users (68% occupancy). NeW Space Travel Patterns – Civic West car park section
Campus Shuttle and Park and Ride	The ability of the Callaghan campus to cater for the parking demands associated with Campus Shuttle can be considered in two ways. Firstly, the relocation of faculties currently based at Callaghan to the city would see some people who drive and park at Callaghan continue to do this, using the shuttle to complete their journey, thus requiring no additional parking capacity at Callaghan. Others who currently drive to Callaghan may instead be able to access NeW Space by public transport or already live within the ATZ therefore freeing up parking at Callaghan. NeW Space Travel Patterns – New Space Shuttle *Response to RFIs* Secondly, there are two designated Park and Ride parking areas at the Callaghan campus. One is located at Car Park 2b, with approximately 120 bays, whilst the other is located in Car Park 14 with approximately 215 bays, providing a total of 335 park and ride spaces. These areas are serviced by the nearby Shuttle pick up points. Recent observations (Friday 26/10/18 and Monday 29/10/18) of the two shuttle service bus stops on the Callaghan Campus during the morning (8:15-9:30am) found that the majority of users were not using the carpark but rather were walking to the bus stops from other locations. For example; • The Monday 8:45am pick up shuttle at Car Park 2b saw 22 patrons board the bus, of which only 5 parked in the designated car park.

	• The Friday 8:15am pick up shuttle at Car Park 14 saw 4 patrons board the bus at this stop, of which only 1 parked in the designated car park. (Note shuttle was approximately half full having already picked up at Car Park 2b) • The Friday 8:15am pick up shuttle at car park 14 saw 5 patrons board the bus at this stop, of which only 1 parked in the designated car park. (Note shuttle was approximately 1/3 full having already picked up at Car Park 2b) The above indicates in the order of 1 in every 4 users parking in the designated areas. Those walking could include; residents (walking from nearby suburbs or on campus), students having caught public transport to campus then using the free shuttle to the city, students sharing a ride or being dropped by car at Callaghan and using the shuttle to access the city, or students parking elsewhere and walking to the shuttle. The number of walk up users, could also reflect users parking in other locations on site, however this is considered unlikely given the designated parking provides the most convenient access to the shuttle stops. Given the low number of users observed to park and ride, there was a significant number of parking spaces available within both designated car parks despite the relatively high usage for the shuttle. The parking demand recorded in Car Park 2b on the Monday is detailed below: • 8:45am = 44 of the 120 spaces occupied • 9:30am = 80 of the 120 spaces occupied (67% occupancy) From observations the majority of drivers parking in this area were not using the shuttle service. The parking in Car Park 14 provides in the order of 400 spaces, with approximately 215 designated for the shuttle service. In total only 46 of these spaces were occupied at 8:30am on the Friday, with the majority being residents (with parking sticker identifiable on the windscreen). It is noted the demand for the shuttle service varies day to day and the peak shuttle use typically occurs on Tuesdays early in each semester (not coinciding with the observations), however the pattern for students utilising this service (park or walk off campus) is considered to be consistent from day to day regardless of total patronage. From the shuttle survey data provided (outlined in the *Response to RFIs Department of Planning* document): • Monday demands are approximately 80% of the Tuesday peak demands. • Friday demands are approximately 70% of the Tuesday peak demands. As such the parking demand during the peak Tuesday period would be higher, however there is spare capacity during the average semester week to accommodate this.

	Given only approximately 1 in 4 users are parking in the designated shuttle bus car parks, which are currently underutilised across the majority of the semesters, it is considered there is spare capacity available within the existing shuttle bus parking provision to enable the expansion of these services for HCCD. The future needs for this service shall also be dependent upon the course offerings at HCCD and is not a lineal progression of the current demand. Currently split courses for Law and various faculties based at Callaghan drive the demand for students to transfer between New Space and Callaghan. This study pattern may not be required for the courses offered at HCCD in the future. There is also a transitional element that is related to students who were already enrolled in courses at Callaghan and living within that area needing to continue their study in the city but were unable/unwilling to relocate their place of residence. Future HCCD students, as detailed in the original NeW Space assessment are most likely to locate within the ATZ. Future courses offered at HCCD will include some new courses that have no connection with Callaghan campus and as such the existing need to transfer between campuses is expected to be lower for HCCD. Given the above, any prediction of future demands for an expanded service are unfeasible at this stage. The peak usage recorded in 2019 occurred in the week starting 4th March, with 6,749 users. The peak usage through the same period in 2018 was 5,985. A comparison of the data across the Semester 1 periods of 2018 and 2019 shows a general uptake in shuttle usage, with a relatively even split of users in each direction. It is noted that there is significant weekly variation, typical of University attendance patterns, which also see lower attendance as the semester progresses.
NCC Park and Ride service	The proposal relies upon students and staff making use of a variety of sustainable travel opportunities provided by entities other than the University. As with the City of Newcastle's Park and Ride service, State Rail, Newcastle Transport, local bus providers and car sharing services all provide commuters to the city with user pays travel options.
Staff Parking	Current parking patterns associated with staff do not reflect future patterns as over time new staff may choose to locate close to the city whilst current staff are less likely to relocate. Such future travel and parking patterns has been addressed in the *Response to Department of Planning* document. Such future travel shall be supported by the ongoing review of the workplace travel plans developed for the city campuses. As detailed above parking at the Civic West parking station is underutilised.

Public transport travel times	The opportunity for public transport connection to the city centre was assessed in detail in the original NeW Space documentation. The key finding at the time was the availability of quality connections to the city centre compared with, for example the Callaghan Campus. Travel times by train continue to be competitive with vehicle journey times eg to drive from Fassifern to the city centre takes 45 minutes and so does train and light rail transfer. The privatisation of Newcastle Transport has seen ongoing improvements to bus travel times. Since 2018 more than one thousand extra services each week have been introduced, with improved frequency, better connections between modes and a well-supported new On Demand service. The introduction of express routes between key nodes has further enhanced these services and provides more opportunities for reasonable public transport travel, particularly from locations not accessed by rail. The future integration of public transport in the city, including the construction of the Newcastle Bus Interchange, shall see ongoing improvements in this regard.
Student accommodation parking	The concept masterplan does not provide specific detail regarding the planned student accommodation. Future student accommodation shall be the subject of individual development applications which shall provide an opportunity to detail suitable levels of support for the various mode shares eg bike storage as well as responding to the availability of accessible parking. Further case studies of development including student accommodation have been examined to determine the level of parking provided. The approved UTS Peter Johnson Building included the construction of student accommodation to provide up to 720 beds, located within a new 13 storey tower constructed above the existing 7 storey Peter Johnson building. This development is similar in context to the future layout of the HCCD precinct. The development included no increase in parking for staff or students as discussed in the *Response to RFIs* **(Attachment B)** Case Studies section. Students coming to the City Campus, taking up accommodation will not be burdened by the cost associated with needing to own and run a car. Regardless of whether a student comes from regional NSW, another capital city or from overseas they will be able to arrive into Newcastle and rely on the city centre and public transport to meet their transport needs. This is quite different to Callaghan which although supported by on campus facilities and a local shopping centre is not part of a busy city centre with employment and social opportunities as well as retail and study.

	The assumption that a student needs to have a car to travel back to their home of origin is assuming a high impost on both the student (cost associated with owning a vehicle) and the university (cost associated with effectively storing a vehicle for a student to travel home). Newcastle is supported by suitable transport links to regional NSW which can provide safe travel options for student travelling home. Case Studies - UTS Student Accommodation *Response to RFIs*
A more comprehensive evidence based strategy detailing responses to a list of bullet points should be prepared.	Refer *Response to RFIs Department of Planning* document (**Attachment B).**
Consider the specific parking requirements for each stage.	The specific details associated with each stage shall be addressed in the individual DAs allowing for the development of the campus over time and the changes associated with the revitalisation of Newcastle. These shall continue to address and respond to the campus' sustainable travel objectives.
Pedestrian Network	The HCCD Concept Masterplan Report has considered the requirements for the campus pedestrian and cycling networks. The detailed design of the various stages shall detail the ongoing suitability of pedestrian and cycling infrastructure and the impact of the development on these existing facilities.

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Attachment B – Response to RFIs – Department of Planning

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29th November 2018

Response to RFIs - Department of Planning

University of Newcastle

Attn: Mathew Watson - APP

Dear Mathew,

HCCD Concept Plan – Response to Department of Planning Comments

The following document has been prepared in response to the request from the Department of Planning and Environment outlined below:

Response to Submissions University of Newcastle Honeysuckle Campus Concept Proposal (SSD 9262) Attachment A, Item 3 Mode Share:

Provide further justification on the proposed mode share targets, and in particular the proposal for limited on-site car parking. The Department understands that the parking analysis and Mode of Transport to NeW Space survey provided indicates a significant percentage of students and staff are likely to travel by car.

The response is based on the following:

- The alignment of the proposed Honeysuckle City Campus Development Transport Access Strategy (HCCD TAS) with the overarching strategies and vision for the City of Newcastle.
- An analysis of survey data provided by the University of Newcastle (UON) relating to travel and transport, to determine the current travel behaviours and overall satisfaction with transport options among UON students.
- Reference to and comparison with similar types of development that have been successful in implementing strategies that are aimed at limiting the use of private vehicles as a mode of transport and subsequently required minimal or no parking as part of planning approvals.

Executive Summary

As part of the Honeysuckle City Campus Development (HCCD) Concept Plan State Significant Development Application (SSDA) process, the NSW Department of Planning and Environment (DPE) has provided some feedback and submissions received during the exhibition period.

The City of Newcastle and two public submissions have queried the proposed mode share targets of the traffic and parking strategy for the proposed Concept Plan, as well as broader traffic and parking issues. As such, the Department has requested further justification as per the following:

Provide further justification on the proposed mode share targets, and in particular the proposal for limited on-site car parking. The Department understands that the parking analysis and Mode of Transport to NeW Space survey provided indicates a significant percentage of students and staff are likely to travel by car.

The University of Newcastle (UON) has engaged Seca Solution to address the submissions and to provide further clarification on the Transport Access Strategy submitted as part of the Environmental Impact Statement (EIS). Our response considers the strategic policies for the City of Newcastle, including the Greater Newcastle Metropolitan Plan 2036; It also provides further insight into UON existing mode share data; and analyses case studies of similar projects.

Overall, this report demonstrates that the HCCD TAS is adequate and well considered; and has been developed with consideration to the future of our city and our university. The data provided in our response further supports our strategy; for example:

- The projected higher density population within Newcastle will provide further opportunities to increase active travel in the city;
- Future transport opportunities identified in the NSW Future Transport Strategy will deliver improved transport options in and around the city, thus increasing public transport usage;
- UON existing transport-related data demonstrates that commencing students are already driving less and are seeking other modes of transport; the University of Newcastle is committed to support sustainable transport mode and will continue to encourage this behaviour shift as the long-term HCCD comes to life;
- Other Universities, like UTS, have been implementing similar transport strategies, anchored around active and public transport, and have been instrumental in changing behaviours.

The University of Newcastle Transport Access Strategy for HCCD is a long-term strategy that aligns with the future of the city of Newcastle and supports the University's commitment to promote sustainable transport options.

Introduction

Honeysuckle City Campus Development (HCCD), coupled with NeW Space, will see an increase in student numbers within the Newcastle City Centre. This underpins the strategy to revitalise Newcastle and as such evidence based on past travel patterns are not representative of this so cannot be relied upon to reflect the future. Even current patterns, although showing potential shifts and trends, only tell part of the story given that the city's revitalisation is still in its infancy with light rail yet to be completed and the increase in accommodation still well below predicted levels.

