



Honeysuckle City Campus Development

University of Newcastle

Transport Access Strategy

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SECAsolution 

University of Newcastle HCCD

Transport Access Strategy

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1 Executive Summary

The University of Newcastle is one of the key stakeholders in the plan to revitalise the City of Newcastle. Its ongoing development of a City Campus to extend into the Honeysuckle Precinct, referred to as Honeysuckle City Campus Development (HCCD), is a significant element in the implementation of this revitalisation strategy.

Seca Solution Pty Ltd has been commissioned by Ethos Urban on behalf of the University of Newcastle to provide input and analysis of the transport and access issues associated with the HCCD Concept Master Plan. The proposed site for the campus is across three amalgamated sites located in the Honeysuckle Precinct of Newcastle, between Honeysuckle Drive and Civic Lane, bounded by Worth Place to the west. The location of the site is shown in Figure 1-1 below.

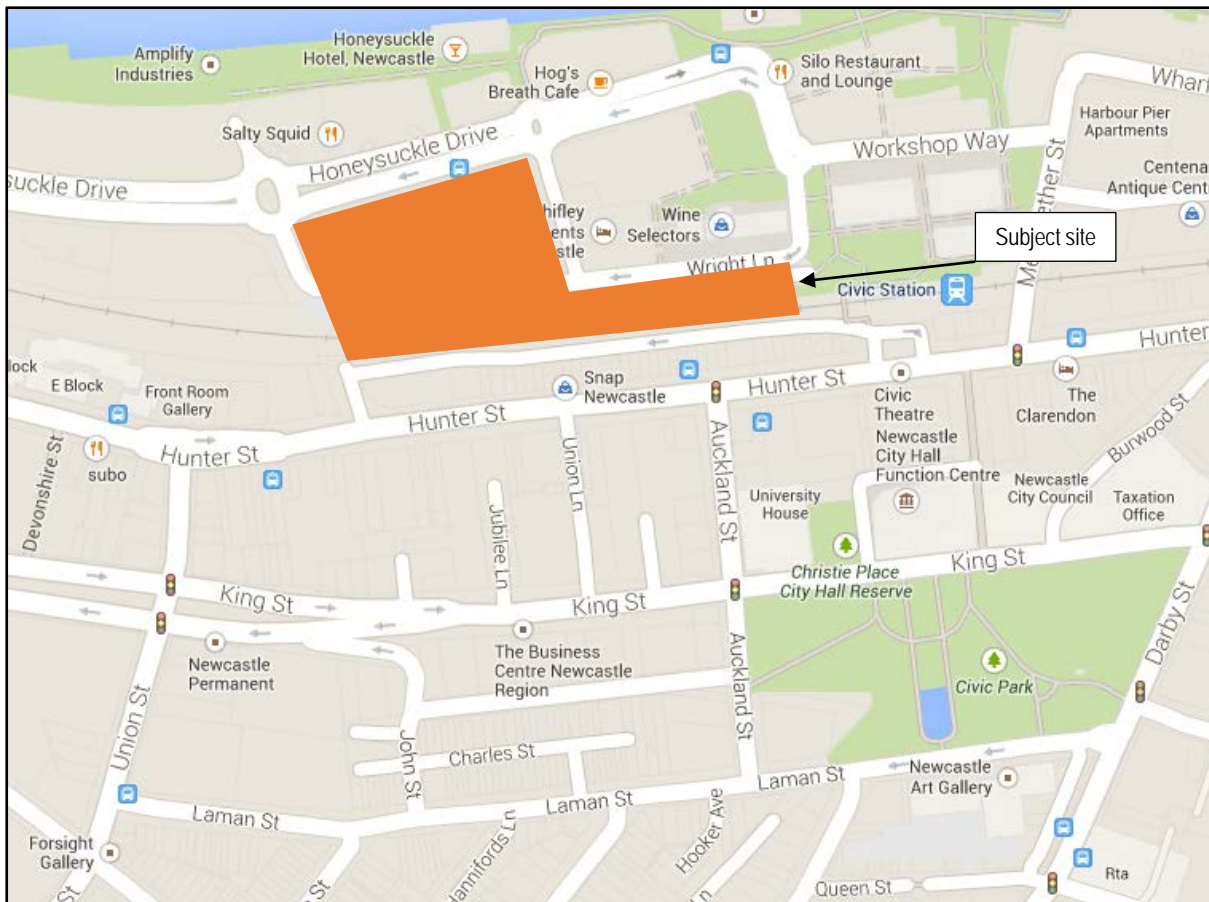


Figure 1-1 Site location of HCCD

The concept plan indicates a staged development (four stages) with seven key buildings as shown in Figure 1-2.

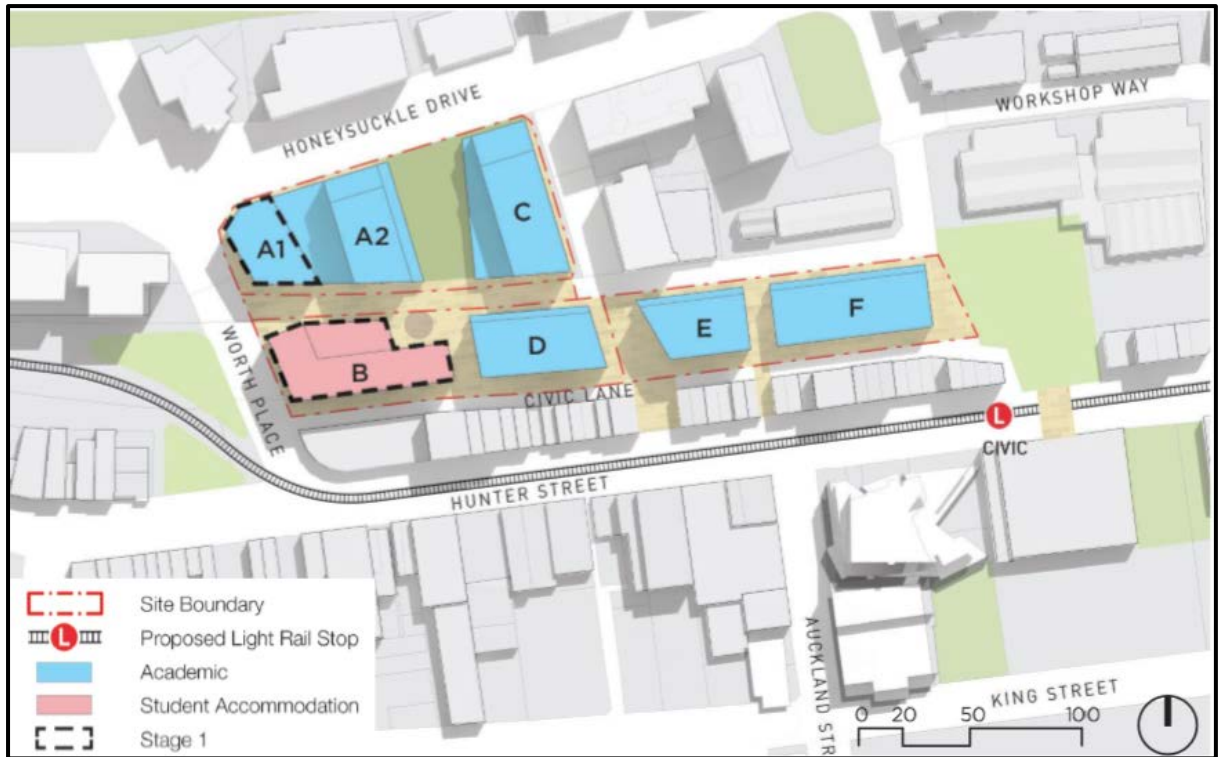


Figure 1-2 Extract from HCCD Concept Master Plan

The concept masterplan provides the following indicative yield for the site

Building	GFA	Site	Stage	Use
Building A1	4,608m ²	Site 1	1	Academic
Building A2	10,299 m ²	Site 1	2	Academic
Building B	11,828m ² 394 beds	Site 1	1	Student Accommodation
Building C	12,217m ²	Site 2	3	Academic
Building D	9,415m ²	Site 2	4	Academic
Building E	7,158m ²	Site 3	4	Academic
Building F	7,049m ²	Site 3	4	Academic

Building A1 has been identified as the first phase of the development allowing for academic presence and shall be located on the corner of Honeysuckle Drive and Worth Place. The student accommodation, nominated as Building B, for up to 400 beds may follow thereafter.

Like its sister campus, NeW Space, HCCD intends to provide specialised parking only, allowing for accessible parking, bicycle facilities, pick up/ drop off zones and loading area. It does not plan to provide general parking but rather supports the strategies that underpin the Revitalisation of Newcastle by promoting active travel and public transport use over single vehicle travel.

Policy Context

The key policy framework that drives the revitalisation of Newcastle is the Newcastle Urban Renewal Strategy 2012 (NURS) which was subsequently revised in 2014. Underpinned by a range of state, regional and local planning instruments it forms the underlying plan for the city's future. It outlines the key initiatives and guidelines and has inter-related components which can be broadly categorised in three sections as:

- 1 place-based

- 2 economic
- 3 transport-related.

The strategy to encourage renewal in the city centre is multi-faceted and includes:

- A planning framework that promotes activity, development and well-located land uses
- A place-making approach to the future development of the city
- Physical improvements to the city's key public domain spaces
- A series of economic initiatives that will support urban renewal
- A strategy to promote transport, access and connectivity to and within the city centre

The guiding principles as they relate to the Transport and Access requirements for HCCD are:

Transport, access and connectivity

- Maximise accessibility and convenience of public transport to and within the city centre, and prioritise a range of transport modes to reduce private vehicle use.
- Promote connections and way-finding between precincts and to the waterfront, and encourage pedestrian activity throughout the city centre.
- Support infrastructure and public domain improvements to attract people to the city centre.

Housing mix and affordability

- Encourage a range of housing types for a variety of markets, including student and seniors housing.

The key transport-related initiatives as they relate to HCCD are:

- support for integrated public transport in the city centre and promoting a mode shift
- creating a connected pedestrian and cyclist network
- managing the impact of carparking
- Improve the amenity of the streets through activation, giving pedestrians priority. Footpath widening to accommodate activity zones in selected locations will also improve safety simply by providing more space for people.
- Promotion of flexibility with respect to carparking requirements, especially in view of site constraints, development feasibility and the presence of Council owned carparking.

Connecting Newcastle – Our Urban Renewal Vision

This document combines the work of prior studies and policies, both National, State and Local to provide a vision for Newcastle in 2030. This initial document (2010) provided a twenty year timeline which the city is now well into.

Strategic Directions and Objectives identified in the document as they relate to the HCCD are:

Connected City - Transport network and services will be well connected and convenient. Walking, cycling and public transport will be viable options for the majority of our trips.

Connected City

- Effective and integrated public transport
- Linked network of cycling and pedestrian paths
- A transport network encouraging energy and resource efficiency

Local Planning Strategy

The Local Planning Strategy is a comprehensive land use strategy to guide the future growth and development of Newcastle. Of relevance for HCCD are the elements of a Connected City and the need for Vibrant and Activated Public Spaces.

Newcastle Transport Strategy

The *Newcastle Transport Strategy* aligns with the 'connected city' strategic direction and sets out Council's actions to contribute to achievement of the community vision of a city in which transport networks are well connected and convenient, and walking, cycling and public transport are viable options for the majority of residents' trips.

Policy Commitments of relevance to HCCD are:

- Council supports the NSW Government's target of 20% mode share to public transport for commuter trips to and from the Newcastle city centre in the peak periods by 2016. (P6)
- Council supports the NSW Government's mode share target to walking of 25% of local and district trips (P13)
- Council supports a mode share target of 5% to cycling for trips less than 10km, and doubling of the mode share to cycling for the journey to work, from 2006 to 2016. (P14)
- The use of motorbikes is supported as an alternative to single occupant cars, but not as an alternative to more sustainable modes such as walking, cycling and public transport. (P24)

The success of these policies relies on their being embraced by all facets of government, stakeholder, developers and the community as they provide the framework for a cohesive, vibrant and exciting future for the city.

HCCD

In supporting and applying these policies the intent is for HCCD to only provide a small number of specialised parking spaces with no general parking. This is based on the following premise:

1. The opportunity to live and study within a city campus includes an expectation by students that there shall be quality transport opportunities to support this. Such transport opportunities are not expected to include the need for students to own vehicles and to park (possibly with associated cost). Living in Newcastle sees opportunities for students to work within the city and immediate surrounds, further reinforcing the opportunity to have a city-centric lifestyle which is not reliant on private vehicle ownership to be able to "get around".
2. There is a large number of the cohort and staff who shall live within the Active Travel Zone (ATZ) and therefore shall be able to walk, cycle and use light rail or alternate public transport to commute to the site.
3. For those staff and students who do not live within the ATZ the provision of parking creates the expectation that they shall drive. This is contradictory to State and local Government strategies which encourage a mode shift from private vehicle use in favour of active travel including public transport, park and ride and car sharing options.

NURS identifies a capacity for up to 6,000 additional dwellings by 2036 in the Newcastle CBD with the ongoing development of the city campus providing a driver for the increased number of students living in the city centre, which in turn will contribute to demand for retail shops and services, and activated public spaces. Further, students can create a stable and reliable customer base for existing business, drive growth in the leisure and entertainment sectors, while also providing a labour pool for other businesses.