The Transport Access Strategy undertaken in June 2018 predicts that the majority of *future* students and staff (66% and 59% respectively) will choose to live in the Active Transport Zone, an area being a 2 kilometre walk to the city campus with a broader cycling/public transport base of 5-8 kilometres. The balance of the cohort, based on an assessment of place of residence showed that 34% / 41% may live beyond this area, however could still look to benefit from alternate transport options rather than that of single occupant car travel. This strategy is based on the implementation of government policy (transport/urban renewal) and the increased density of the Newcastle CBD and surrounds. It also replicates similar strategies adopted for other city based university campuses such as University of NSW (UNSW), University of Technology Sydney (UTS) and University of Tasmania (UTAS).

The Transport Access Strategy target was compared with travel data for the first six months only for NeW Space as determined in the Post Occupancy Survey, with the results outlined in Table 1 to follow. This demonstrated for a sample size of 961 (including 177 staff) that travel modes were on target for cycling and public transport, even allowing for the disruption created by the city centre roadworks and route changes a regular part of the transport environment due to light rail construction and works associated with the V8 racing track.

Table 1 – Post occupancy Survey Results (P01) compared with mode targets from the NeW Space Transport and Accessibility Assessment

Active Transport Mode	Actual - Students	Actual - Staff	Long Term Target - Students	Long Term Target -Staff
Cycling	6%	11%	8%	7%
Walking	23%	25%	54%	48%
Public Transport	32%	37%	38%	45%

The key element that has not yet been effective at this stage is the number of staff and students able to live within the Active Transport Zone (ATZ) and walk to the campus. This reflects the timing of residential developments within the city and surrounds as well as the location of future students to the ATZ. The lag is reflective of existing students who have existing accommodation and was predicted in the NeW Space strategy.

Similarly, the truncation of the heavy rail (December 2014), and the yet incomplete light rail, has seen a drop in public transport patronage to the city. A comparison of the Journey to Work (JtoW) data for the Newcastle Cooks Hill area (SA2) from 2011 to 2016 shows a shift from 10.29% to 8.25% for public transport.

Evidence to support the future mode share targets for HCCD, anticipated to be similar to those predicted for NeW Space, are based on the following:

1. The assumption that staff and students will choose to live, work and study within the CBD and its environs – Consistent with the Newcastle Urban Renewal Strategy
2. That ongoing improvements to transport including parking policies will encourage moves towards sustainable travel – Refer to *Changes to Strategic Policies* section to follow.

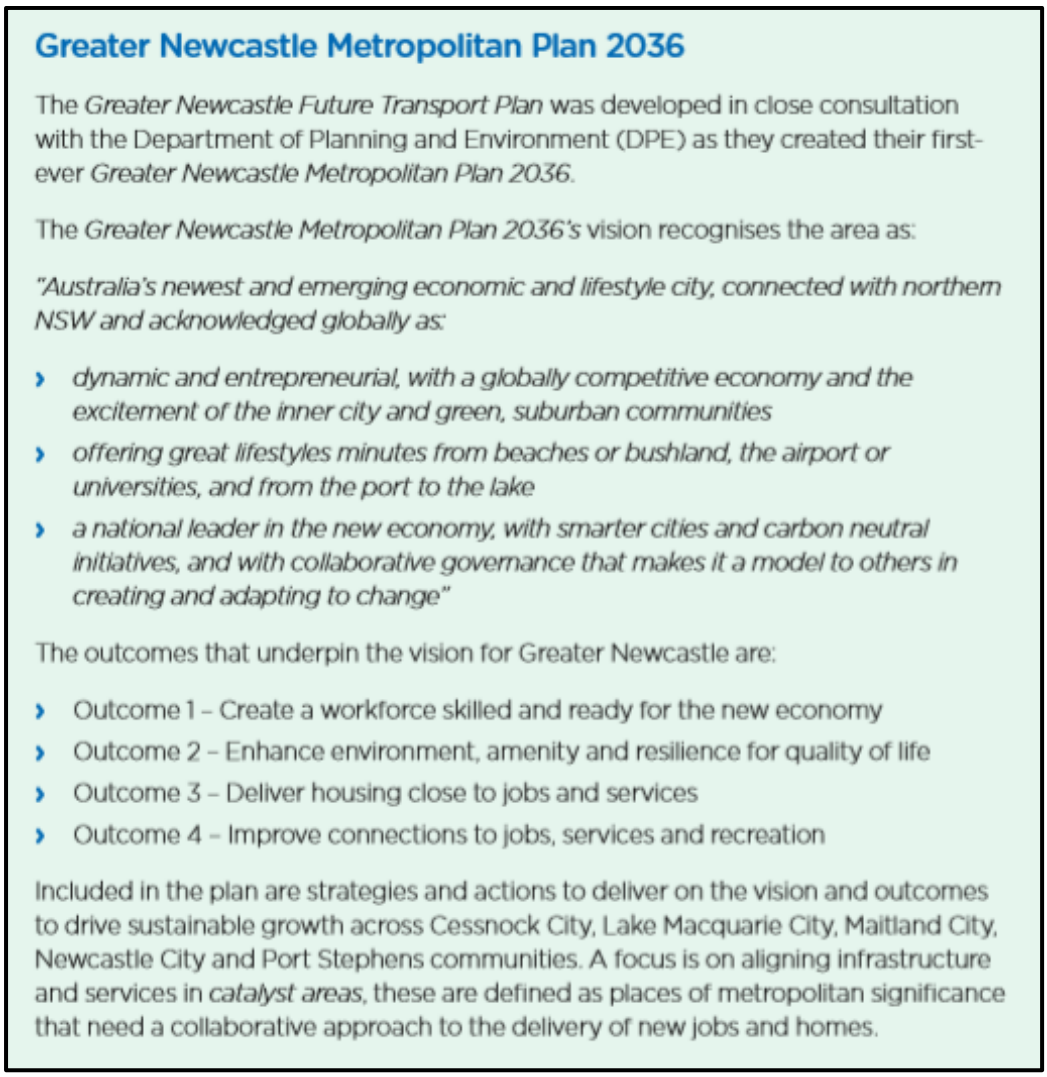
An analysis of the current travel behaviours and satisfaction with alternative transport options to single car use has been undertaken. This analysis was based on data provided by the University of Newcastle that was recorded as part of the Student Feedback on the University of Newcastle survey (SFUN). This data provides an update to the travel modes outlined in Table 1 above and also entails a more detailed study.

Examples are also offered to demonstrate how significant shifts in the number of residents, employees or students into areas can be supported by sustainable transport rather than the provision of parking. The examples detailed include The University of Technology Sydney and The University of NSW whilst Barangaroo also provides a case in point.

Alignment with City of Newcastle Strategic Policies

Changes to Strategic Policies

Since the development of the Honeysuckle City Campus Development (HCCD) Transport Access Strategy (June 2018) two additional State Government plans have been finalised and released which have direct relevance to the HCCD and its sustainable transport strategy. The Greater Newcastle Metropolitan Plan 2036 (refer Figure 1 below) and the Greater Newcastle Future Transport Plan (GNFTP) came from draft plans that were developed concurrently to ensure land use and transport outcomes for Greater Newcastle are integrated.



Greater Newcastle Metropolitan Plan 2036

The *Greater Newcastle Future Transport Plan* was developed in close consultation with the Department of Planning and Environment (DPE) as they created their first-ever *Greater Newcastle Metropolitan Plan 2036*.

The *Greater Newcastle Metropolitan Plan 2036's* vision recognises the area as:

"Australia's newest and emerging economic and lifestyle city, connected with northern NSW and acknowledged globally as:

- *dynamic and entrepreneurial, with a globally competitive economy and the excitement of the inner city and green, suburban communities*
- *offering great lifestyles minutes from beaches or bushland, the airport or universities, and from the port to the lake*
- *a national leader in the new economy, with smarter cities and carbon neutral initiatives, and with collaborative governance that makes it a model to others in creating and adapting to change"*

The outcomes that underpin the vision for Greater Newcastle are:

- Outcome 1 – Create a workforce skilled and ready for the new economy
- Outcome 2 – Enhance environment, amenity and resilience for quality of life
- Outcome 3 – Deliver housing close to jobs and services
- Outcome 4 – Improve connections to jobs, services and recreation

Included in the plan are strategies and actions to deliver on the vision and outcomes to drive sustainable growth across Cessnock City, Lake Macquarie City, Maitland City, Newcastle City and Port Stephens communities. A focus is on aligning infrastructure and services in *catalyst areas*, these are defined as places of metropolitan significance that need a collaborative approach to the delivery of new jobs and homes.

Figure 1 – Extract from Greater Newcastle Metropolitan Plan 2036

As can be seen above, Outcomes 3 and 4 of the Greater Newcastle Metropolitan Plan 2036 focus on the delivery of housing close to jobs and services, along with improved connections to jobs, services and recreation. The HCCD Transport Access Strategy is based on the delivery of these outcomes, with particular reference to the future supply of residential development within the Newcastle City Centre to provide a means for staff and students to live within the Active Travel Zone.

The Greater Newcastle Future Transport Plan provides the overarching strategic transport network and vision that will guide future transport planning for the Greater Newcastle area. It is an evidence based plan that identifies key transport policy, service and infrastructure initiatives for investigation within the Global Gateway City of Greater Newcastle and forms part of the Future Transport 2056 suite, which comprises an overarching strategy being an update of NSW's Long-Term Transport Master Plan released in 2012. It has been developed in concert with the Greater Sydney Commission's A Metropolis of Three Cities, Infrastructure NSW's State Infrastructure Strategy, and the Department of Planning and Environment (DPE) Regional Plans, to provide an integrated vision for the state. It has been informed by the Department of Premier and Cabinet's A 20-Year Economic Vision for Regional NSW.

Newcastle Light Rail has been a transformative infrastructure project, triggering increased investment and urban renewal of the city centre. This has seen the development the Newcastle Interchange, Newcastle Courthouse upgrades as well as new businesses entering the city centre, supporting jobs in the region.

In addition to Light Rail, other improvements to public transport will support changes with planning underway for the New Intercity and Regional Rail Fleets. The recent introduction of Newcastle Transport has led to more frequent bus and ferry services as well as trials of on demand buses within the metro heart and metro core.

Defining Greater Newcastle and its future

The distribution of residential population growth across Greater Newcastle has a considerable impact on travel patterns and demand. The Greater Newcastle Metropolitan Plan 2036 identifies a goal of delivering 60% infill housing across Greater Newcastle by 2036. Infill housing development typically increases demand on existing services, whereas greenfield development requires planning for delivery of new services and infrastructure. It is this infill housing that will provide the critical increase in residential density for the city.

The highest population density in Greater Newcastle is within 5-10km of Newcastle City Centre, the metro core, at around 19 people per hectare. This area is expected to continue to grow with increased density, with projected overall growth for the region from around 575,000 people to around 760,000 by 2056.

Figure 2 to follow shows the current and future age distribution across Greater Newcastle, highlighting the age group with the highest number of people in each area. In summary:

- Higher proportions of working aged people (aged 30-59 years) are located around the metro core, concentrated north of Lake Macquarie, and in the areas north and south of Maitland.
- Greater Newcastle's metro core has a notably higher proportion of people aged between 20-29 years, reflecting the presence of the University of Newcastle

The Hunter Regional Plan 2036's vision is for 95 percent of Greater Newcastle's residents to live within 30 minutes of a strategic centre. Newcastle City Centre is one of the catalyst areas identified in the Greater Newcastle Metropolitan Plan 2036 with high population and employment densities already recognised as being within the metro core.

These areas are consistent with the Active Transport Zone identified in the HCCD Transport and Access Strategy with future cohorts (20-29) also located along the Hunter Railway Line towards Maitland.