The Transport Access Strategy that was developed for NeW Space analysed the residential patterns of the existing Law and Business Faculty cohort to determine where future participants of the campus would live over time. This analysis determined that 66% of future students attending the city campus would live in the suburbs surrounding the city. This recognises the desire of future students to live in Newcastle and surrounds because they are studying in the city.

This area, identified as the Active Transport Zone (ATZ), is centred on HCCD and the City CBD with a 2 kilometre radius for walking and an eight kilometre radius for cycling which also includes public transport opportunities. The equivalent of these students would continue this pattern by choosing to locate within a similar proximity to HCCD. It is also expected that students who move to Newcastle from out of the region would also choose to locate within the city and its surrounds, rather than live in the outer suburbs and commute.

A similar analysis was also undertaken of staff associated with the Law and Business Faculty which indicated that 59% of staff would be expected to be living within the ATZ with the balance living in Lake Macquarie City (18%), Lower Hunter (5%), Port Stephens (2%) and Central Coast (8%). This makes no allowance for staff living in these surrounding areas relocating to the city.

Current trends in non-car travel show that Gen Y (20-34 year olds) are giving up driving in favour of alternatives.

- Mileage by GenY is down 23%
- 25% less 20-24yo held licenses in 2008/09 than 2001/02
- 13% of public transport users are 18-25yo
- Many car share not car own. They are open to car share programs such as "Go Get" (as recommended within the NURS)
- The car is no longer seen as a status symbol

With the embracing of new technology the choice between texting and not driving or driving and not texting is seeing public transport and walking being embraced as an appealing choice (Tolley 2014)

Based on the policy context of the NURS and the Newcastle Transport Strategy and considering the existing student accommodation data the following mode split targets have been determined for the future student cohort travelling to HCCD.

Walking 54%

Cycling 7%

Public Transport 39%

It is recognised that future students will want to live in the Newcastle CBD and surrounds because they are studying in the city. The desirability of the Newcastle CBD to be a lifestyle study/living/work choice is a large driver behind the Revitalising Newcastle strategy. Based on the enrolment data of existing students, 66% of future students attending HCCD would live in the ATZ and of these 82% will live within 2 kilometres of the HCCD development and be able to walk to the campus.

To support this the HCCD development will provide specialised parking allowing accessible spaces, bicycle parking, pick up and drop off zones and loading and service areas.

HCCD and the new City of Newcastle

To enable effective transportation of staff and students HCCD embraces the key guidelines and initiatives of Revitalising Newcastle:

- The need for quality walking routes
- Cycling routes and end of trip facilities
- The need for strategic bus corridors, transport interchanges and park and ride opportunities
- The development of a Travel Demand Management Strategy
- Encouraging car sharing opportunities in the city
- Managing the need for inter-campus travel through timetabling, promotion and support of public transport and cycling

Implementation Strategy

The University of Newcastle will further investigate consultation with authorities regarding

- quality pedestrian connectivity and cycling in the City,
- implementation of public transport improvements including encouraging park and ride opportunities and the ongoing development of strategic bus corridors
- City based car share programs

Development of a Travel Demand Management Strategy for HCCD through the extension of

- Education and awareness programs for all staff and students
- Workplace travel plan for staff
- University travel plan for students and visitors including potential shuttle buses

Benchmarking Case Studies

A review of comparable educational facilities, built in the past 10 years, has been undertaken and the following summarises the findings:

	Floor Area (GFA)	Public Transport	Parking Ratio (Space/GFA m2)	Student Accommodation	Active Transport Measures	Parking Context (On-street / off street)	Green Star Rating
HCCD – University of Newcastle	12434	√	1:497	√	√	On-street/ Public carparks	5
Dr Chau Chak Wing Building UTS Sydney	15488	√	1:500	√	√	Limited/ Public carparks	
Jeffrey Smart Building – UniSA		√	nil	√	√	Metered & Free/ Public carparks	5
The Spot Building-University of Melbourne	25850	√	nil	√	√	Public carpark	5
Medical Precinct – University of Tasmania	20000	√	1:769	√	√	Public carpark	5
The Swanston Academic Building -RMIT	34350	√	nil	√	√	Metered/ Public carparks	5
Mirvac School of Sustainable Development – Bond University		√	1 space	√	√	Carpark in surrounding campus	6
Waterfront Building – University of Tasmania	5350	√	1 space	√	√	On-street/ Public carparks	5
Camp Street Campus Ballarat – Federation University Australia	8000	√	Nil	√	√	On-street	

2 Honeysuckle City Campus and the Revitalisation of Newcastle

Revitalising Newcastle is a NSW government program focused on activating the city to attract people, jobs and tourism to Newcastle. This follows the demise of the city centre due to reductions in city based employment (e.g. Australian Taxation Office, Passport Office, Newcastle Herald) and moves to suburban retail centres (e.g. David Jones, The Store).

The program's number one objective is "to bring people back to the city centre". This shall be done in part through the promotion of growth, activity and innovation and to deliver 10,000 new jobs and 6,000 new homes over the next 25 years. The development of a university presence in the city is the number one driver to this change.

Honeysuckle City Campus Development (HCCD) is proposed as the next phase in the development of the University of Newcastle's (UoN) City Campus and builds on NeW Space (Law and Business Faculties) opened in 2017 as well as the university's historic presence with the Conservatorium of Music and various support services.

HCCD is located on a series of connected sites between Honeysuckle Drive and Civic Lane (Figure 2.1 and Figure 2.2), located within close proximity to the NeW Space campus.

A Concept Master Plan has been developed to provide certainty to UoN that the site can accommodate a range of academic and student accommodation uses with flexibility as the design for the Campus progresses in future stages.

The proposal sees minimal provision for parking, consistent with its sister campus NeW Space.



Figure 2-1 Honeysuckle City Campus site context plan (source: HCCD Masterplan)

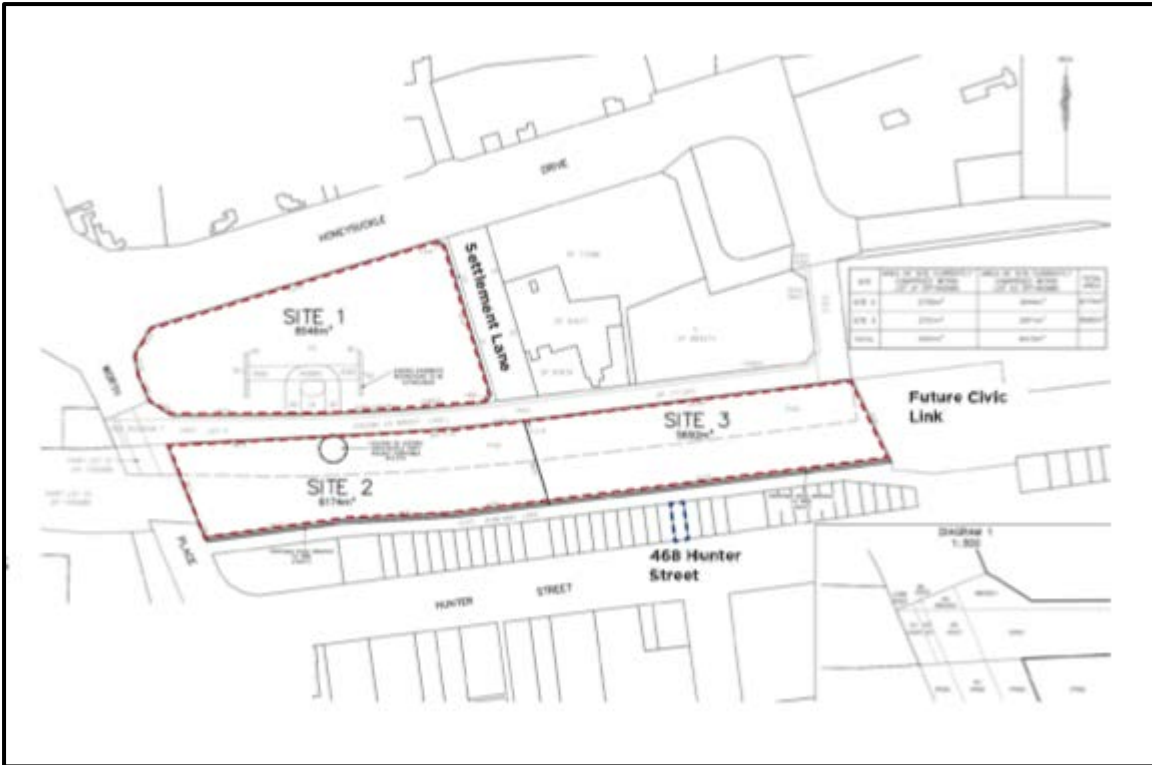


Figure 2-2 Connected sites between Honeysuckle Drive and Civic Lane

The concept masterplan indicates the opportunity for a staged development providing seven buildings across the connected sites (Figure 2.3)



Figure 2-3 Staged development across the connected sites

The concept masterplan provides the following indicative yield for the site (Table 2.1)

Table 2-1 Indicative Development Yield for Concept Masterplan

Building	GFA	Site	Stage	Use
Building A1	4,608m ²	Site 1	1	Academic
Building A2	10,299 m ²	Site 1	2	Academic
Building B	11,828m ² 394 beds	Site 1	1	Student Accommodation
Building C	12,217m ²	Site 2	3	Academic
Building D	9,415m ²	Site 2	4	Academic
Building E	7,158m ²	Site 3	4	Academic
Building F	7,049m ²	Site 3	4	Academic

Building A1 has been identified as the first phase of the development allowing for academic presence and shall be located on the corner of Honeysuckle Drive and Worth Place. The student accommodation, nominated as Building B, for up to 400 beds may follow thereafter.

The Concept Masterplan does not quantify future student or staff numbers except as they relate to accommodation. It does however indicate the intention to provide for quality end of trip facilities for cyclists within each building as well as ensuring quality pedestrian connectivity. It is recognised that there will be a need for servicing for the site as well as the need to provide for specialised parking including disability spaces. There is no general parking proposed for the site.

The intent to only provide a small number of specialised parking spaces, with no general parking is based on the following premise:

4. The opportunity to live and study within a city campus includes an expectation by students that there shall be quality transport opportunities to support this. Such transport opportunities are not expected to include the need for students to own vehicles and to park (possibly with associated cost). Living in Newcastle sees opportunities for students to work within the city and immediate surrounds, further reinforcing the opportunity to have a city-centric lifestyle which is not reliant on private vehicle ownership to be able to "get around".
5. There is a large number of the cohort and staff who shall live within the Active Travel Zone (ATZ) and therefore shall be able to walk, cycle and use light rail to commute to the site.
6. For those staff and students who do not live within the ATZ the provision of parking creates the expectation that they shall drive. This is contradictory to State and local Government strategies which encourage a mode shift from private vehicle use in favour of active travel including public transport, park and ride and car sharing options.

This HCCD Transport Access Strategy shall outline the proposed transport opportunities available to the city campus and shall support the parking approach adopted by the masterplan.

3 Policy Context

This HCCD Transport Access Strategy is underpinned by the approach developed and adopted for the NeW Space Campus which commenced classes in July 2017. It also draws on various policies developed to underpin the development of the City of Newcastle. This section provides an overview of the key aspects of these strategies as they relate to the HCCD development.

3.1 The Newcastle Urban Renewal Strategy 2012 update 2014

3.1.1 Key Initiative and Guiding Principles

The strategy and resulting initiatives have inter-related components which can be broadly categorised in three sections as

- 1 place-based
- 2 economic
- 3 transport-related.

The strategy to encourage renewal in the city centre is multi-faceted and includes:

- A planning framework that promotes activity, development and well-located land uses
- A place-making approach to the future development of the city
- Physical improvements to the city's key public domain spaces
- A series of economic initiatives that will support urban renewal
- A strategy to promote transport, access and connectivity to and within the city centre

Several key initiatives have been nominated as having significant short-term benefits as well as being catalysts for stimulating a wider change in the city centre. Prioritising their implementation has been recommended.

These include:

- establishing a university campus in the city centre to stimulate and drive demand for commercial and retail floor space, introduce a student resident and worker population, and create synergies with established businesses and industry sectors
- revitalising Hunter Street Mall into a distinct retail, entertainment, leisure and residential precinct to catalyse other renewal in the east end, including nearby major landholdings
- reshaping Hunter Street as a key city destination to promote activity, business opportunities, events and other uses in identified nodes. Reshaping can start with less permanent measures on a trial or temporary basis
- providing additional connections across the rail corridor for pedestrians, cyclists and cars
- appointing a Local Business Coordinator to prepare and implement a Business Improvement Plan
- attracting more residents into the city centre to support and build a vibrant and viable city centre
- promoting a higher mode shift to public transport to reduce the number of cars in the city centre, encourage activity and support for business, and utilise existing infrastructure and services.

An implementation plan supports the strategy and provides a framework for delivery of renewal over the life of the plan. Indicative timeframes are divided into short (1 - 3 years), medium (3 - 8 years), and long-term (greater than 8 years). The implementation plan can be used to guide future decision making and to measure the progress and success of urban renewal in Newcastle's city centre. The implementation is being updated to reflect developments within the strategy.

The guiding principles as they relate to the Transport and Access requirements for HCCD are:

Transport, access and connectivity

- Maximise accessibility and convenience of public transport to and within the city centre and prioritise a range of transport modes to reduce private vehicle use.
- Promote connections and way-finding between precincts and to the waterfront and encourage pedestrian activity throughout the city centre.
- Support infrastructure and public domain improvements to attract people to the city centre.

Housing mix and affordability

- Encourage a range of housing types for a variety of markets, including student and seniors housing.

The strategy was updated in 2014 with the following key objectives stated to encourage urban renewal and the revitalisation of the city centre by:

- Amending the local planning controls to promote growth, activity and innovation and to deliver 10,000 new jobs and 6,000 new homes over the next 25 years
- Re-establishing Hunter Street as Newcastle's main street, revitalising Hunter Street mall and the East End, recognising the city's heritage as an important asset and improving the quality of public space and street
- Supporting employment growth, such as establishing a university presence within the Civic precinct and bringing retail businesses back into the city centre
- Improving transport to make the city easier to access and move around in, better connected to the waterfront and to provide alternative to car transport
- Preparing an implementation plan with clear actions to support the strategy and deliver renewal over the next twenty years

One of the initiatives of particular note in the 2014 update is the need to manage the demand for car parking which shall be done through

- undertaking an annual review of parking; and
- considering the expansion of parking controls to the inner city areas as well as considering setting limits on the amount of car parking available in the city centre.

3.2 Connecting Newcastle – Our Urban Renewal Vision

This document combines the work of prior studies and policies, both National, State and Local to provide a vision for Newcastle in 2030 (Figure 3.1). This initial document (2010) provided a twenty year timeline which the city is now well into.

Strategic Directions and Objectives identified in the document as they relate to the HCCD are:

Connected City - Transport network and services will be well connected and convenient. Walking, cycling and public transport will be viable options for the majority of our trips.

Connected City

- Effective and integrated public transport
- Linked network of cycling and pedestrian paths
- A transport network encouraging energy and resource efficiency

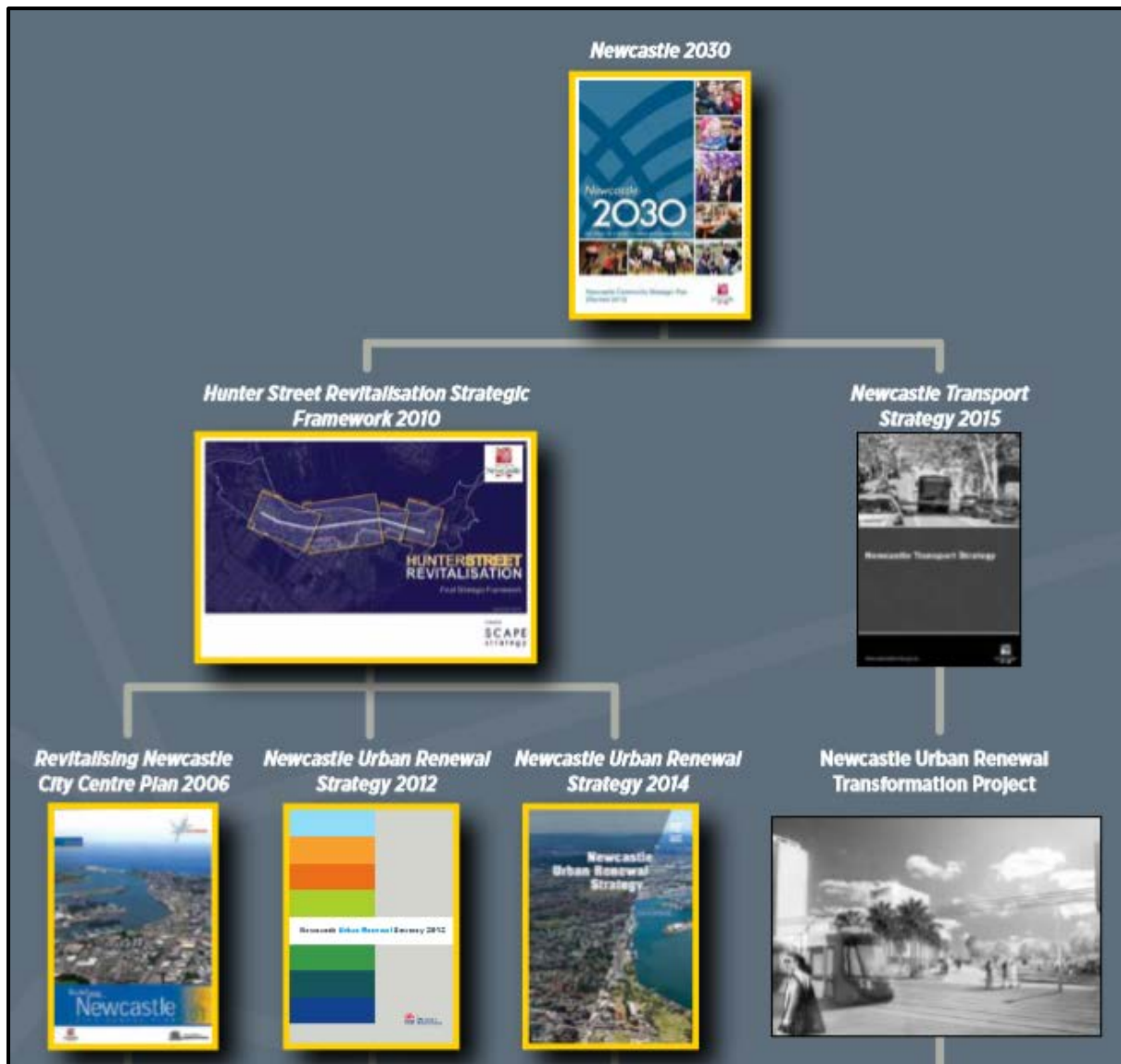


Figure 3-1 Relationship between various local policy document (Source: Connecting Newcastle)

CBD that offers Vibrant, Shared Spaces

- Improve walking and cycling access and options.
- Equitable road space allocation for each mode of transit including pedestrians, cyclists, public transit and vehicles. This includes pedestrian prioritisation measures and separated cycleways.

City to Newcastle University Callaghan Campus

- A major transit corridor connecting Newcastle University's Callaghan campus and the new NeW Space precinct in the CBD
- Enhances the student experience by enabling ease of movement between Callaghan and City campuses
- Provides a cost-effective, safe mode of travel for students and staff
- Supports active travel for students and staff
- Provides a viable alternative to private car travel, thus reducing the reliance on already limited parking availability in the CBD

3.3 Local Planning Strategy

The Local Planning Strategy is a comprehensive land use strategy to guide the future growth and development of Newcastle.

The Strategy implements the land use directions from the Newcastle 2030 Community Strategic Plan. The Strategy also reflects the outcomes of the Council's other strategies as they relate to land use.

The Local Planning Strategy replaces the Newcastle Urban Strategy as the principal land use strategy for Newcastle.

Elements of this strategy as they relate to the HCCD include:

Connected City

- P1. Land uses at appropriate densities will be located to support effective and integrated public transport.
- P2. Walking and cycling will be viable options for the majority of trips by linking networks of cycle and pedestrian paths.
- P3. The urban form will support a transport network encouraging energy and resource efficiency.

Vibrant and Activated Public Spaces

P9. The urban form will encourage safe and activated places that are used by people day and night. Streets are the primary public spaces for access and exchange between people, and should be made safe, friendly, attractive and efficient

3.4 Newcastle Transport Strategy

The *Newcastle Transport Strategy* aligns with the 'connected city' strategic direction and sets out Council's actions to contribute to achievement of the community vision of a city in which transport networks are well connected and convenient, and walking, cycling and public transport are viable options for the majority of residents' trips.

Policy Commitments of relevance to HCCD are:

- Council supports the NSW Government's target of 20% mode share to public transport for commuter trips to and from the Newcastle city centre in the peak periods by 2016. (P6)
- Council supports the NSW Government's mode share target to walking of 25% of local and district trips (P13)
- Council supports a mode share target of 5% to cycling for trips less than 10km, and doubling of the mode share to cycling for the journey to work, from 2006 to 2016. (P14)
- The use of motorbikes is supported as an alternative to single occupant cars, but not as an alternative to more sustainable modes such as walking, cycling and public transport. (P24)

Whilst relevant Actions include:

- Facilitate opportunities for establishment of car share schemes. Dedication of parking spaces for car-sharing purposes; flexible development controls and developing a car share policy, are examples of ways in which Council can facilitate car sharing. Though Newcastle may not yet meet density and trip pattern criteria that make car share viable in the short term, development of a policy that sets out Council's position on car sharing, and the procedures by which organisations would be selected and schemes implemented, signals Council's interest and will position Council to respond to future opportunities. (A31)

- Facilitate car pooling. Council will investigate partnering with education and health sectors and other Lower Hunter Councils to implement a car pooling program in the region (A33)
- Provide information on sustainable transport options and promote their use. Council will communicate the benefits of active transport and promote increased participation in walking and cycling through such measures as publication of cycling maps, and participation in events such as Walk to Work Day, NSW Bike Week and Ride to Work Day. In conjunction with completion of significant walking and cycling facilities projects, Council will undertake communication to promote their use. Council will enhance its communication of sustainable transport options through enhancement of its web site and through expansion of production of transport access guides. Officers will be encouraged to include information about sustainable transport options in conjunction with promotion of events. Council will continue its involvement in the Lower Hunter Councils Transport Group to facilitate increased mode share to sustainable transport. Through this group and fostering of other partnerships, Council will develop a regional communications strategy for conveying the benefits of reduced car use and increased participation in active transport (A35)

3.5 National Policies

The development of the above local strategies and policies have also drawn on the following National and State strategies.

Our Cities, Our Future – a national urban policy for a productive, sustainable and liveable future

Released by the Minister for Infrastructure and Transport in May 2011 this policy outlines the Australian Government's goals and priorities for the nation's cities and how it will contribute to making them more productive, sustainable and liveable. It recognises the critical roles that state, territory and local governments, the private sector and individuals play in planning, managing and investing in cities.

The Australian National Cycling Strategy 2011 – 2016

The overarching vision is to realise a step-change in attitudes to cycling and in the numbers of riders in Australia. In the short term, the goal is to double the number of people riding by 2016. It sets out a framework of six key priorities and objectives with generic actions that can be applied within states and local governments.

Walking, Riding and Access to Public Transport

This document explores how the Australian Government can work with other levels of government, business and the community to encourage and support walking and riding as part of the transport systems in Australia's cities and towns. The report explores options to increase the mode share of walking, riding and public transport through planning, building and encouragement.

3.6 NSW State Government Policies

NSW 2021 – A Plan to Make NSW Number One

NSW 2021 is a ten-year plan to guide policy and budget decision making in NSW. It is based around five key strategies: rebuild the economy; return quality services; renovate infrastructure; strengthen our local environment and communities; and restore accountability to government. The plan enunciates 32 goals, including reducing travel times; increasing patronage on public transport by making it a more attractive choice; improving customer experience with transport services; and improving road safety.

NSW BikePlan

Released in 2010, the NSW BikePlan included targets for lifting the share of short trips by bike in Greater Sydney for all travel purposes to 5% and doubling the use of cycling to get to work across NSW. These were carried through to the Newcastle Cycling Strategy and Action Plan (2012). The current NSW Government strategies in relation to cycling are the regional transport plans and Sydney's Cycling Future.

Lower Hunter Regional Strategy

The government's vision embraces a sustainable future for the region and emphasises the integration of land use and transport planning to connect homes, employment and services, minimising the need to travel and encouraging resource and energy efficiency means of transport.

4 Travel Demand Management

The Transport Access Strategy developed for NeW Space, located on the corner of Hunter Street and Auckland Street, to the immediate south of HCCD, involved consideration of the future planning for the city as well as what was the then proposed changes to the transport environment.

NURS identifies a capacity for up to 6,000 additional dwellings by 2036 in the Newcastle CBD with the development of the City Campus providing a driver for the increased number of students living in the city centre. The desirability of the Newcastle CBD to be a lifestyle study/living/work choice is a large driver behind the Revitalising Newcastle strategy with the nomination of the city as an education hub including a University campus regularly noted.

4.1 Background Analysis

In developing the NeW Space Transport Access Strategy (NeW Space TAS) a detailed analysis was undertaken of the residential pattern of the existing student cohort and staff associated with the Law and Business Faculty. This analysis of the 2013 student registrations by postcode (fulltime and part time but not distance) for the Faculty of Law and Business showed:

Newcastle LGA	56%
Lake Macquarie City	15%
Lower Hunter	9.5%
Port Stephens	4%
Central Coast	5%
Other Regions	10.5%

A further analysis of the Newcastle LGA cohort indicated that 60% live within a walking or cycling distance of the NeW Space site. These students live within what could be considered an Active Transport Zone (ATZ) – a zone within walking or cycling distance of the NeW Space site, centred on NeW Space and the City CBD.

The balance of the Newcastle LGA cohort, 40%, lived within the post codes of Callaghan, Jesmond, Shortland and Birmingham Gardens. This area is within a 1 kilometre radius of the Callaghan campus where they were studying. This would indicate a preference for these students to seek accommodation that is close to their existing campus. It can be assumed that over time the equivalent future students will have a similar preference, with the choice of location being within a similar area centred on NeW Space.