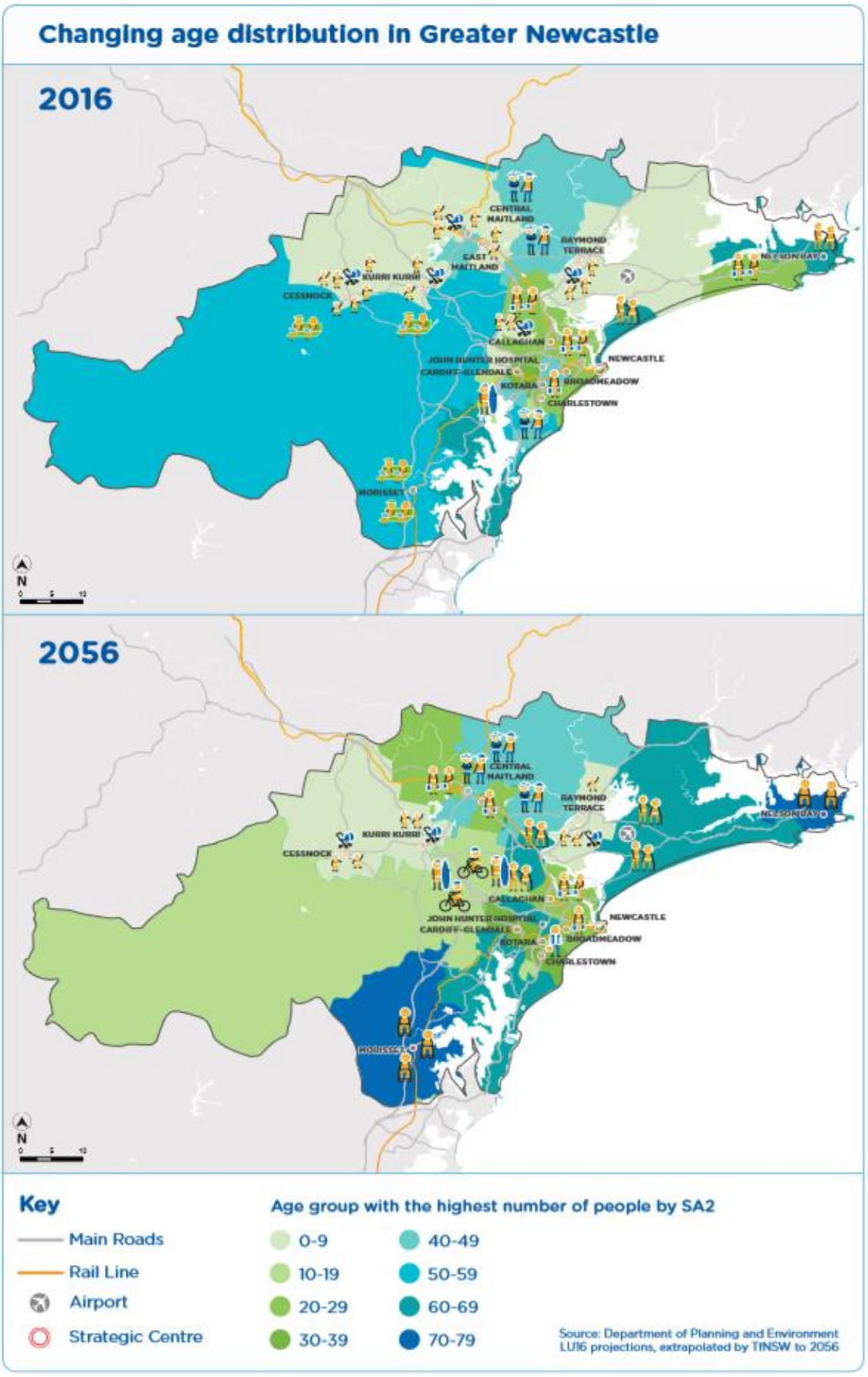


Figure 2 – Existing and projected age distribution across Greater Newcastle: age group with the highest number of people in each SA 2, 2016 and 2056 (Source: Department of Planning and Environment LU16 projections extrapolated to 2056)

Understanding travel behaviour

Travel behaviour detailed in the GNFTP allows for the broader area of Greater Newcastle and so reflects the wide diversity of travel across the region. Given this, most people in Greater Newcastle travel by private vehicle (over 80 percent of all trips). Public transport use is generally low. However, there are strong rates of active transport, with more than 13 percent of all trips made by walking or cycling.

Over half of the trips made by Greater Newcastle's residents are short journeys under 5km. The GNFTP recognises "that there is an opportunity for these shorter journeys to be undertaken by walking or cycling". This finding is consistent with the assumptions of the Active Transport Zone.

Allowing for the high use of private vehicles some roads are currently approaching capacity in the AM and PM peak. With increased travel demands (to 2056) a significant number of key corridors in the metro core will also be approaching capacity without transport improvements and changes to travel behaviour.

Within the Intercity network, Opal data shows that the stations generating the most use are Hamilton (former temporary access point into Newcastle City Centre), Morisset, Broadmeadow, Warabrook (University of Newcastle) and Cardiff with future demands expected from north from Wyee, south from Cardiff and east from Metford in the AM peak.

Bus patronage data shows strong demand for travel to and from key destinations such as Charlestown Square shopping centre, University of Newcastle, Stockland Jesmond shopping centre, and Stockland Glendale shopping centre.

Patronage of ferry services between Stockton and Queens Wharf in the Newcastle City Centre appear to be increasing with an average of 1,300 trips each day on the service in 2017 and in January 2018 data showing an increase of 9,000 trips compared to the number taken in January 2017.

Point-to-point services include on demand services, taxis, rideshare and Community Transport.

A Newcastle Transport On Demand bus trial currently operates in addition to existing scheduled bus routes in Dudley, Whitebridge, Mount Hutton, Windale, Tingira Heights, Eleebana, Warners Bay, Gateshead and Charlestown areas. Transport is available from 9am to 4pm on weekdays, 7am to 6pm on Saturday and 9am to 6pm on Sunday and saw patronage grow from 232 rides in January 2018 to 1,318 rides in April 2018.

The public transport accessibility through various times of day and across the region is outlined in Figure 3, Figure 4 and Figure 5 following.

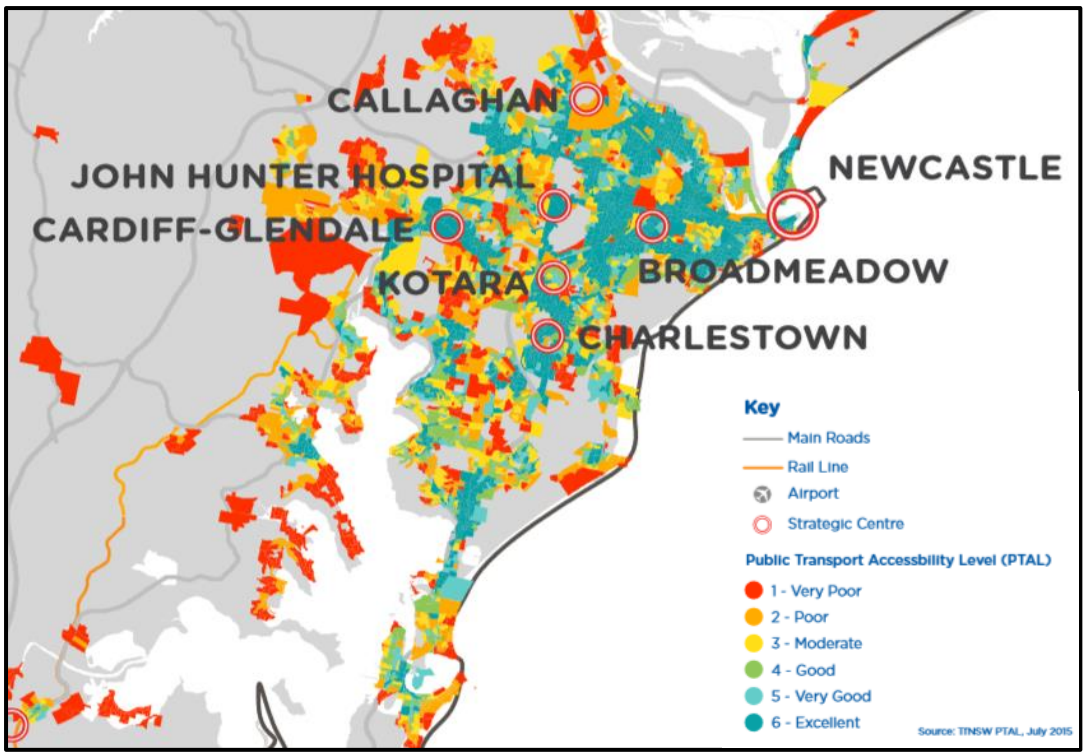


Figure 3 – Public Transport Accessibility 8am-9am (Source: GNFTP))

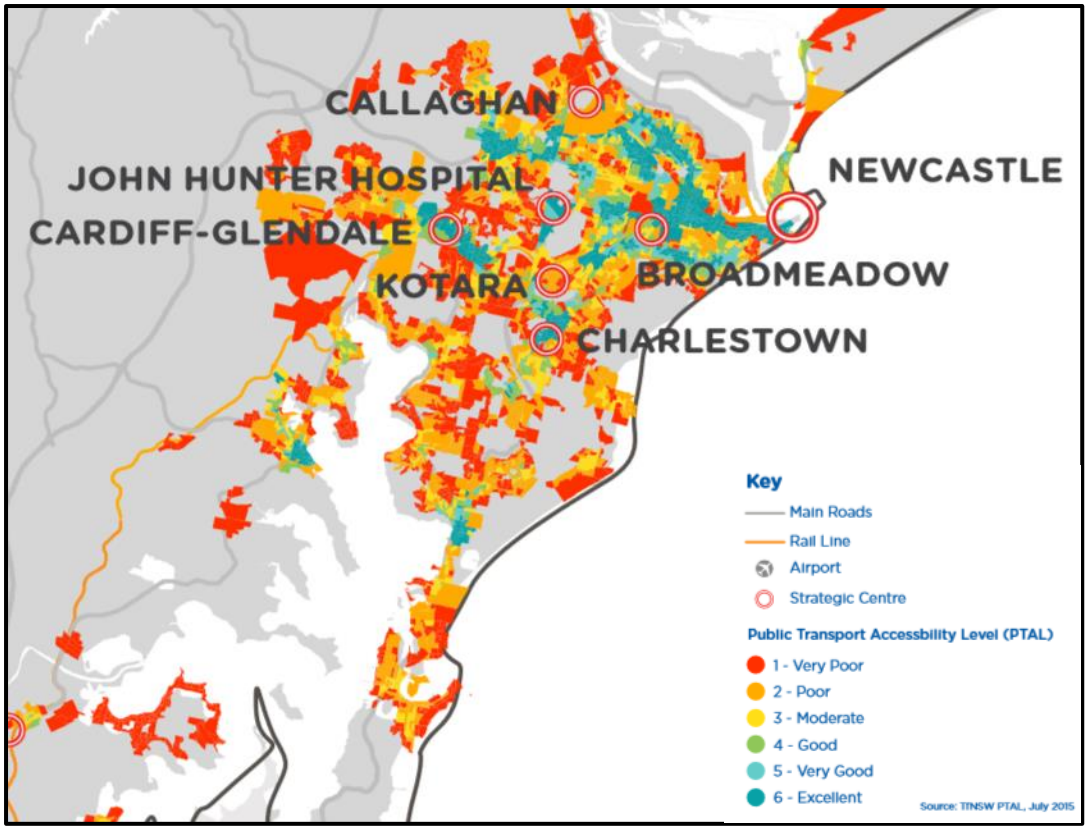


Figure 4 – Public Transport Accessibility 12-1pm (Source: GNFTP)