An analysis of the Other Regions data indicated that these students have registered from out of area in either regional NSW or inter-state. As either full time or part time students these students would have temporarily relocated to Newcastle to undertake their studies. It is assumed that these students in the future would choose to locate close to their campus, with convenient accommodation, employment, social life and transport.

Based on this data 66% of future students attending the city campus would live in the suburbs surrounding the city. This recognises the desire of future students to live in Newcastle and surrounds because they are studying in the city.

4.2 Mode Share

4.2.1 Car ownership

The 2011 census indicates that 11.4% of private dwellings in the Newcastle LGA do not have a car, slightly more than the average for NSW.

As detailed in the Newcastle Transport Strategy, car ownership may be influenced by various factors, including income, prices, interest rates and demographic trends. The number of cars owned by a household affects how much residents travel and what modes are used.

The suburbs of Jesmond, Mayfield and Waratah, which have a relatively high proportion of households without a car, are also those suburbs which historically have housed many students, being proximate to the University of Newcastle.

4.2.2 Travel to Work Data

A review of the trip data for Newcastle (Inner-City and Throsby) based on 2010/11 five-year pooled Household Travel Survey dataset shows the following (Table 4.1):

Table 4-1 Household Travel Survey data

Mode of travel	Newcastle Inner-City (trips %)	Newcastle-Throsby (trips %)
Vehicle driver	52%	55%
Vehicle passenger	17%	21%
Train	1%	0%
Bus	3%	3%
Walk only	25%	18%
Other modes	3%	3%

Tighes Hill had the highest proportion of residents who rode bicycles to work, with a mode share to cycling of 6.1%, followed by Carrington at 5.9%, and Maryville Wickham at 5.1%.

The proportion of residents who walked to work also varied significantly across the city. Though on a citywide basis, the mode share was just under 4%, Newcastle – Newcastle East – Newcastle West had a mode share to walking of 13.8%, followed by Cooks Hill and The Hill, at 12.7%.

Such data shows a historical pattern of active transport for people living within the city and its immediate environs and supports the premise that people living within the city are open to walking and cycling as a means of travel.

4.2.3 Trends in student non-car travel

- GenY (20-35 year olds) are giving up owning cars and instead looking at alternatives. Mileage by Gen Y is down 23%
- Later getting their licences than previous generations
- 13% of public transport users are 18-25yo
- Many car share not car own. They are open to car share programs such as “Go Get”
- The car is no longer a status symbol
- As embracers of new technology the choice between texting and not driving or driving and not texting is seeing public transport and walking being embraced as an appealing choice (Tolley 2014)

These trends are reinforced by the Bureau of Transport Statistics data (figure 4.1). Although the percentage for 2008-09 for 15-19 year olds can be explained in part by changes to the provisional license system in recent years, the decrease in license holding for 20-24 year olds reinforces other evidence.

Sydney's Walking Future (TNSW 2013) identifies that tertiary students have a higher rate of walking than other groups. "As we increase walking trips to school, work or university we reduce the pressure on our road network and public transport system."

The peak car driving boom is over in large urban centres. For example, between 2006-2011, despite 9% more workers in the Sydney CBD car usage dropped by 9%. The opportunity is to remove the barriers for non-driving options.

Table 1: Percentage of persons with full Driver's Licence by age and year, Sydney GMA

Age Group	Year		
	1991/92	2001/02	2008/09
15-19	23%	23%	3%
20-24	79%	80%	51%
25-34	86%	88%	83%
35-44	89%	92%	91%
45-54	86%	91%	92%
55-64	74%	85%	89%
65+	55%	63%	68%
Full	74%	79%	76%
Provisional	2%	1%	5%
Full + Provisional	76%	80%	81%

Source: Bureau of Transport Statistics, Household Travel Survey, Sydney Greater Metropolitan Area, 15+ yrs

Figure 4-1 Percentage of full licensed drivers by age and year

4.3 The Active Travel Zone (ATZ)

The NeW Space TAS identified the Active Travel Zone as an area, based on post code data, where the majority of student would tend to live providing close access to their campus as well as to the city and coast. This area was found to be generally within a 2-kilometre walking area but further away (e.g. Merewether, Mayfield) could allow for cycling and public transport access.

4.3.1 Walking

One of the guiding principle of Connecting Newcastle is to encourage pedestrian activity throughout the city centre.

Applying the walking tool Walk Score (walkscore.com) to the suburbs surrounding Newcastle provides the walkability rating for these locations. Walk Score is a number between 0 and 100 that measures the walkability of an address.

- 90-100 Daily errands do not require a car
- 70-89 Most errands can be accomplished on foot
- 50-69 Some errands can be accomplished on foot
- 25-49 Most errands require a car
- 0-24 Almost all errands require a car

This data indicates that all of these suburbs are very walkable with most errands being able to be accomplished on foot (Figure 4.2). Similarly, the Walk Score site provides us with a travel time map based on 30 minute journey time from the city campus location for both walking and cycling which covers the majority of suburbs promoting accommodation opportunities for students.

Rank	Name	Walk Score	Transit Score	Bike Score	Population
1	Newcastle	94	-	-	2,362
2	The Hill	89	-	-	1,713
3	Cooks Hill	89	-	-	3,625
4	Hamilton	86	-	-	4,049
5	Newcastle West	85	-	-	590
6	Newcastle East	84	-	-	995
7	Wickham	83	-	-	944
8	The Junction	81	-	-	1,491
9	Bar Beach	80	-	-	1,129
10	Hamilton East	79	-	-	888
11	Islington	75	-	-	1,806
12	Jesmond	74	-	-	2,609
13	Broadmeadow	70	-	-	1,556

Figure 4-2 Walk Score for Newcastle Suburbs (source: www.walkscore.com)

Sydney's Walking Future states that there are around seven million journeys that are shorter than two kilometres made daily (Monday to Friday). More than three million of these short trips are walk only trips (43%) and a further three million are travelled by car. Many short car trips could be replaced with walking trips. The number of trips less than two kilometres is projected to increase by more than 20 per cent in the next 20 years. Figure 4-3 below shows a two-kilometre perimeter for walking applied to the HCCD location.



Figure 4-3 30 minute walk zone centred around the HCCD location.

4.3.2 Cycling

Cycling provides a very viable alternative for students living within a five to eight-kilometre radius of the City Campus development.

According to Sydney's Cycling Future (TNSW 2013), since 2006, the number of people riding to work has increased by 50 per cent in metropolitan Sydney. Most of this increase in bike riding is occurring close to town centres, where people are choosing to live closer to where they work, shop and socialise. Cycling is ideal for short distances of

about five kilometres or 20 minutes. Riding a bike can be quicker than a car for trips up to five kilometres, and faster than public transport for trips up to eight kilometres.

The topography of Newcastle provides a comfortable ride for novice cyclists within the basin shown in Figure 4-4 below. The ridgeline to the south and south-west of the city forming Merewether Heights, Adamstown Heights, Blackbutt Reserve and Lookout Road creates a physical barrier for less experienced cyclists. This area within 8 kilometres of the city however also provides a potential extensive supply of student accommodation and as such is ideal for commuting to HCCD.

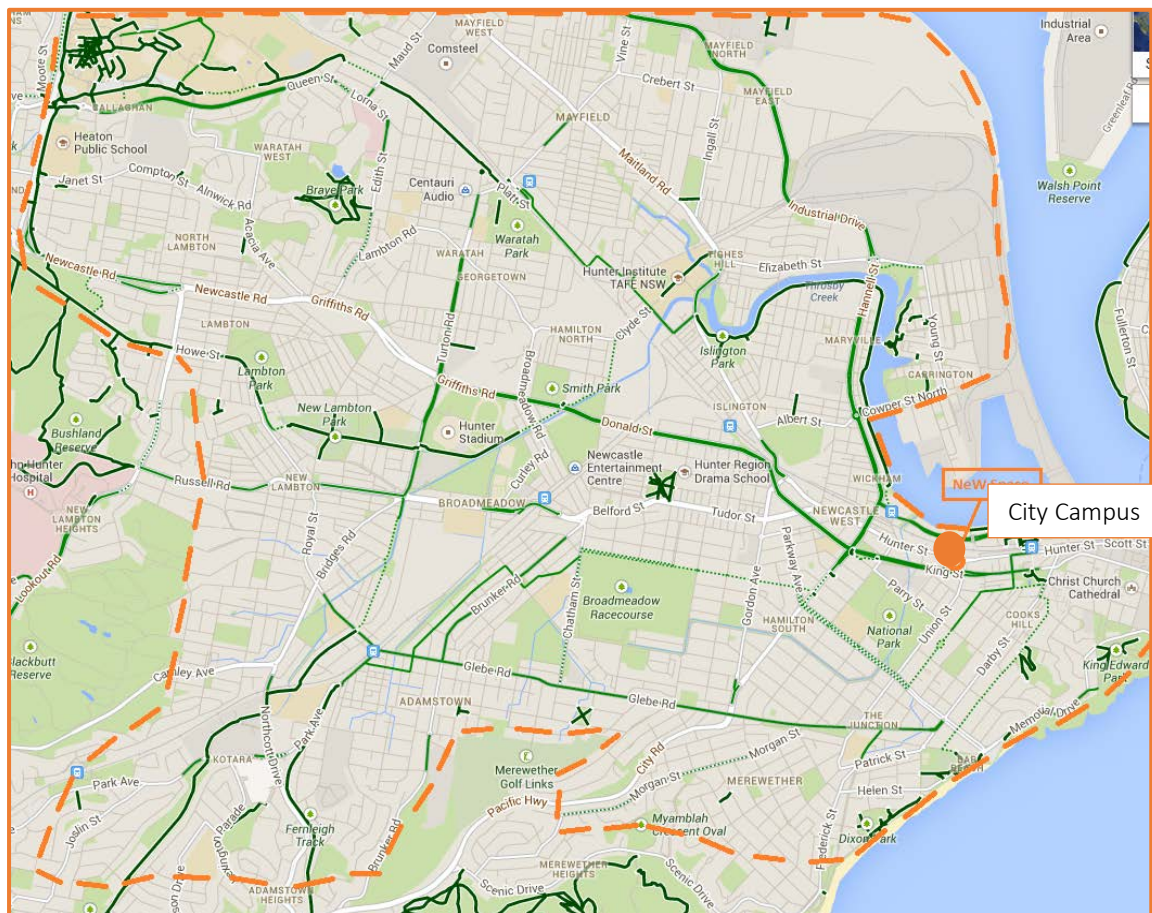


Figure 4-4 Cycling catchment based on topography of Newcastle and its environs

Transport for New South Wales is currently undertaking a trial of E-bikes in Newcastle in conjunction with BYKKO. The contract includes the delivery of electric bikes to selected areas in and around the Newcastle CBD with the bikes to be collected and returned to the various docking stations by hirers.

Such a service is described as a “simple and effective means of intra city transport with the potential to reduce the number of cars entering the Newcastle CBD”.

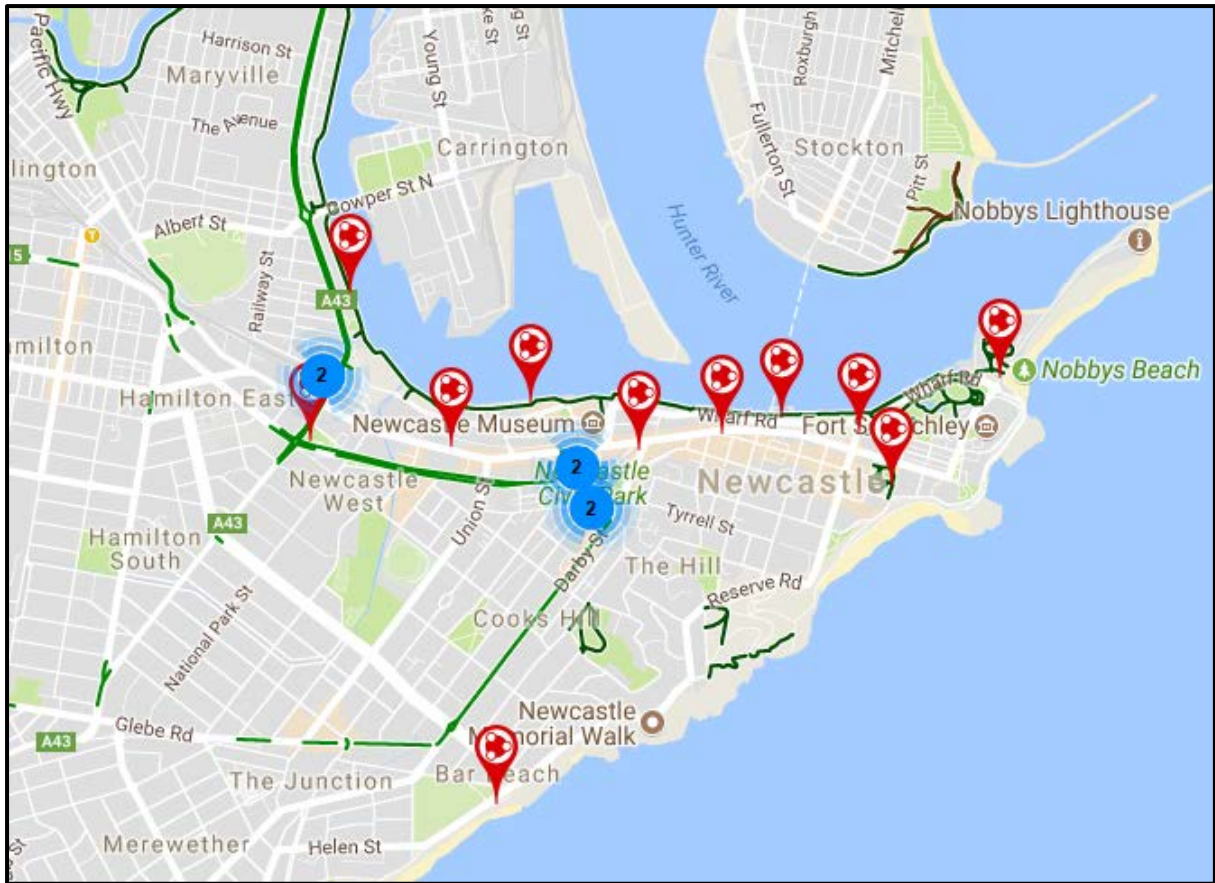


Figure 4-5 Location of BYKKO docking stations throughout the CBD

4.3.3 Public Transport

The Local Planning Strategy acknowledges the importance of transport links in identifying future growth areas. Such growth corridors are particularly focussed around the existing rail network with railways stations given a higher rating than bus stops in considering future land use.