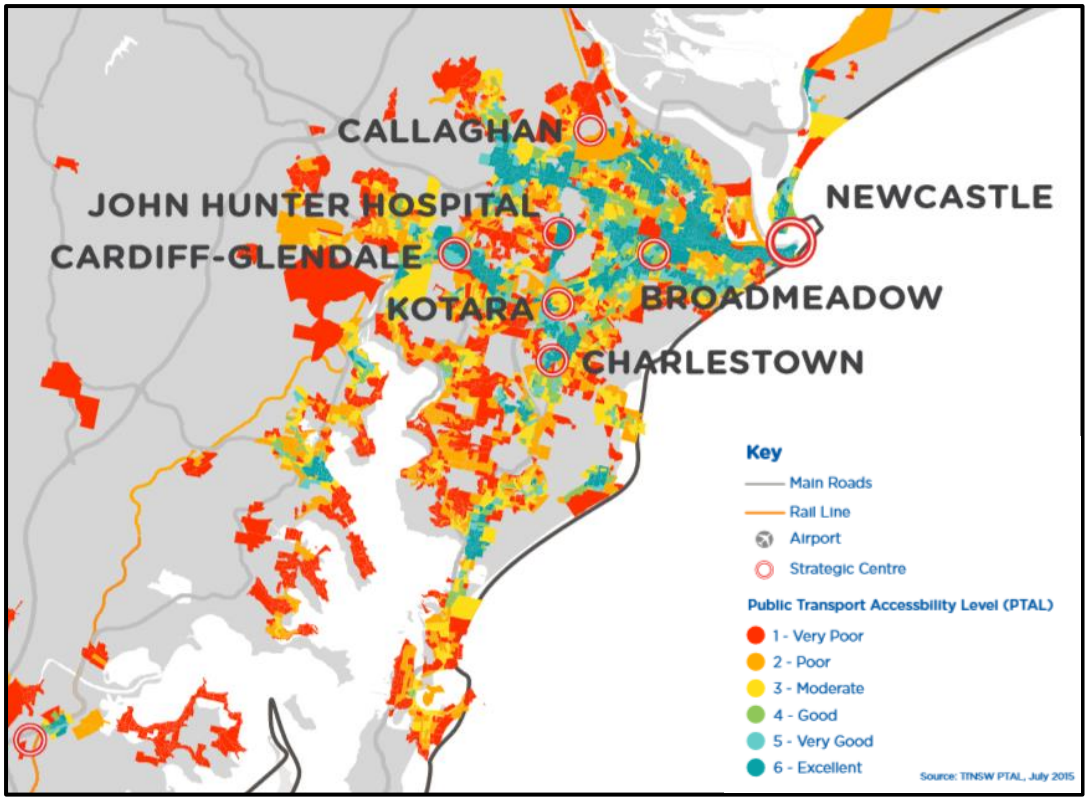


Figure 5 – Public Transport Accessibility 5-6pm (Source: GNFTP)

The Public Transport Accessibility Level (PTAL) is a measure of accessibility from a point of interest on the public transport network. As detailed in the GNFTP, data for 2015 shows that most strategic centres within Greater Newcastle have excellent PTAL ratings in the AM peak. These are concentrated in Newcastle City Centre. Areas outside the metro heart generally have less than excellent ratings throughout the day.

This information supports the availability of quality public transport within the Active Transport Zone and to key hubs such as Charlestown, Cardiff and Belmont.

Future Travel 2056

The GNFTP predicts that as Greater Newcastle grows, there will be increased pressure on the road network with the need to develop travel demand strategies to re-balance travel demand. Public and active transport must be viable options for travelling to/from and within Greater Newcastle.

The GNFTP identifies an opportunity to support development as a Global Gateway City by “getting ahead of the curve” and supporting its transition into Stage 3 of the city development cycle (as referred to in Figure 6).

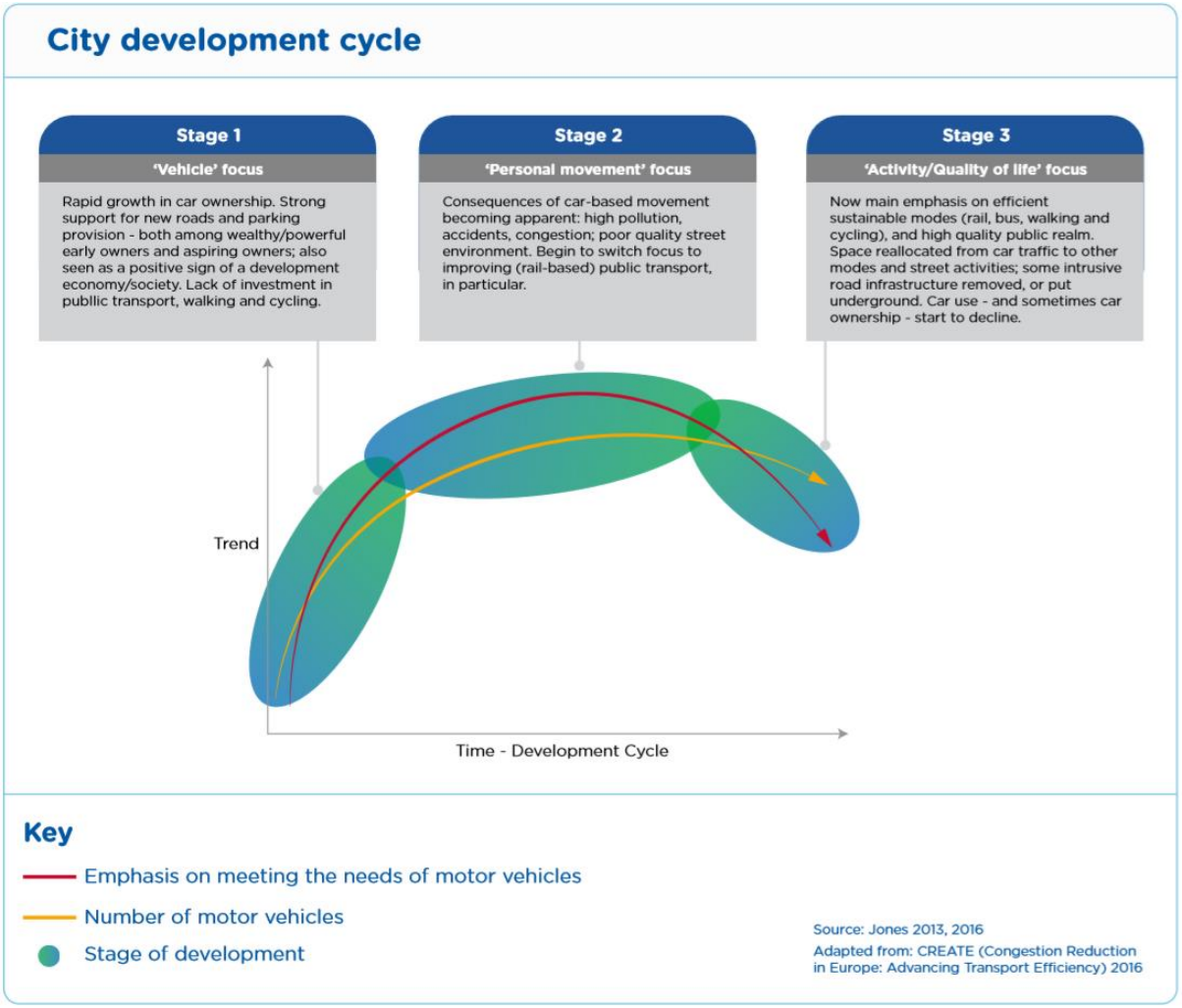


Figure 6 – City Development Cycle (Source: GNFTP)

With increased focus on more efficient and sustainable modes of transport (public and active), rather than car use, the GNFTP acknowledges that there is an opportunity to support the development of a high quality public realm. The GNFTP notes "this process has already started with the transformation of the city centre as a result of the new light rail. Newcastle Transport's clear public transport network hierarchy with more frequent bus and ferry services and an on demand trial area will continue to support this transition."

The development of this requires:

- Development of a strong public transport system connecting people with where they live to where they want to travel to.
- Better integrating train stations with surrounding land uses.
- Reviewing car parking provision and limiting parking in centres where strong public transport exists and exploring opportunities for park and ride, car pooling and car sharing services.
- Encouraging and working with stakeholders to develop travel demand management policies (re-time, re-mode, re-route and reduce travel) such as promoting people working from home or working with employers to promote sustainable working and organisational practices, travelling in off peak periods or reallocation of road space to reduce the number of single occupant vehicle trips.
- Collaborating with local councils and key stakeholder groups to develop a safe and connected cycling network and creating more walkable places across Greater Newcastle.

Future transport opportunities are outlined in the State Government's *Future Transport Strategy.*

- New technologies for connected, automated and electric vehicles will improve public and private modes of transport and freight vehicles.
- Personalised mobility devices, like e-bikes and motorised scooters, offer alternatives for short trips to city centres and work locations.
- Ever expanding data sources and applications are enabling greater integration of services and new service models to be developed and adopted. The emergence of rideshare companies has already significantly changed the point-to-point market, with new online service providers emerging and being embraced by customers.
- Data-enabled transport service models, known as Mobility as a Service (MaaS), will enable customers to plan and pay for their journeys across different transport service providers via a single customer interface, such as a mobile phone app. The trial of the on demand bus services in Greater Newcastle reflects this technology.

Mode Share

The GNFTP notes that Greater Newcastle has strong potential to increase the share of trips that people make on public transport, walking and cycling. Using data from the Household Travel Survey (five year pooled data between 2011/12 and 2015/16), only three per cent of trips in Greater Newcastle during the week are undertaken by public transport. However, Greater Newcastle has one of the highest shares of people walking and cycling in the metropolitan areas of Sydney, Wollongong, Central Coast and Hunter with 13 per cent of trips made by foot or bicycle.

Overall the use of public transport, walking and cycling is relatively low when compared with similar cities internationally although the data for the Newcastle City Centre shows a high rate of public transport and with the increased densities and light rail, there is significant opportunity to increase this use of public transport.

A review of Journey to Work data for the Newcastle City Centre shows commuting by public transport and active transport are both in the vicinity of 8%. Vehicle use however was still in the order of 70%. There is no Bureau of Statistics (BoS) data however to identify travel patterns for University students.

The GNFTP acknowledges that improvements can be achieved by:

- Implementing travel demand management policies and behaviour change initiatives as well as infrastructure, supported by Greater Newcastle Metropolitan Plan 2036's goal of 60 percent infill development.
- Increasing the frequency, reliability and directness of bus services along Greater Newcastle's key corridors, including urban renewal corridors, making bus travel more competitive with private vehicle travel (recently introduced in Newcastle Transport operating area).
- Introducing new point-to-point and on demand services in areas not well served by scheduled services.
- Encouraging the use of car pooling and park and ride.
- Connecting the regional cycleway network and providing safer ways for people to get to where they are going by bike.
- Focusing urban renewal development around train stations, improving train services and improving connections to these services.
- Completing Newcastle light rail and investigating opportunities for expansion.
- Extending the ferry network to the Newcastle Interchange.

Active Transport

GNFTP acknowledges that "there is an opportunity for trips within centres as well as trips less than 10km to be made by walking or cycling". This will be supported through the development of networks to make sustainable transport a real travel choice as part of the Walking and Cycling Program. Funding within this Program supports infrastructure as well as behavioural change programs and bicycle parking. It sees a regional bicycle network developed to support travel by bicycle across Greater Newcastle.

The greater density of residential and employment land uses presents a greater opportunity to increase sustainable mode shares compared to other regional areas. The availability of robust evidence on travel patterns (via Household Travel Survey data) also enables monitoring of performance throughout the day in these areas. It is noted however that this does not reflect trips undertaken by students by mode.