A review of the Public Transport Accessibility Levels reproduced in Figure 4.6 identifies the importance of the Newcastle city centre and the corridors to Mayfield and Broadmeadow in terms of their access to public transport. These areas are well within the area identified as the ATZ and demonstrate opportunities for staff and students who choose not to cycle or walk to be able to access the city using the existing train network.

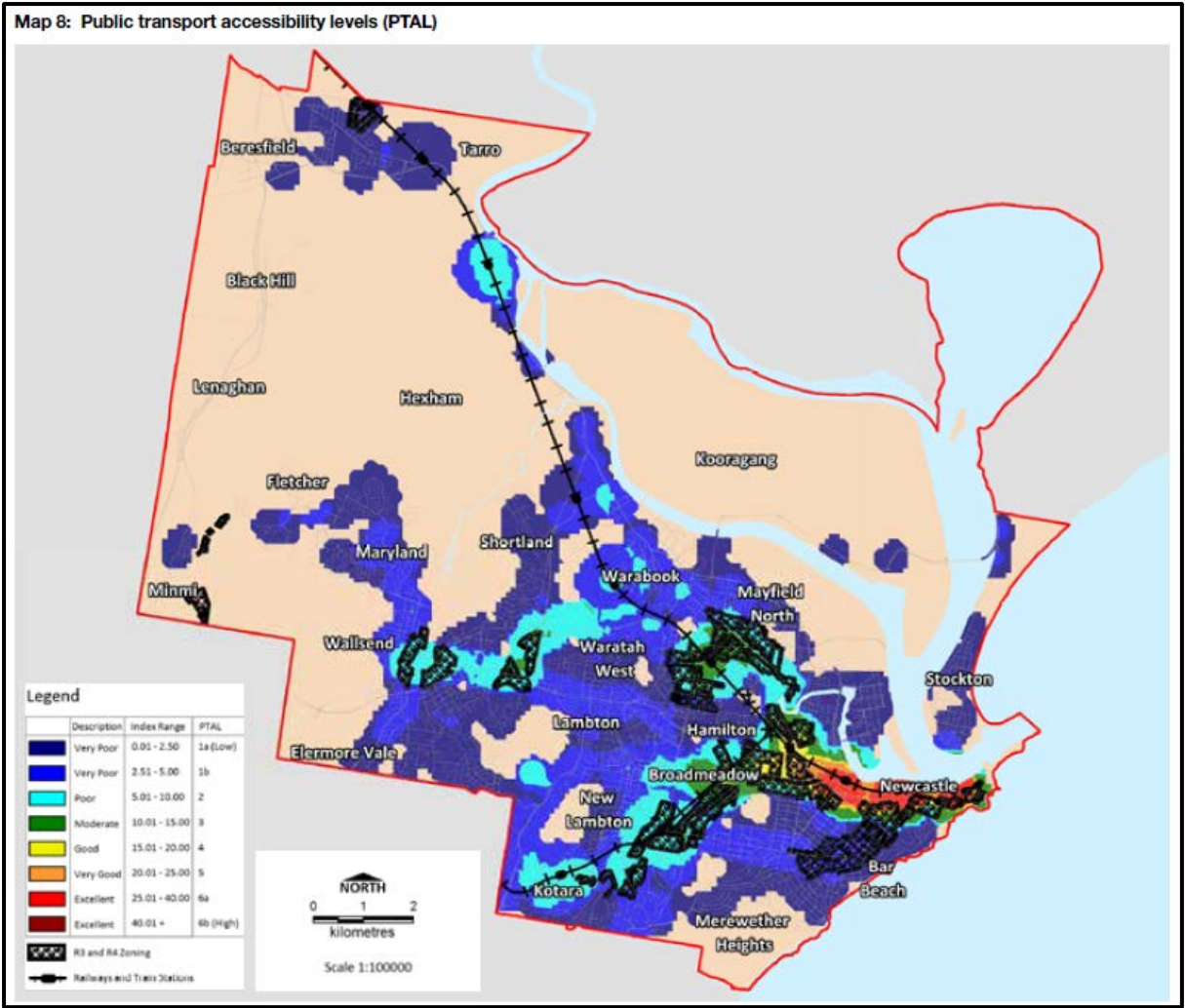


Figure 4-6 Public Transport Accessibility Levels for Newcastle LGA (Source: Local Planning Strategy)

Bus travel within the ATZ is also an option (Figure 4.7). Since its privatisation Newcastle Transport have announced ongoing improvements to the bus system to support increased patronage and better service outcomes.

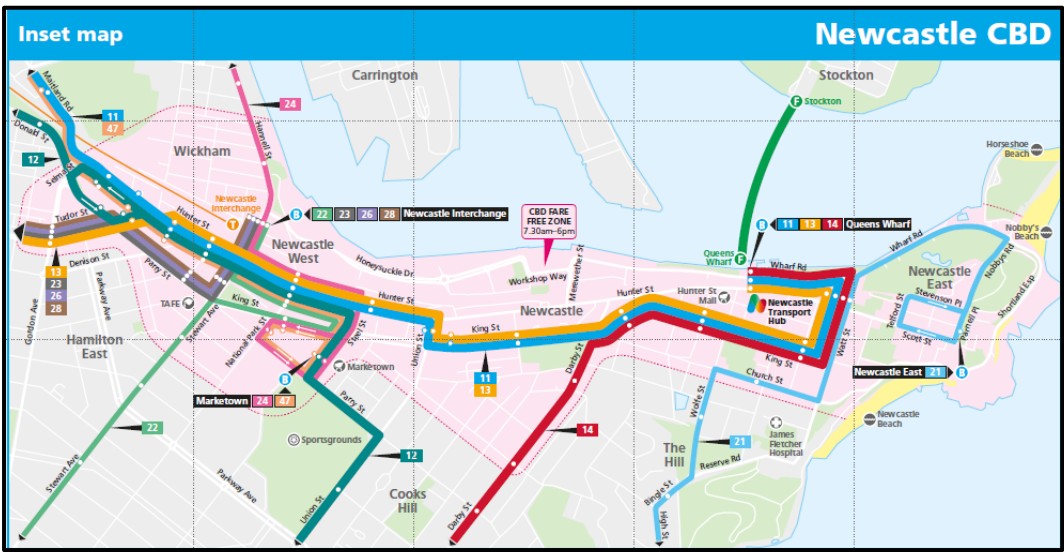


Figure 4-7 Bus services accessing the CBD

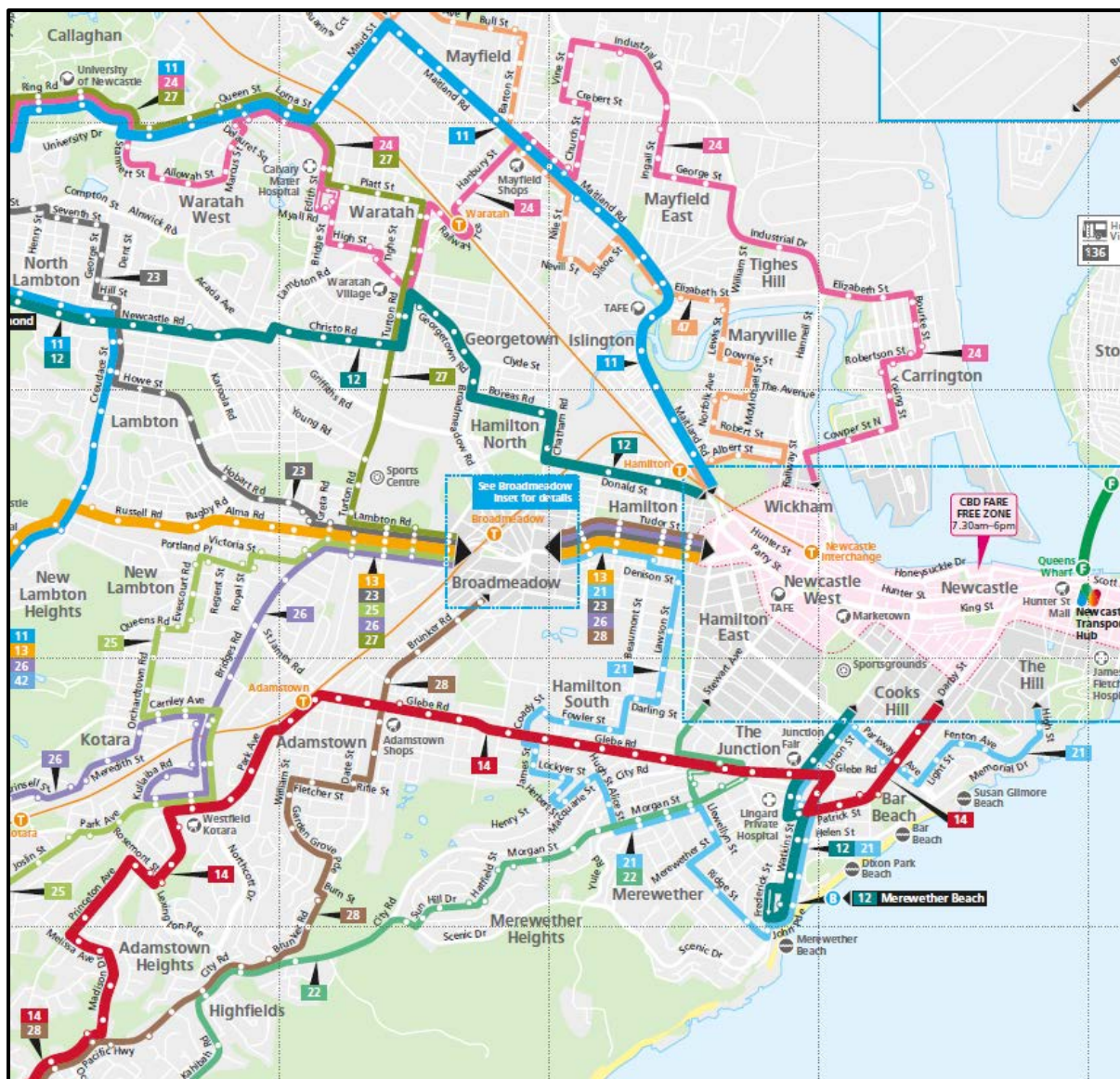


Figure 4-8 A variety of bus routes throughout the ATZ accessing the CBD

A review of the regional map (Figure 4.8) shows the coverage of bus routes through the ATZ and the number of services which access the city .

Based on this analysis of the Active Transport Zone 66% of the future students studying at the Honeysuckle City Campus would be expected to live within this area. This number is based on the future cohort and is not necessarily reflective of the initial student body who transfer across to the city campus. These students have existing housing arrangements which they are not necessarily in a position to change. Over time, as new students commence, these accommodation patterns and in turn travel patterns will become more evident. Similarly, as more and more suitable accommodation within the city and its immediate environs becomes available, including the accommodation proposed as part of HCCD, this number shall also increase with a larger percentage being able to walk or comfortably cycle.

The ATZ with its emphasis on walking and cycling over car use is therefore consistent with Council's strategy:

Through advocacy and direct action to improve walking and cycling networks, Council is working towards changes in mode share. Walking and cycling are the most sustainable modes of transport, accessible to the majority and offer significant health benefits and, given that the majority of residents' trips are less than 10km, there would appear to be significant potential to substitute car trips for these modes. However, not everyone wants to walk or

cycle and if public transport is not viable, a reduction in single occupant car trips may be achieved through facilitating car pool, car share and park and ride.

4.4 Benchmarking Against NeW Space

Whilst NeW Space has only been operational for 6 months, the University has some data on access to the campus which it collected as part of its Post Occupancy Survey at the end of the 2017.

This survey indicates that of the respondents, on average 7% accessed the campus by bicycle.

Table 4-2 Excerpt of Table 4 Mode of Transport to NeW Space (source: UoN Post Occupancy Survey)

Cohort	N	Bicycle
Academic	72	10%
Research Students	66	8%
Professional	105	12%
Coursework Students	718	5%
Overall	961	7%

Similarly, 23% of respondents walked either to NeW Space or possibly to Callaghan to use the shuttle as the survey enabled multiple responses.

Table 4-3 Excerpt of Table 4 Mode of Transport to NeW Space (source: UoN Post Occupancy Survey)

Cohort	N	Walking
Academic	72	25%
Research Students	66	15%
Professional	105	25%
Coursework Students	718	23%
Overall	961	23%

This compares with the long term mode split for NeW Space as shown in Figure 4-9 below which indicates the opportunity for more students and staff to walk to the campus as more of the cohort are able to live within the city.

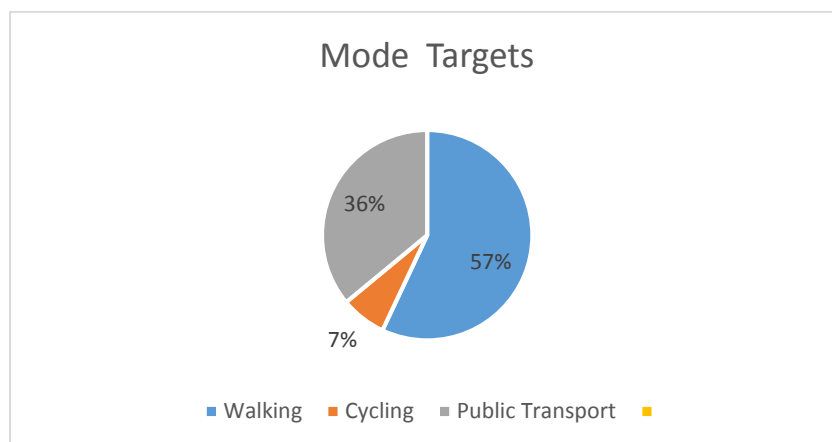


Figure 4-9 Mode Targets for NeW Space Students

4.5 Outside the ATZ

The analysis undertaken for NeW Space predicted that 34% of staff and students may not live within the ATZ but rather would generally travel from

Lake Macquarie City	15%
Lower Hunter	9%
Port Stephens	4%
Central Coast	5%
Other	1%

These students and staff would be encouraged to travel by public transport or by alternate travel such as car pooling, car sharing and park and ride consistent with the Newcastle Transport Strategy which notes “ *not everyone wants to walk or cycle and if public transport is not viable, a reduction in single occupant car trips may be achieved through facilitating car pool, car share and park and ride.*”

Changes to the existing public transport network within Newcastle, including the construction of the light rail and changes to the bus network in association with its privatisation, have not necessarily encouraged an increase in take up of public transport to the city. Certainty around public transport however shall increase once the light rail is operational along with an integrated public transport system.

Congestion and a reduction in parking within the City Centre during the light rail construction has seen the implementation by Council of a Park and Ride scheme from Broadmeadow to the city each day. This is consistent with the Newcastle Urban Renewal Strategy (NSW DPE, 2014) which recommended that further investigation be carried out into creating a park and ride facility near either Warabrook, Lambton or Charlestown to encourage greater use of public transport.

Despite this, the Post Occupancy Survey indicates that an average of 33% of respondents included public transport as part of their journey to NeW Space. (Table 4.4).

Table 4-4 Excerpt of Table 4 Mode of Transport to NeW Space (source: UoN Post Occupancy Survey)

Cohort	N	Public Transport
Academic	72	36%
Research Students	66	32%
Professional	105	37%
Coursework Students	718	32%
Overall	961	33%

This is consistent with the mode share predicted for NeW Space being 36% for public transport use.

4.6 Campus Shuttle - Callaghan to City Park and Ride

To support travel between the City Campus and Callaghan the UoN implemented a Campus Shuttle which operates between the two campuses. This provides travel options for staff and students studying or working at both campuses and needing to transfer through the day. It also acts as a Park and Ride enabling parking at the Callaghan Campus with a transfer in to the city.

These operate in a manner similar to those run by the University of Adelaide (Roseworthy/North Terrace/Waite Campuses) and Monash University (Clayton to Caulfield or Peninsula Campus).

A review of data associated with shuttle use during the first week of March 2018 shows that daily passenger numbers varied between 979-1447 people two-way (Table 4.5). Allowing for predicted staff and student numbers in the vicinity of 4,635 by 2019 these passenger numbers would typically reflect 15-20% use of the shuttle, assuming each passenger undertakes a return trip through the day. This compares with the Post Occupancy Survey data which indicates on average 31% use of the shuttle.

Table 4-5 Passenger Numbers for Campus Shuttle Service

PAX NUMBERS						
		5-Mar	6-Mar	7-Mar	8-Mar	9-Mar
DEPART		MON	TUE	WED	TUR	FRI
Design						
DAY TOTAL		580	746	620	498	452
WEEK TOTAL		2896				
DEPART						
NeW Space						
DAY TOTAL		631	701	611	619	527
WEEK TOTAL		3089				
Combined total		1211	1447	1231	1117	979

Future demands for the shuttle shall be influenced by the need for students to undertake courses across both campuses and the need for staff to travel between the two sites.

Similarly, the completion of the light rail may see more certainty for staff and students to travel by light rail and train to Warrabrook in the future.

For those using the shuttle as a Park and Ride facility similar changes may occur once there is more certainty associated with public transport use to the city.

4.7 HCCD Transport Demands

As the new campus shall be developed over time future students shall be able to anticipate their housing needs and travel requirements before enrolling in courses at the Honeysuckle City Campus. As such they are more likely to follow existing trends with a significant number (approx. 66%) choosing to live within close proximity to the city. There will however always be students and staff who have housing outside of the ATZ and therefore, like those attending NeW Space, shall seek alternate travel over walking and cycling.

Council has made a commitment to increase mode share by public transport for commuter trips to and from the city to 20% during peak hours (by 2016). Such travel would include staff associated with the city campus as well as students with classes early in the day or finishing at the end of the working day. The HCCD would further support this strategy of effective and integrated public transport, providing the critical mass to enable improved services to and from the city.

5 Parking

In HCCD providing only specialised parking (e.g. disabled, loading, cycling, drop off zones) they are meeting the requirements of the various strategies outlined in Chapter 2. All National, State and Local strategies have an emphasis on reducing the number of single car driving trips in favour of public transport, active transport and car sharing or Park and Ride alternatives.

Council's requirements for the number of car parking spaces provided in new development such as HCCD can influence people's choice in travel, urban design, living costs and development costs. It is recognised that parking for private vehicles is to be balanced against promoting public transport and cycling as viable alternatives, particularly for commuter trips. Council's Newcastle DCP 2012 specifies car parking rates for new development but also contains rates for motorcycle and bike parking (along with associated end of trip facilities) to encourage commuter cycling. The Newcastle Transport Strategy recommends a review of Council car parking rates for the Newcastle City Centre.

By the HCCD not providing general parking it not only encourages the use of alternate modes of travel but also adds to the revitalisation of the city through activation of the public domain. Students and staff moving through the city, walking to work or home, cycling, walking to bus stops or catching the light rail all add to activated public spaces. People going from work to their car to then drive out of the city does little to improve the vitality of a streetscape nor support local businesses.

5.1 Future Parking in the City

The NURS outlines the need to restrict access by private vehicle to the city centre and identifies that as there are over 2,500 underutilised parking spaces in the peak period Monday to Friday then there is limited requirement for the supply of additional parking. The area defined as the city centre within NURS is provided below in Figure 5.1.



Figure 5-1 – City Centre Limits defined by NURS report

Parking is recommended to be capped at 11,000 spaces, 500 more than when assessments were undertaken.

It recognises that there is a ready supply of parking available in public parking stations and on-street parking (timed and ticketed) within the CBD. Studies associated with the impact of the Light Rail has further reviewed this supply

allowing for the removal of on-street parking and determined that the balance of parking provided is adequate to accommodate the ongoing demands of the city.

As such, it proposed that there be no dedicated general parking provided within the HCCD development. This supports the various strategies and is in accordance with NURS as well as recognising that for those who choose to drive there is public parking within the CBD. Specialised parking shall be provided across the campus to meet the specific needs of end users including disabled spaces, loading areas, bike parking and end of trip facilities.

6 HCCD and the new City

6.1 Quality walking routes

When considering the distance that people will travel by walking it is not a question of quantity but rather quality. Sydney's Walking Future Connecting People and Places (TNSW 2013) outlines that people will walk more often in places where there are:

- Direct, connected and safe routes
- Quality facilities along the way and at the end of their journey, such as seating, change rooms and showers, and protection from the weather
- Pleasant environments and ambience.

Quality and consistency of wayfinding and signage for pedestrians is also frequently nominated as a barrier to affective walking as is adequate lighting and CCTV surveillance. Ultimately areas that have high pedestrian patronage with good urban form including activity spaces and social hubs (e.g. cafes and coffee shops) feel safer to pedestrians.

The Newcastle City Centre Connectivity and Accessibility Study (AECOM 2012) nominates a series of connection points to ensure an effective pedestrian and cycling network for the City of Newcastle (Figure 6-1).

For the HCCD Campus there is quality connectivity available between:

- Accommodation zones and HCCD
- HCCD and social hubs and activity nodes
- HCCD and public transport facilities
- HCCD and city based employment precinct



Photo 1 Quality pedestrian pathways are available to connect the site to the broader city



<p>AECOM</p> <p><small>LEVEL 21, 420 GEORGE STREET, SYDNEY NSW 2000 T 61 2 8234 0000 F 61 2 8234 0001</small></p>	<p>DRAWING NUMBER T002</p> <p><small>01 JUNE 2012</small></p>		<p style="text-align: center; color: #0070c0; font-weight: bold;">NEWCASTLE CITY CENTRE CONNECTIVITY AND ACCESSIBILITY STUDY CREATE A CONNECTED PEDESTRIAN AND CYCLE NETWORK</p>
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Figure 6-1 Pedestrian and Cycling Network

6.2 Cycling routes and end of trip facilities

Where Journeys to Work to Newcastle are within a 5km catchment of the city it is recognised that they could potentially be made on foot or with a bicycle as opposed to being made by car. The implementation of clearly marked safe and convenient cycle and pedestrian routes will provide the infrastructure for shorter journeys in the city to be made via active transport modes. However, the uptake of these modes needs to be supported by a behaviour change program that raises the awareness of the benefits of this travel choice and deters private vehicle use. (Newcastle City Centre Connectivity and Accessibility Study AECOM 2012)

The implementation of such routes will support the mode shift of students in the ATZ to walking and cycling.

A review of the Newcastle City Council Cycling Strategy and Action Plan (Appendix 2) provides a number of regional routes that connect with local routes to provide access to the city centre (Figure 6.2).

Table 6-1 Appendix 2 of the NCC Cycling Strategy and Action Plan details proposed cycling routes

Proposed regional, local and scenic/recreational routes are as follows:	
Regional Routes	
R1	Adamstown Heights to Fern Bay
R2	Newcastle to Maitland
R3	Kotara – John Hunter Hospital – Sandgate
R4	Kotara to Tighes Hill TAFE
R5	Newcastle City Centre to Glendale
R6	Newcastle City Centre – University – Birmingham Gardens
R7	Fernleigh Tunnel to Newcastle City Centre
R8	Birmingham Gardens to Tairā via Hexham Swamp
R9	Minmi to Hexham
R10	Wallsend to Minmi
R11	Minmi to Beresfield
R12	Newcastle Link Rd to City Centre
R13	R2 (Industrial Dr at Tourle St) to Port Stephens

Within the vicinity of the site there are a range of cycling options including on-street and off -street routes (Figure 6.3). Upgrades to the city centre as part of the light rail construction shall see ongoing improvements to bike services to encourage cycling safely through the city.