Over the next 40 years, forecasts show that population within the Newcastle City Centre will increase with areas within 10km of the Newcastle city centre to have a higher population density. The urban renewal of the Newcastle City Centre, including the University of Newcastle NeW Space campus and other corridors will generate additional demand for people to live and work in the city centre.

Public and active transport infrastructure and service changes should be put in place before people move into new developments to support sustainable travel behaviour and provide viable transport choices.

Priority corridors

In conjunction with the Newcastle Light Rail priority corridors have been investigated across Greater Newcastle (refer Figure 7) and its strategic centres for investment in priority public transport over the next 10 years.

Four have been shortlisted for further exploration:

- Newcastle Interchange – John Hunter Hospital
- Newcastle Interchange – Wallsend
- Newcastle Interchange – Mayfield
- Newcastle Interchange – Charlestown

Introducing bus priority measures in tactical locations can increase journey speed and reliability in the short and medium term delivering more rapid services with potential for light rail in the long term depending on demand.

This work will provide the foundation for the development of a rapid bus program for Greater Newcastle.

Figure 7 – Priority Corridors (Source: GNFTP)

Parking

The GNTFP clearly identifies that "a strategic approach to the provision of car parking needs to be considered for Greater Newcastle. This includes consideration of parking in centres as well as opportunities for park and ride and car pooling" (Refer Figure 8).

Other opportunities available for consideration include:

- Using technology to better manage car parking through improved communication and wayfinding, parking enforcement compliance and pricing based on demand
- Development controls setting maximum parking space requirements in new developments
- Shared use of car parking spaces
- A consistent approach to managing parking needs to be achieved across a region; it cannot be undertaken in one area and not others.

Parking in strategic centres

Previous parking policies have focused on providing parking to meet the demand in centres. However, ease of parking results in traffic congestion, decreases the viability of public transport and detracts from the amenity of places as they focus on vehicle access and not access for people.

These policy positions should be considered:

- Parking should support customer and business service needs
- Sustainability should drive parking supply, not demand, recognising:
  - The need for parking turnover
  - Reallocation of all day parking away from centres that are supported by strong public transport networks
- Maximising value in parking spaces particularly in centres through:
  - Prioritisation of short stay, high turn-over spaces over long stay, low turn-over spaces
  - On street parking for short stay uses only
  - Reduction in time limits for on-street parking
- Parking to support transport objectives through:
  - Progressive reduction of relative parking supply or pricing as a travel demand management tool to encourage mode shift to public and active transport.

Figure 8 – Extract from GNTFP highlighting the strategic approach to city centre car parking

Summary

The GNTFP strategic approach to travel to the Newcastle City Centre encompasses improved mode share to public transport, walking and cycling. The increased target mode share for these modes of transport aims to decrease reliance upon the use of private motor vehicles. With increasing density in the city centre and within the 10 km radius of the city centre, the demand for alternative active transport will increase, with this demand to be supported through the urban renewal corridors and strategic transport corridors. This will significantly increase the use of active transport options for the population of greater Newcastle and supports the planning for Honeysuckle City Campus Development in its location in a centre that is well serviced by strong public transport networks.

The focus on sustainable travel options rather than the promotion of vehicle trips into the Newcastle CBD also sees the supporting of Government transport objectives.

University of Newcastle Survey Data

As part of the response to submissions, The University of Newcastle (UON) has provided data regarding the travel behaviours of existing students and their level of satisfaction with alternative transport infrastructure (to driving and parking). This data was recorded as part of the Student Feedback on the University of Newcastle (SFUN), which was a survey administered to all current Undergraduate, Postgraduate and Enabling students, covering a range of non-Academic aspects of the student experience including travel and transport among a number of other themes.

The total number of respondents for the SFUN survey in 2018 was 7,020, which equates to 24% of the total student enrolments.

The SFUN responses pertaining to travel habits and satisfaction with transport options have been analysed, with the goal of determining the following key outcomes:

- The current travel behaviours for all UON students, including specifically for the Newcastle City Precinct.
- Identifying any evidence of a mode shift away from reliance on private vehicle use, including specifically for the Newcastle City Precinct.
- Identifying any evidence of a mode shift away from reliance on private vehicle use for commencing students in comparison to existing students, including specifically for the Newcastle City Precinct.
- Understanding the student satisfaction with alternate modes of transport to private vehicle use.
- Identifying any opportunities for increasing the use of alternate modes of travel.

The relevant SFUN questions and their potential response options, that were analysed to inform the above are listed below:

- How do you travel to campus most of the time?
  (Response options: Car, Carpool, Train, UON Shuttle Bus, Walk, Bicycle, Bus (public))
- Public Transport is adequate for me to come to campus.
  (Response options: Strongly agree, Agree, Uncertain/Unsure, Disagree, Strongly disagree)
- The NeW Space shuttle service is adequate for when I need to travel to/from NeW Space.
  (Response options: Strongly agree, Agree, Uncertain/Unsure, Disagree, Strongly disagree)
- End of trip facilities (Bike Hubs/showers) are adequate for my needs.
  (Response options: Strongly agree, Agree, Uncertain/Unsure, Disagree, Strongly disagree)
- Would you like to cycle to campus? (Response options as below)
  - No, I don't want to.
  - No, other modes of transport better suit my needs.
  - Yes, but I don't feel fit enough.
  - Yes, but I don't feel safe.
  - Yes, but the end of trip facilities are inadequate.

Mode of Travel

A summary of the mode of travel for students attending the Callaghan campus and the Newcastle City Precinct is provided in Figure 9 to follow. This data was derived from the survey question "How do you travel to campus most of the time?".

The data for each campus was also broken down into commencing students and continuing students, in order to identify if there has been any change in travel behaviours for commencing students.

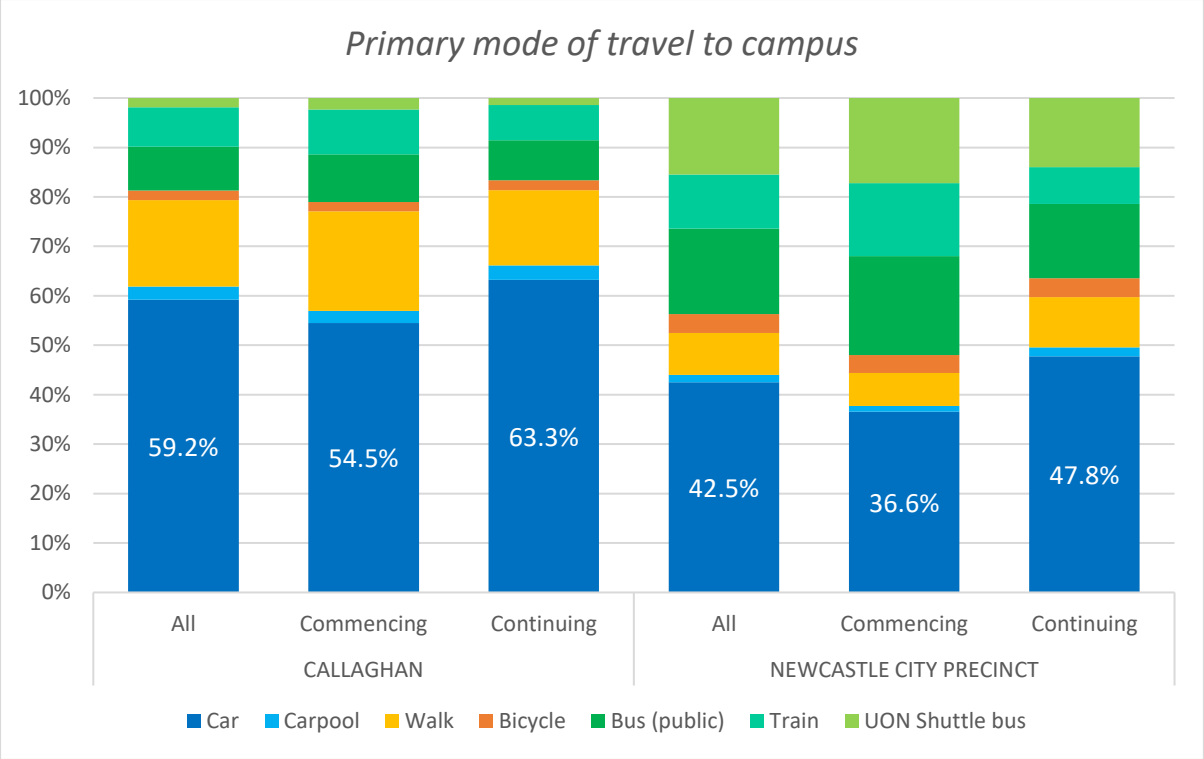


Figure 9 – Primary mode of travel for Callaghan and Newcastle City Precinct students, including a breakdown of commencing vs continuing

Callaghan Mode of Travel Analysis

The survey results outlined in Figure 9 indicate that single occupant travel by car is the most common method of travel to the Callaghan campus (59.2%). The comparison of commencing students against continuing students shows that those commencing in 2018 were less inclined to drive. Subsequently, there is a higher proportion of commencing students utilising a number of alternate modes, including walking, train travel and both public and shuttle bus services. There is no discernible difference for cycling and car pooling.

The increase in use of alternate modes for commencing students could indicate that the ongoing promotion of sustainable travel by the University, including the implementation of Active Travel Guides and expansion of the shuttle services to the Callaghan Campus, is working to reduce the reliance on private vehicles at this campus which historically has had a high demand for private vehicle access and on-site parking.

Newcastle City Precinct Mode of Travel Analysis

The mode of travel data for the existing city campus in Figure 9 shows the majority of Newcastle City Precinct students travel via alternate modes to private vehicle.

The breakdown of mode of travel for commencing students and continuing students at Newcastle City Precinct indicates there has been a significant shift away from travel via single occupant car to the Newcastle City Precinct, with 36.6% of commencing students stating car as their primary mode of travel compared to 47.8% for continuing students (a decrease of 11.2%). This could be an indication of the reluctance of continuing students, having moved from Callaghan to the city, to change their mode of travel as opposed to new students, who unlike many continuing students were aware of the study location prior to making their study decisions, who are more inclined to try alternative modes and establish sustainable travel behaviours.

There has been an increase across the alternate modes to car use, with the exception of cycling which remains similar and walking which is more common among continuing students than commencing. Train travel in particular for commencing students has been popular, with usage almost twice that of continuing students. It is considered this will continue to see high demands in the future upon the completion of the light rail, with this mode of travel to

provide a relatively cheap and reliable form of transport. This trend could indicate that commencing students are seeking to live closer to rail stations to make their commute easier, or alternatively parking at rail stations and catching the train in.

The mode of travel data also shows that the level of car usage for students enrolled at the Newcastle City Precinct is much lower than thot of the Callaghan campus, being 16.7% less. It is considered that due to the wide range of transport options and increased density of residential development in the city centre that this trend will increase over time.

Satisfaction with Alternate Modes

Public Transport

Both the SFUN 2018 and prior 2016 surveys included data regarding the overall satisfaction with public transport, by the agreement/disagreement with the following statement "Public Transport is adequate for me to come to campus". As such, a recent trend for student satisfaction with public transport can be established. The results for this are outlined in Figure 10.

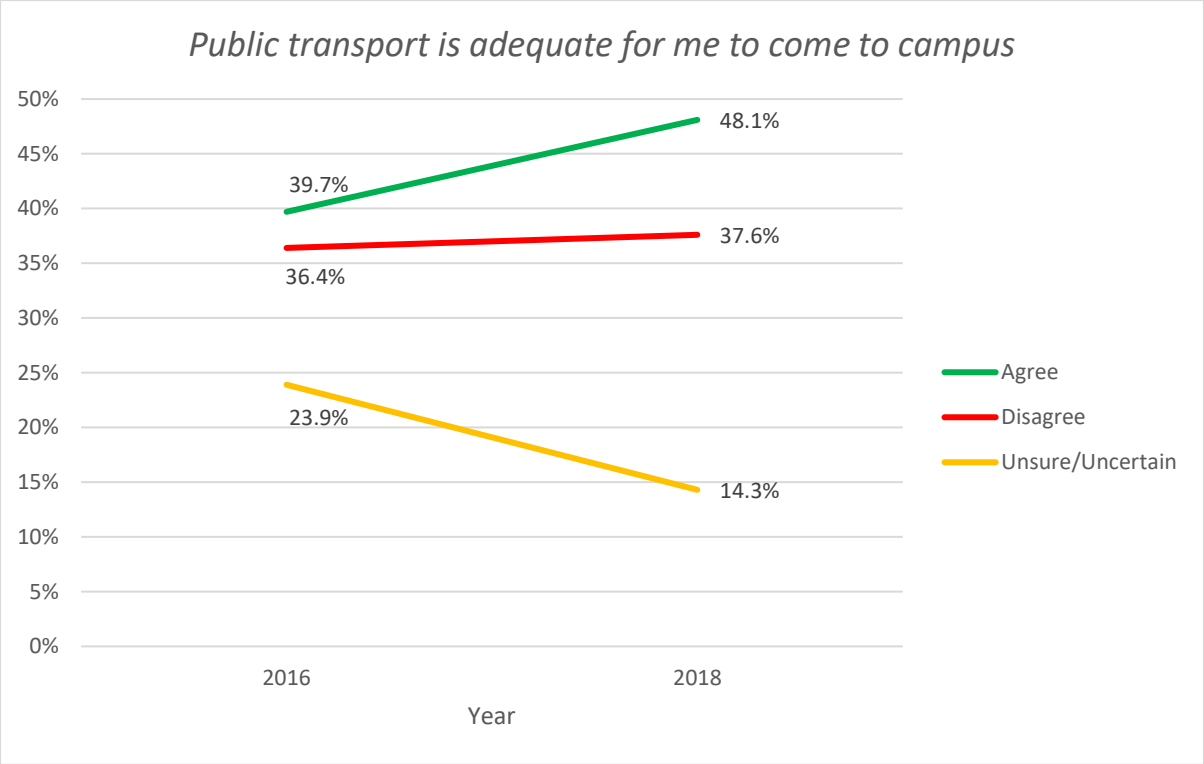


Figure 10 – Public transport satisfaction between 2016-2018

It can be seen that the overall student satisfaction with the adequacy of public transport is currently 48.1%, with 37.6% not satisfied and the remainder uncertain. There has been an 8.4% increase in student satisfaction since 2016, with those not satisfied remaining relatively steady and a decrease in uncertain responses indicating an increased awareness of the public transport options available to students from 2016 to 2018.

A further review of this survey question for the Newcastle City Precinct specifically in 2018 was undertaken, with the results outlined in Figure 11 to follow, which also includes a comparison of commencing against continuing students.

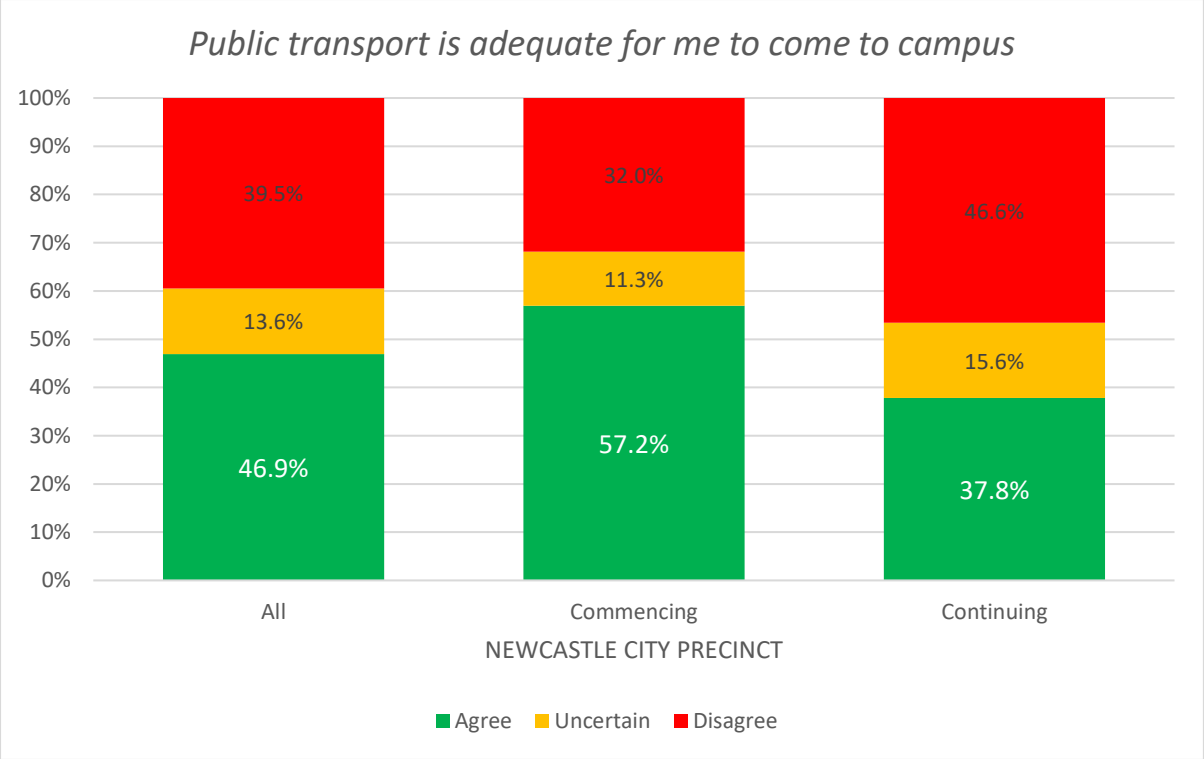


Figure 11 – Comparison of public transport satisfaction for Newcastle City Precinct, commencing vs continuing students in 2018

An analysis of the commencing students against the continuing students for the city campus showed significantly higher satisfaction rates for commencing students, with 57.2% agreeing public transport is satisfactory over 37.8% for continuing students. This shows that the majority of commencing students at Newcastle City Precinct are satisfied with the current public transport available.

This is in spite of the ongoing disruptions to public transport routes in the city precinct during 2017-18, due mainly to the light rail works. It is expected that satisfaction with public transport for city campus students will increase in 2019 and subsequent years, once the light rail is operational and there is more certainty regarding routes and scheduling of public transport options.

NeW Space Shuttle

Satisfaction with the NeW Space shuttle service was determined via the agreement/disagreement with the statement, "The NeW Space shuttle service is adequate for when I need to travel to/from NeW Space". A summary of the responses for the Callaghan and Newcastle City campuses is shown in Table 2 below.

Table 2 – Adequacy of the NeW Space Shuttle

Campus	Satisfied	Uncertain	Not Satisfied
Callaghan	58%	30%	12%
Newcastle City	63%	20%	17%

The results outlined above indicate the majority of both Callaghan and Newcastle City campus students are satisfied with the shuttle service. The high number of uncertain responses indicate that many students are either unaware of the service or may have not tried it yet.

A review of the commencing students against the continuing students for the city campus again indicates that commencing students are overall more satisfied with this method of travel to NeW Space, with 67.2%, over 59.1% for continuing students.

The expansion of this service is proposed as part of the Honeysuckle City Campus Development, with the above data reflecting the high level of satisfaction for the existing service.

Cycling

As outlined previously in the Mode Share section, the current cycling numbers are low at around 2% of all UON students. The Newcastle City Precinct does have a higher rate of 3.8%, indicating cycling to the city campus is more desirable for students. This is likely due to the greater density of residential development within the surrounding area meaning cyclists are required to travel a shorter distance.

From the survey query, "End of trip facilities (Bike Hubs/ showers) are adequate for my needs", 85.9% of city campus respondents are satisfied with the Bike Hub facilities.

The survey also asked "Would you like to cycle to campus?", which received a large number of respondents indicating they would be inclined to cycle. Of these, the most frequently reported preventative factor was that they feel unsafe doing so, with 11.8% of city campus students indicating this.

The changes to the city centre and large amount of roadworks and traffic management in operation over the course of 2017/2018 is a likely contributor to cycling in the city being considered unsafe. The Newcastle Cycling Strategy and Action Plan outlines the need for cycling infrastructure in the city to enable a higher level of service for cyclists, with reference to Inner City Bike Lanes Investigation. The implementation of improved cycling infrastructure would provide opportunity for the cohort outlined above to consider this as their primary mode of travel. This in conjunction with the expected shift of staff and students living towards the city centre would see a higher mode share for cycling to the city precinct then presently experienced.

It is considered given the residential development proposed in the city and subsequent increase in population within the Active Travel Zone, that the potential for cycling to the HCCD would be much higher, particularly given the existing bike path through Honeysuckle.

Survey Data Summary

As discussed in the prior sections, it can be seen that there is a general positive trend towards greater use of alternative modes to car use, consistent with the goals outlined in the prior transport strategies for NeW Space. It is considered this data provides the basis and evidence to support the implementation of a similar strategy for the HCCD precinct, in conjunction with the relevant strategic planning documents for the region which have been outlined within this document.

The staged development of the HCCD precinct will also enable the desired mode share targets to be achieved progressively over time, with this progression already evident from the survey data analysed for the existing Newcastle City Precinct.

NeW Space Travel Patterns

NeW Space Shuttle

The shuttle bus service between Callaghan and NeW Space is monitored by the University, with users required to present their staff/student id cards. It provides services every 30 minutes between 7.15am and 10.15pm on weekdays during semester teaching periods, including exam periods, with free WiFi provided on board to enable staff and students to make their travel time productive, if desired.

The data regarding patronage for this service has been analysed, with an average of 4,969 people using the shuttle per week over Semester 1 and Semester 2 (up to end of September) during 2018. It is noted that there is significant weekly variation, with a peak use in the order of 6,000 people per week during week 2 of each semester, with typically lower usage as the semester proceeds. This drop off is typical of University attendance patterns, which see lower attendance as the semester progresses.

Based on the average weekly usage, approximately 1,000 people utilise the shuttle service per day, with a peak of 1,192 on Tuesdays and low of 809 on Fridays, as shown below in Figure 12.