Photo 2 On-street cycling along Honeysuckle Drive



Photo 3 Shared pathways in the vicinity of the site

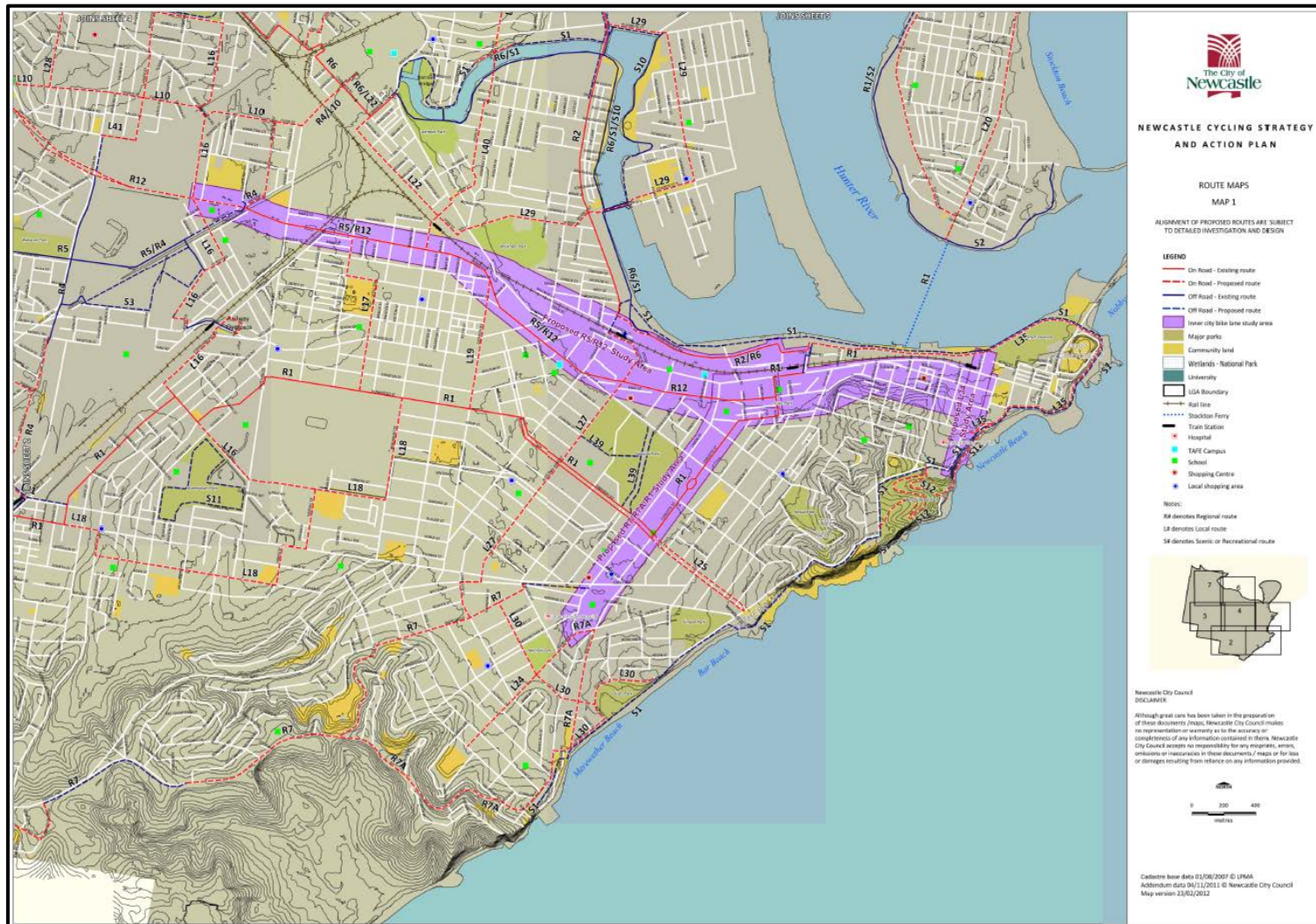


Figure 6-2 NCC Cycling Strategy and Action Plan (Figure 1) showing the extent of local and regional route



Figure 6-3 Newcastle City Centre cycling routes

Quality end of trip facilities are planned for the HCCD to coincide with the construction of each building.

There is also quality cycling facilities at NeW Space as well at the Callaghan Campus which supports inter-campus travel.

6.3 Strategic Bus Corridors

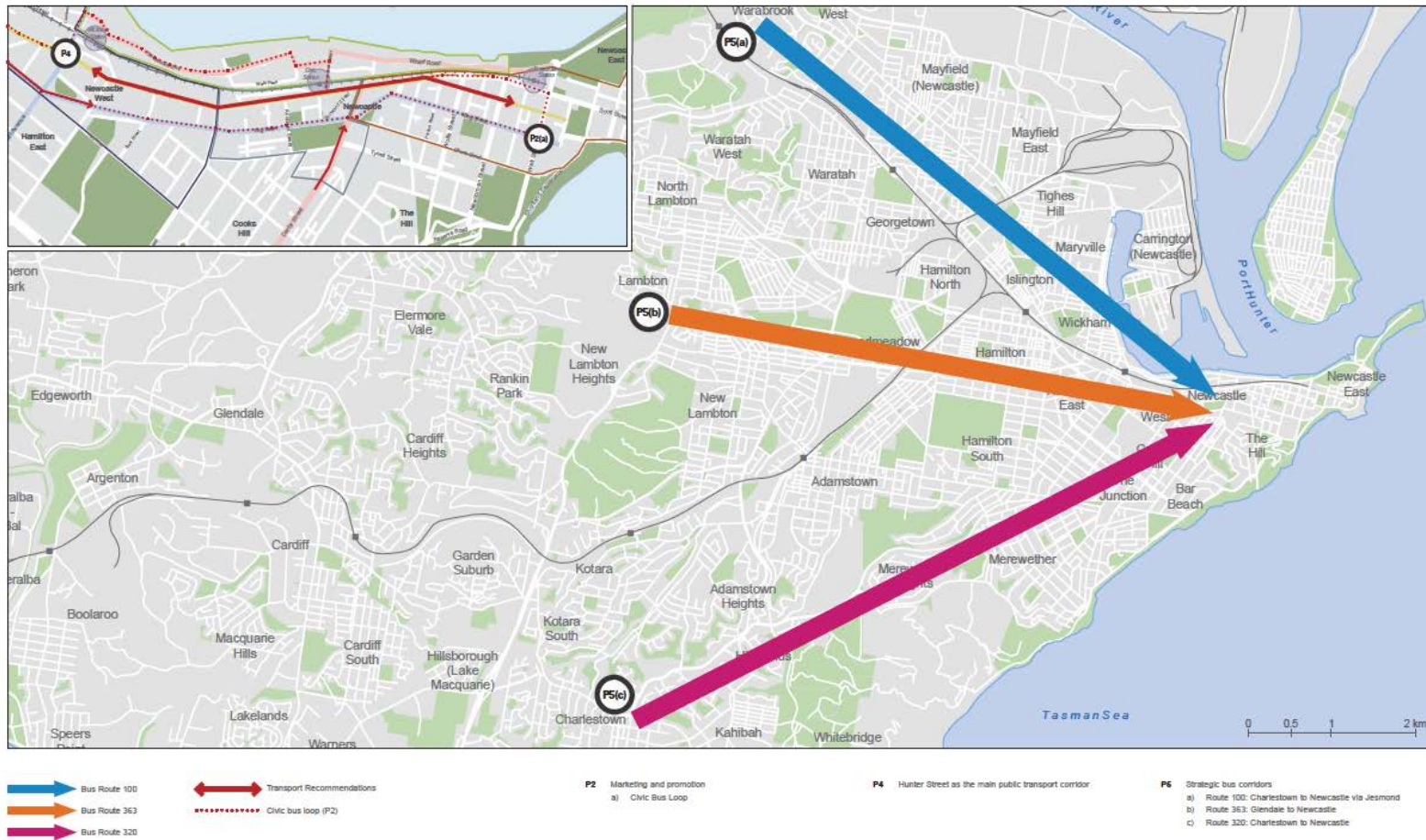
The Transport Management and Accessibility Plan (AECOM 2010) (TMAP) suggested introducing new express corridors to the city centre from Charlestown and Glendale, to improve journey times from the suburbs as well as supporting park and ride bus services (figure 6.4).

Similarly, the implementation of bus priority measures and modifications to accommodate bus movements at intersections in the city centre will complement the suggested bus lanes and allow the more efficient movement of buses.

Bus priority measures are also recommended in the TMAP along Newcastle Road to Jesmond, which would allow buses to operate more efficiently on a main access road to the city centre. Public consultation will be undertaken where implementation of clearways is considered and the TMAP recommends this be implemented in the short to medium term.

Recent changes have been made to bus services to provide for more express services to the city from key suburban hubs.

Changes to the city centre in conjunction with the light rail are expected to impact on bus services which are anticipated to terminate at the Newcastle Interchange with the future bus interchange planned to be in constructed in conjunction with the redevelopment of the Store site on Hunter Street. No definitive advice is available regarding this.



<p>AECOM</p> <p>LEVEL 21, 422 GEORGE STREET, SYDNEY NSW 2000 T 02 8834 0000 F 02 8834 0001</p>	<p>DRAWING NUMBER T001</p> <p>01 JUNE 2012</p>	<p>N</p>	<p>NEWCASTLE CITY CENTRE CONNECTIVITY AND ACCESSIBILITY STUDY MAKING THE MOST OF THE PUBLIC TRANSPORT NETWORK</p>
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Figure 6-4 Strategic Transport Corridors

6.4 Effective transport interchanges and Park and Ride opportunities

In its 2012 report AECOM recommended that “consistent with current City of Newcastle policy, park and ride should be supported in Newcastle where aligned with the provision of frequent or express bus services, along with complementary central area long term parking restrictions and improved public transport efficiency through bus priority measures and improved services”

It suggested that they could be provided at the following three locations:

- a. B2a - Serving the north-west in the vicinity of Warabrook;
- b. B2b – Serving the west in the vicinity of Lambton, and;
- c. B2c – Serving the south/south-west in the vicinity of Northcott Drive/Pacific Highway.

The report goes on to say that prior to being established, locations must be investigated and fully costed. The establishment of new park and ride facilities should be undertaken considering capacity requirements and the likely impacts on local traffic. Park and ride could be initially trialled at facilities such as Hunter Stadium or Broadmeadow Showground to better understand impacts.

A number of locations further away from the city centre are also potentially suitable for park and ride facilities.

These locations include within the Lake Macquarie Council area, Thornton and along the Maitland rail line.”

In late 2017 City of Newcastle Council implemented a Park and Ride service between Broadmeadow (McDonald Jones Stadium) and the city (Figure 6.5). Buses run weekdays from McDonald Jones Stadium every 15 minutes from 7am to 9am, with CBD stops designed to deliver you within a few minutes' walk of anywhere in the CBD. Buses make the return trip from the CBD to the stadium every 15 minutes from 4.30pm to 6.30pm.

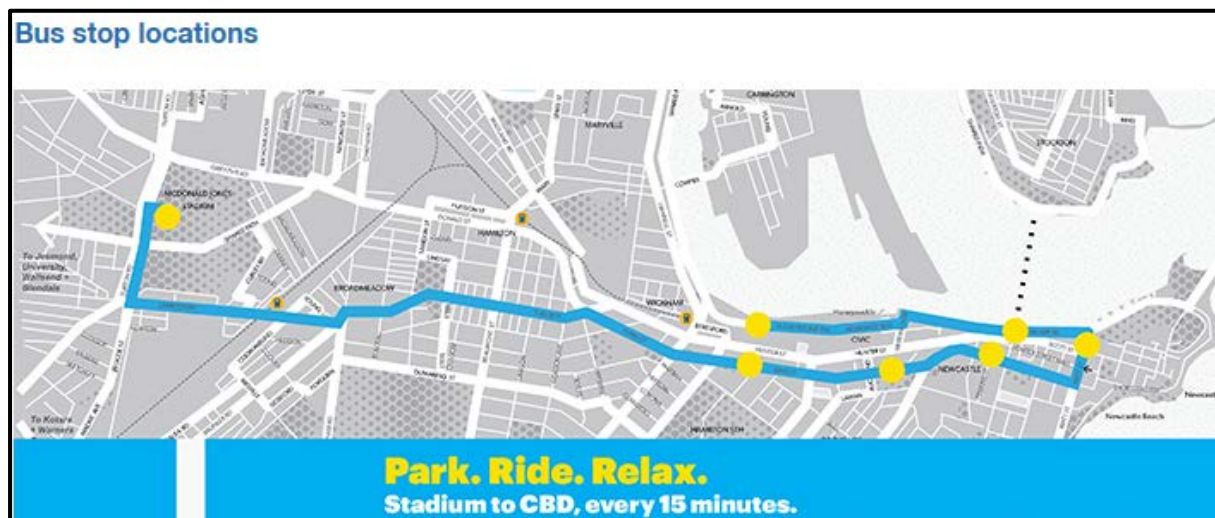


Figure 6-5 Park and Ride program between Broadmeadow and the CBD

6.5 Travel Demand Management Strategy

The shift away from the private car dominance currently experienced in Newcastle necessitates a change in behaviour that could be supported by:

- Education and awareness programs;
- Workplace travel plans, in particular for Newcastle City Council and various government agencies;
- Residential travel plans;
- School/university travel plans, and;

- The introduction of alternative travel choices, such as car sharing schemes.

The Hunter Street Revitalisation Framework also discusses the need for a Travel Demand Management strategy and changes to parking controls to encourage the use of alternative modes of transport to private car.

The Newcastle Transport Strategy has outlined a series of Transport Management Actions including recognising the need for a workplace travel plan for Council.

A32 Develop and implement a Workplace Travel Plan (Green Travel Plan) for Council.

Council will lead by example and encourage its own staff to reduce reliance on cars for work journeys, through surveying staff travel patterns and developing a travel plan. The process of developing a travel plan will have regard for potential for wider application and include production of a template for adaptation by other major employers in the Lower Hunter.

6.6 Car Sharing Opportunities

AECOM 2012 recommended that consideration be given to the implementation of a formalised carpooling program, with incentives to encourage higher vehicle occupancy rates among commuters. This would involve Newcastle City Council offering incentives such as reduced parking costs to drivers who travel to the city with, for example, 2 or more passengers.

Such recommendations are now imbedded in the Newcastle Transport Strategy

A31 Facilitate opportunities for establishment of car share schemes.