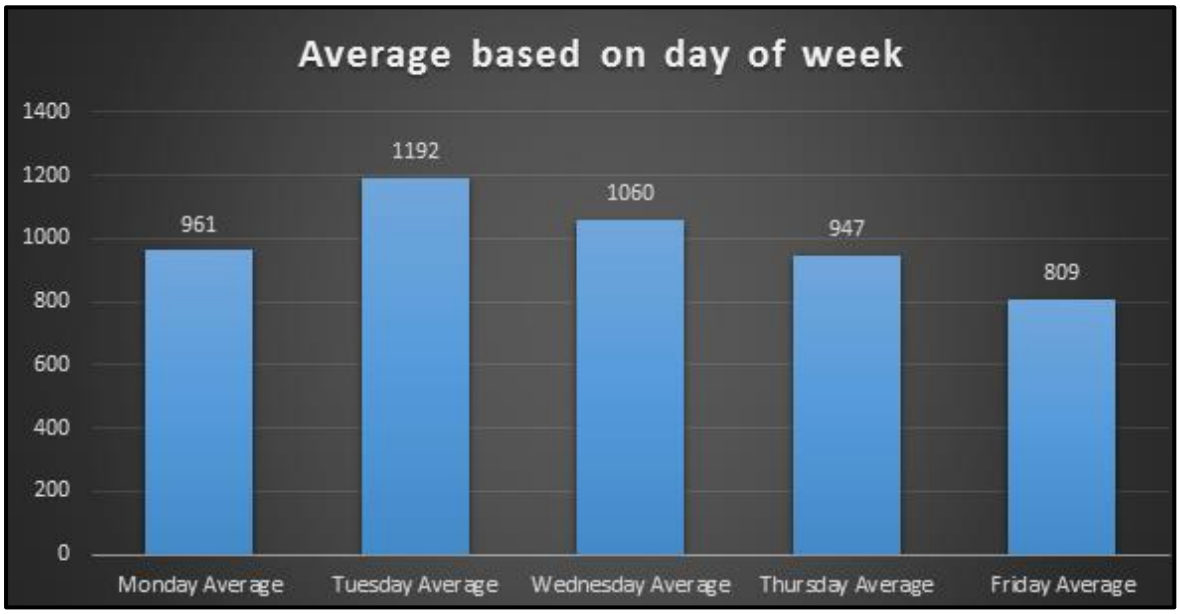


Figure 12 – Average weekly shuttle use

This above figure includes patronage numbers in both directions. A review of the two-way movements for a typical day found a relatively even split over the course of the day, giving 500 from Callaghan to NeW Space and 500 from NeW Space to Callaghan. Based on the data the general trend indicates that those who travel from Callaghan to NeW Space in the morning, return in the afternoon and vice versa, with a higher demand for the Callaghan to NeW Space route in the morning.

There are two Park and Ride parking areas at the Callaghan Campus. One is located at Car Park 2b, with approximately 120 bays, whilst the other is located in Car Park 14 with approximately 215 bays. These areas are serviced by the nearby Shuttle pick up points.

The University provided an additional 306 car spaces at the Callaghan Campus designated as park and ride facilities for students and staff who attend courses or work at NeW Space.

Civic West Car Park

The University offers 150 parking spaces in the Civic West car park, available to staff and students at a rate of $10 per day. The peak usage recorded for this parking during 2018 (up to the end of September) was 70 users. This equates to an occupancy of 47%, indicating this service currently has significant spare capacity.

NeW Space Bike Hub

The University has provided data in regard to the usage of the Bike Hub at NeW Space. This data is based on the number of swipe ins by patrons on entering the facility, with the accuracy being limited by the possibility of multiple users turning up at the same time and not all people swiping in, or alternatively a person leaving as another arrives, resulting in no swipe in. As such, it is considered the usage rates could be higher than that recorded.

The data for bike hub usage over weeks 2 and 3 of both semesters is shown in Figure 13 to follow. The data indicates 673 users on average, giving approximately 67 per day over the 10-day working week (with low use during weekends).

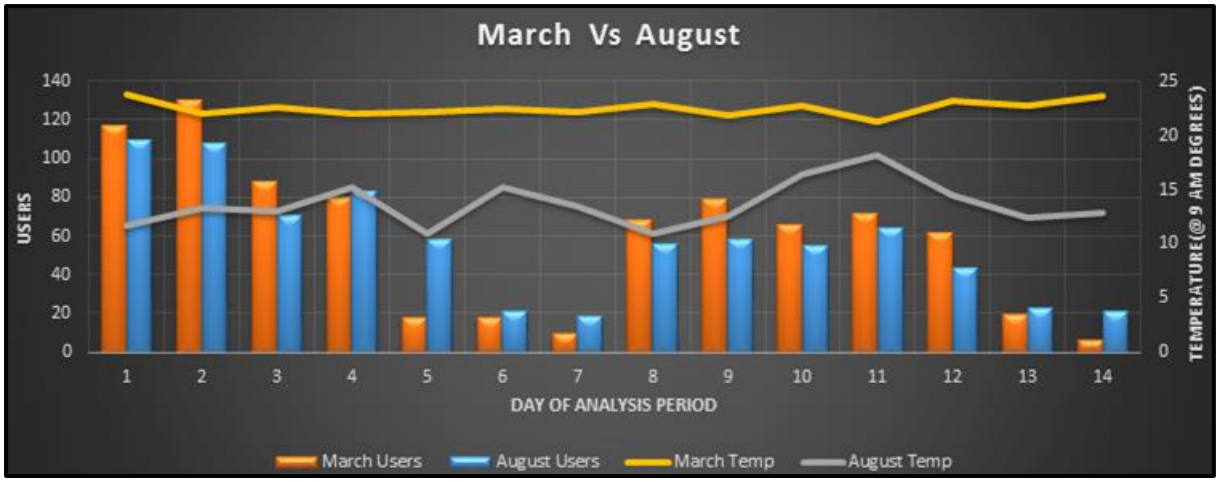


Figure 13 – Bike Hub usage across weeks 2-3 of Semesters 1 and 2

It can be seen that bike usage can be affected depending on the weather, with rain or inclement weather likely to result in a significant drop in cyclists.

At peak use up to 130 users were recorded using the facility on a Tuesday in semester 1, whilst on a Friday during the same semester less than 20 users were recorded. There are similar patterns for the shuttle and Civic West parking, with much lower usage on Fridays, given there is typically fewer classes/attendees on this day. Bike Hub usage during both semesters was significantly higher on Mondays and Tuesdays compared to the remainder of the week, with between 110-130 users recorded.

A comparison between the data recorded in semester 1 (March) and semester 2 (August) shows that there is overall higher usage during March. This likely reflects the fact that cycling may be more desirable as a mode of travel during periods of warmer weather.

Case Studies

Given that travel data for the Newcastle CBD does not reflect the future urban demographic it is important to look for other examples where there have been increases in employment, student or resident numbers to further understand the impact this can have on travel behaviour. Similarly, travel surveys for other universities in city centres have been considered to provide a benchmark for this development.

University of Technology Sydney Expansion

The University of Technology Sydney Concept Plan (2009) outlined the overarching vision for the Broadway Campus and the expansion and redevelopment of the existing facilities. The approved Concept Plan will see the UTS population increase to 19,500 equivalent full-time students by 2020, up from 12,800 in 2008. The Transport Management and Accessibility Plan for the works states that there is no proposed increase in on-site parking provision as part of the overall Concept Plan.

A review of the subsequent traffic assessments for the Student Accommodation, as well as the "UTS Central" developments confirms that this ideology has been implemented, with no additional parking provided and only some existing historic parking being retained. These assessments are detailed in the following sections.

UTS Central (Broadway Precinct) Transport Impact Assessment (2016)

The proposed works include extensions to an existing building on site and the complete redevelopment of a further building at the City Campus, Broadway Precinct. It is expected that approximately 2,700 EFTSL (Equivalent Full Time Student Load) would be accommodated in the proposed redevelopment, with an additional 300 staff.

This approved development does not include any on-site car parking. As a result, the traffic assessment determined there would be minimal changes to the existing situation, with the supporting arguments for no parking listed below:

- A large share of the additional trip generation would be accommodated by public transport.
- An increasing supply of residential dwellings in the surrounding areas, particularly to the south of UTS will promote an increase in mode share for walking and cycling.
- JtoW data indicates a trend away from car usage for the travel zone containing UTS, and an increase in mode share for public transport. This includes a 6 per cent increase in public transport usage, from a 55 per cent mode share in 2006 and a 61 per cent mode share in 2011; and a 7 per cent decrease in car usage from a 33 per cent mode share in 2006 and 26 per cent mode share in 2011.
- The excellent accessibility of public transport from the site and limited parking availability discourages high car usage to the site and correspondingly encourages public transport usage.

The above is similar in context to the future layout of the Honeysuckle precinct, which will include a significant increase in supply of residential dwellings in the surrounding area. The Newcastle public transport network is also currently undergoing a significant upgrade in order to provide commuters with a valid alternative to private vehicles.

As can be seen from the UTS city campus development, there is the opportunity to encourage alternate modes of travel given the type of location, with excellent walkability and links/proximity to public transport.

Based on the City of Sydney Council's Sydney Local Environment Plan 2012 (LEP), the UTS Central development would have required 223 car parking spaces. The provision of no parking was considered appropriate and approved on the basis of that described above, with this being consistent with various State Government's strategic transport policies and plans aiming to reduce reliance on travel by private vehicles and encourage greater modal shift towards more sustainable travel mode.

The Strategic Context for this assessment are listed below:

- NSW Long Term Transport Master Plan (2012)
- Sydney City Centre Access Strategy 2013

UTS Student Accommodation

The UTS Peter Johnson Building, Harris Street, Broadway Traffic and Parking Report (2009) assessed the now approved construction of student accommodation to provide up to 720 beds, located within a new 13 storey tower constructed above the existing 7 storey Peter Johnson building.

The development included no increase in parking for staff or students with the report outlining the following reasoning:

- Consistency to the UTS Concept Plan which seeks no increase in parking for staff and students at UTS.
- Travel demand management. Peak hour traffic capacity is limited and UTS is keen to increase staff and student numbers whilst minimising the impact of their associated travel on the operation of the road network.
- The proposed resident student population will live within a 400 metre walking distance of the University where students will undertake educational, recreational and leisure activities. The co-location of accommodation and workplace is a desired outcome in the integration of land use and transport planning to reduce the need to travel by private vehicle.
- The site is located in close proximity to a major public transport corridor (bus and rail) to provide transport opportunities to a diverse range of social, recreational, employment, institutional and religious activities.
- Provides an opportunity to ingrain sustainable travel patterns in the younger adult population to assist in removing a dependency upon private vehicle usage for mobility in inner city urban areas. The locality immediately surrounding the development site is projected to have population growth well above the average population growth of Sydney. This increasing population density in close proximity to workplace / educational opportunities will provide additional opportunities and encouragement for active transport (walk, cycle modes) and public transport in association with a constrained car parking approach.

The above is similar in context to the future layout of the Honeysuckle precinct, with the HCCD Concept Plan also including student accommodation which shall operate similar to that above, which provides no parking.

UTS Dr Chau Chak Wing Building

The recently constructed Dr Chau Chak Wing Building as part of the city campus can accommodate up to 1300 students and 300 staff.

The Traffic Impact Assessment Arup 2011 for the project stated no parking will be allocated to student use. The development was approved on the basis that 21 designated parking spaces would be provided at basement level, which will be generally allocated for senior staff. This parking provision was approved due to the location within the core CBD fringe and the surrounding availability of suitable alternatives to private car travel. The low parking provision for the development was also in keeping with the relevant State Government and City of Sydney planning strategies, similar to that discussed previously.

UNSW 2016 Travel Survey

The UNSW 2016 Travel Survey Analysis Summary outlines the results of the universities annual travel survey. The Survey was conducted on-line by Facilities Management for staff and students that attend the Kensington campus (the main campus of UNSW). The Survey received a very high number 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 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 extract of the survey provided to follow (Figure 14 and Figure 15) relates specifically to the question determining travel related trends, including the method of travel to and from the campus.

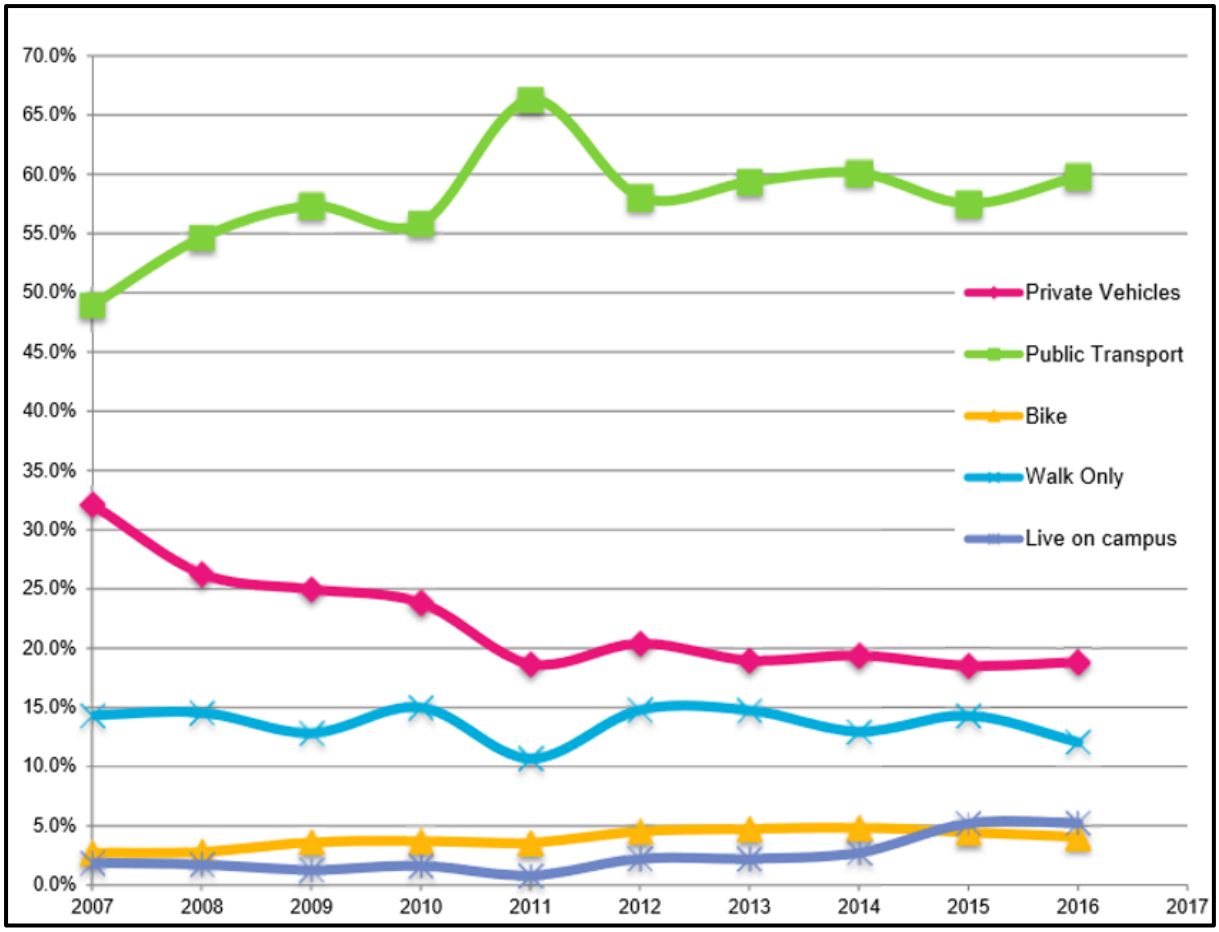


Figure 14 – Travel trends for Kensington Campus, Sydney for years 2007 to 2016 (Source: UNSW 2016 Travel Survey Analysis Summary)

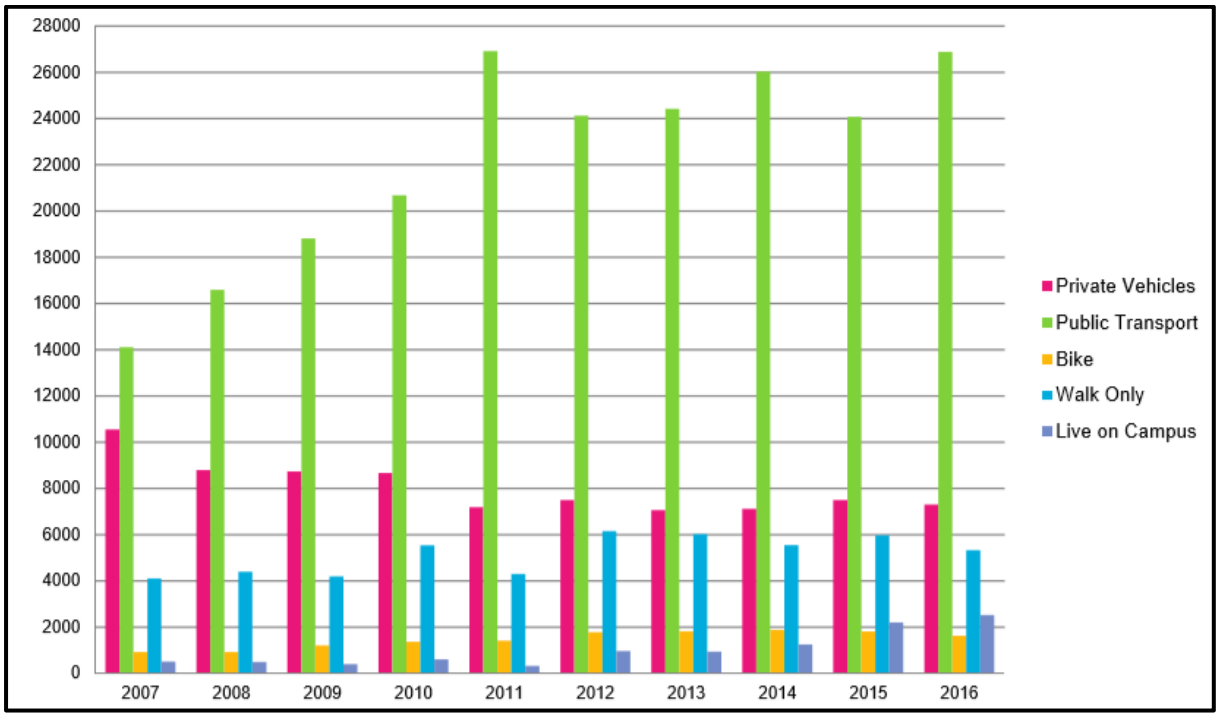


Figure 15 – Travel trends for Kensington Campus, Sydney extrapolated to whole of campus population (Source: UNSW 2016 Travel Survey Analysis Summary)

The *Analysis Summary* section of UNSW Travel Survey report provides the following breakdown of the preceding figures.

- 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.
- In 2016, a majority of the respondents (59.8%) travelled by public transport, a 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.
- Bicycle usage has increased significantly, with the percentage of respondents cycling to and from the campus increasing 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.
- 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.
- 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 a 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.

It can be seen from the analysis that over the course of the survey period there has been a progressive shift away from travel via private vehicle, with travel via each of the alternative modes listed increasing between 2007 and 2013.

Barangaroo

Barangaroo is a 22 hectare site along Sydney Harbour, between King Street Wharf and Walsh Bay. The site is owned by the NSW Government and falls within the City of Sydney local government area.

The development of the Barangaroo site is ongoing, with the completed precinct to include residential, retail and commercial uses, as well as public space. The Department of Planning website states that when complete in 2024, Barangaroo will:

- enjoy 33,000 visitors a day
- offer space for some 24,000 permanent jobs
- provide a home to 3,500 residents
- generate approximately $2 billion per year to the NSW economy
- provide more than 11 hectares of newly-accessible public domain.

The planning for the above has incorporated a transport strategy aimed at limiting reliance on private vehicles, with the mode share targets for commuters in the AM peak (excerpt from Barangaroo Integrated Transport Plan) outlined in Figure 16 to follow.

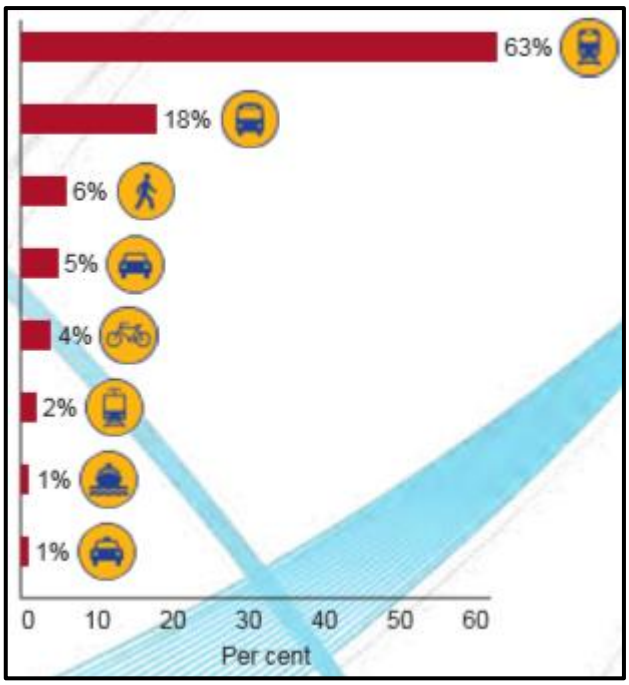


Figure 16 – Mode share targets for Barangaroo precinct

The East Darling Harbour (EDH) concept plan (renamed Barangaroo) outlines the existing modes of travel to the CBD of Sydney for Journey to Work (JtoW):

- Train - 50%
- Bus - 20%
- Car (Driver + Passenger) - 20%
- Other (walk/cycle/ferry etc) - 10%

The Barangaroo Integrated Transport Plan (ITP) outlines the methodology behind the target mode share above. The key element being to recognise the unique transport needs of the Barangaroo area, including the site's limited road access.

In order to negate the impact of additional traffic on nearby intersections and the surrounding road network, the planning approval for Barangaroo South was based on the principle of achieving high usage of public transport, walking and cycling, with significantly higher mode share targets for these travel modes and lower mode shares for private vehicles than was being experienced across the CBD.

The Barangaroo ITP stated that the low target mode share for private vehicles will be facilitated by restricting on-site car parking. Further to this, there is to be ongoing management of the supply and demand for all-day parking, to progressively achieve the target mode share by public transport rather than by car.

The overall planning allowed for adequate infrastructure to accommodate travel by alternate modes to private vehicle, including provision of set down/pick up areas for taxis/uber/kiss 'n' ride as well as pedestrian/cycle infrastructure. The existing and future public transport network was also assessed to ensure capacity to achieve the desired targets.

The factors listed above are similar to that for Newcastle City Centre, which also has limited road access. The HCCD proposal utilises a similar approach in order to achieve the goals outlined within the Greater Newcastle Metropolitan Plan 2036 and the Greater Newcastle Future Transport Plan, which have been discussed in the earlier sections of this document.

Case Studies Summary

As discussed in the prior sections, there are a number of parallels between the case studies outlined and the planning for the HCCD proposal, with similar types of development and access constraints. Common to the Case Studies outlined and the HCCD Transport Access Strategy is the recommendation for services to be provided which support the desired mode share targets.

- Appropriate provision of bike storage.
- The provision of suitable pedestrian access, including suitability for mobility impaired.
- Premium public transport connection between bus and rail services (heavy and light) that service the wider region.
- Appropriate set down for light vehicles e.g. taxi, ride share etc.
- Proactive promotion of alternatives to private vehicle use

Shuttle bus services are already provided for NeW Space, with the opportunity for this service to be further expanded and encouraged as part of the HCCD. The Bike Hub facilities also have a high level of satisfaction among users (as discussed in the survey data section), with similar facilities to be provided for HCCD, as appropriate to meet the demand.

It is considered the HCCD Transport Access Strategy is consistent with the planning for the above mentioned case studies, which included similarly high mode share targets for alternatives to private vehicle use and a minimisation of parking. The staged development of the HCCD precinct will also enable the desired mode share targets to be achieved progressively over time, with this approach being consistent with the planning for other university development in city centres, as well as the Barangaroo development outlined above.