Dedication of parking spaces for car-sharing purposes; flexible development controls and developing a car share policy, are examples of ways in which Council can facilitate car sharing. Though Newcastle may not yet meet density and trip pattern criteria that make car share viable in the short term, development of a policy that sets out Council's position on car sharing, and the procedures by which organisations would be selected and schemes implemented, signals Council's interest and will position Council to respond to future opportunities. In the short term Council will initiate discussions with car share companies to determine the feasibility of establishment of car sharing programs in Newcastle and inform development of a policy.

Car sharing opportunities however can also be promoted through car membership programs such as Go Get. Such programs are based on a membership scenario where users pay and have access to a network of vehicles parked locally which are then available for their personal casual use. They are promoted to members on the basis that it is cheaper to have access to the program than to own a vehicle. They provide city residents with access to a car on those odd times when it is necessary, removing the need for car ownership and associated parking demands. As the city grows, and along it demand, such programs become more viable. The HCCD provides the levels of city usage and "critical mass" to generate such a demand.

6.7 Inter-Campus Transfers

The implementation of an inter-campus shuttle service between Callaghan and the city has been well supported by staff and students. HCCD will see the extension of this shuttle to include transfers between HCCD and Callaghan.

It is considered that many of the trips by the shuttle will be able to be undertaken using improved public transport options that will develop in conjunction with the ongoing revitalisation of Newcastle and the staged development of HCCD .

The University currently provides an on-campus shuttle at Callaghan which provides connections with trains arriving and leaving Warabrook Station in the morning and afternoon. It is expected that this shuttle will be able to improve the efficiency of train transfers from the City to Callaghan by meeting students and transferring them to the main student hub at Shortland.

Ongoing discussions with Transport for NSW are recommended to understand the options for suitable public transport to facilitate the movement of staff and students between campuses.

7 Implementation Strategy

7.1 Promotion of quality pedestrian routes

It is recommended that the University of Newcastle (UoN) consult with Newcastle City Council to promote routes between the city and areas identified as being student accommodation zones be included in planning mechanisms for quality pedestrian treatments. Current planning focuses on connectivity between the city and the foreshore and between the various activity zones however quality pedestrian routes are also desirable between HCCD and future student accommodation or affordable housing developments both in the city centre but more importantly within the 2 kilometre desirable walking radius eg Wickham, Carrington, Newcastle West etc. Gaps in such connections could be identified for future upgrades in association with s94 contributions or with direct development input.

7.2 Transport Management Strategy

The mode split being adopted for HCCD is a result of the application of the Newcastle Urban Release Strategy and reflects more recent strategies reviewed above. This mode split promotes the key transport elements of walking, cycling and public transport. To ensure these are adopted by staff and students it is recommended that the Travel Demand Management Strategy developed for NeW Space be extended to incorporate HCCD and all of the city campus, actively encouraging behaviour change and a shift away from travel by private vehicle. The implementation and monitoring of this strategy should be overseen by a suitable coordinator responsible for an integrated approach to travel management across the whole of the city campus.

This strategy includes:

7.2.1 Education and awareness programs

Particularly focussing on the move to and the excitement of HCCD for students and staff. These programs can build on the existing UoN web site for off-campus accommodation and travel options to HCCD. They importantly focus on the message that being a student at HCCD means you don't need a car.

Include attendance during orientation of representatives from Transport for NSW and Newcastle Transport to promote public transport and active transport options for staff and students. Also include representatives from other transport mode providers such as BYKKO, Go Get, bicycle suppliers and bicycle rider groups.

Promote and develop Ride to Campus and Walk to Campus days, cycling buddies etc with signage included in the NeW Space bike hub.

7.2.2 University travel plan

The inclusion of HCCD in the web based Travel Access Guides (TAGs) for students not only provide information about access to HCCD and inter-campus travel to Callaghan but can also include information to support students with their travel needs to and from Newcastle and within the Newcastle environs.

7.2.3 Workplace travel plan

The development and implementation of a WTP for staff both traveling to HCCD and commuting between campuses will be essential in ensuring the shift away from private vehicle dependence. Surveying of staff to understand their existing travel patterns prior to relocation and their future anticipated travel patterns to analyse programs could be best implemented to support a shift to public transport, active transport, park and ride shuttle and carpooling.

The travel plan could include information about adopting technology as a commuter, information from Newcastle Buses, trip planning, walking and cycling apps, bike routes and bike user groups (BUGs) as well as car sharing schemes, online shopping and local grocery delivery options.

7.3 Quality End of Trip Facilities for walking and cycling

Quality end of trip facilities for staff and students within HCCD as well as casual bike storage to compliment this where appropriate are planned for the new campus.

A review of the demands and usage for the bike hub within NeW Space offers opportunities to compliment this service and to ensure that appropriate user based facilities are provided in HCCD.

It is recommended that end of trip facilities be monitored to ensure appropriate take up of the space by cyclists and and to ensure that there is adequate facilities to suit the peak demands of the campus. This would be undertaken by the city campus Transport Coordinator.

7.4 Car Share Programs

The Newcastle Transport Strategy identifies the role that the Council can play in investigating and supporting commercial car share programs. These programs are well supported by Gen Y and the implementation of such a program could be supported in principle by UoN. The inclusion of suitable car share parking in conjunction with the proposed student accommodation or at Callaghan campus where students could pick up a vehicle having travelled on the Campus Shuttle could be an example of this support.

7.5 Support Park and Ride opportunities

The suggestion that TNSW investigate and implement park and ride locations in conjunction with strategic bus corridors would also benefit staff and students travelling from outside the ATZ to HCCD.

The Park and Ride service from Broadmeadow could be promoted to those staff and students who live out of the ATZ, particularly along the eastern side of Lake Macquarie.

The Campus Shuttle provides an effective transport link between campuses, enabling staff and students to travel by bus rather than by car. This program is also used as a Park and Ride by those participants that travel to Callaghan and then use the shuttle to transfer to the city. This service shall be extended to include HCCD.

8 Benchmarking Studies

Dr Chau Chak Wing Building – UTS Sydney



Project Description

This 11 story high building will house the UTS Business School and the related teaching and research faculty. The proposed gross floor area of the building is 15,488 m². The building will accommodate 454 academic/ support staff and research students and 7905 undergraduate and post graduate students with a maximum of approximately 1260 students at any one time.

Public Transport Context

Located at Ultimo, UTS is well located to maximise the use of Sydney's public transport network and is connected along associated pedestrian paths to/ from the campus. Sydney's Central Railway Station and bus interchanges are within 5 minutes walking distance of the university.

Parking Supply

The new building provides 28 parking spaces at basement level plus service vehicle space for 3 courier-sized vans and either 2 small rigid or 1 medium rigid vehicle.

Student Accommodation within the vicinity

Student accommodation is available throughout the surrounding suburbs of Ultimo, Haymarket, Redfern in addition to on campus accommodation including the newly built Yura Mudang high rise apartment providing 720 beds.

Active Transport Measures

UTS provides comprehensive active transport information on its website encouraging people visiting or studying at the campus to utilise public transport.

Interactive maps and links provide information on bicycle parking and the location of end of trip facilities.

High quality end of trip facilities and secure bicycle storage is available.

Printable Travel Access Guides are available online including comprehensive bus route information.

Shuttle bus is available between Ultimo and Kuring-gai campuses.

The frequency, reliability and capacity of rail services and the close proximity of the campus to Central station means that the highest proportion of the existing student travel by train.

Parking Context

Limited metered onstreet parking is available in the vicinity of some of the UTS buildings.

Public carparking stations are available in Ultimo, Haymarket and Darling Harbour.

Other

Jeffrey Smart Building – University of South Australia



Project Description

7 stories high this building will cater for the learning needs of 15,000 students meeting their studying needs through the supply of education facilities in a creative and engaging environment. The new building is situated on the southern side of Hindley Street on the City West campus in Adelaide.

Public Transport Context

Located on the western fringe of the Adelaide CBD the campus is within walking distance of Adelaide Railway Station. City West is also easily accessible by bus, with many routes stopping on North Terrace and Currie Street.

Parking Supply

The University of South Australia City West campus provides very limited parking on site. The new building is consistent with this providing no additional parking.

Student Accommodation within the vicinity

Student accommodation is available in privately owned student apartments, hostels and residential colleges throughout Adelaide.

Active Transport Measures

The UniSA web site provides positive active transport information encouraging walking and cycling as viable transport options to the campus and encourages public transport where this is not practical.

Secure bike storage and showers are available with the location of all bike racks and end of trip facilities available on interactive web links.

Additional links are provided to encourage cyclists to connect with other cycling resources including maps, cycling clubs and bike hire.

Parking Context

No campus parking is available at City West. On-street parking, both metered and free is available in the city as well as off-road commercial car parking.

Other

The new Jeffrey Smart Building is being designed as a 5 Green Star development.

The “Spot” Building –University of Melbourne



Project Description

Located on the south-western gateway to the University of Melbourne this 12 storey combined academic and teaching facility is to house the Faculty of Economics and Commerce.

The building has 20,000 square metres of usable floor area and includes a 400+ seat theatre. (25,850m² in total).

Public Transport Context

Forming part of the University of Melbourne Parkville Campus The Spot Building is well located to take advantage of public transport. Buses and trams service the precinct directly whilst Melbourne Central Station is within walking distance of the campus.

Parking Supply

The Spot Building provides no parking.

Student Accommodation within the vicinity

The campus is centrally located with a variety of accommodation options available within Parkville, Carlton, North Melbourne and the top part of the CBD within easy walking distance. Outside these areas the university is walkable or a short tram ride. A number of on-campus residential colleges are also within walking distance.

Active Transport Measures

The building provides a bicycle hub located in secure and weather-protected area, 42 bicycle parking spaces are available with end-of-ride facilities such as changing rooms, showers, and lockers.

Location of the 1800 bike parks, hubs and bike repair stands are available online.

TAGs to promote public transport readily available and public transport is promoted over car usage.

Parking Context

Very limited parking is available for short term only throughout the Parkville Campus.

Public carparking station is available at University Square.

Other

5 Star Green Star Education Building

Medical Science Precinct- University of Tasmania



Project Description

Located in the Hobart CBD the new Medical Science precinct will have teaching facilities for more than 1,100 undergraduate students and office and laboratory facilities for 450 staff and postgraduate students. These two new buildings (MS1 and MS2) accommodate medical and clinical research facilities for the Menzies Research Institute, UTAS School of Medicine and the Royal Hobart Hospital incorporating flexible teaching spaces, PC2 and wet teaching laboratories. The precinct takes up over 20,000m².

Public Transport Context

Forming part of the University of Tasmania's Hobart Campus this precinct is located within the heart of Hobart, well located to take advantage of public transport. Buses (Metro) service the precinct directly with bus stops within close proximity to the complex.

Parking Supply

There are only 26 parking spaces with 11 for clinical patients, 10 share car spaces, 3 accessible spaces and 2 other. Priority parking for small cars.

The new space replaced a previous carparking site.

Student Accommodation within the vicinity

The University's Sandy Bay campus provides on-campus accommodation whilst various off-campus options are also available.

A new affordable housing project supported by the UTAS is currently being planned for the Hobart CBD.

Active Transport Measures

200 secure bike parking spaces with a shower and storage for staff and students.

Public transport is promoted by the University.

Parking policy supports active transport modes.

Parking Context

Public parking stations controlled by Hobart City Council.

Staff parking policy for this precinct.

Other

5 Star Green Star Education Building

The Swanston Academic Building –RMIT



Project Description

The Swanston Academic Building is located at 427 – 433 Swanston Street in Melbourne and has been built around the historic Oxford Scholar Hotel. Forming part of the redevelopment of the Melbourne campus of RMIT this 12 storey building is the home for the College of Business and provides a base for some 6, 600 students and staff. In an area of 34,350m² it houses 12 lecture theatres, 64 teaching spaces and 10 specialist learning venues to cater to the RMIT community.

Public Transport Context

Located as it is in the block bounded by Swanston Street, Franklin Street, Stewart Street and A'Beckett Street this building is well located to take advantage of public transport. Trams service the precinct directly along both Swanston Street and La Trobe Street whilst Melbourne Central Station is at the southern end of the campus.

Parking Supply

The Swanston Academic Building provides no parking.

Student Accommodation within the vicinity

The campus is centrally located with a variety of accommodation options available within Parkville, Carlton, North Melbourne and the top part of the CBD within easy walking distance. Outside these areas the university is walkable or a short tram ride. A number of on-campus residential colleges are also within walking distance.

Active Transport Measures

Secure bike parking is available for cyclists within the new building and includes showers, changing rooms and lockers.

Bike riding is promoted on the RMIT web site (RMIT Bicycle Information Hub) which includes suitable routes, riding promotion days and repair workshops.

TAGs to promote public transport readily available and public transport is actively promoted.

Parking Context

Metered street parking is available around the City campus.

Commercial car parks are available within a short walk to the campus.

Other

5 Star Green Star Education Building

Mirvac School of Sustainable Development – Bond University, Gold Coast



Project Description

Located on the Bond University Campus this facility houses the School of Sustainable Development.

Public Transport Context

Bus services operate from the campus providing access to shopping, residential and tourist areas on the Gold Coast. Robina Railway Station provides access to train services to Brisbane.

Parking Supply

Only one space is provided, suitable for a small, hybrid vehicle only.

Student Accommodation within the vicinity

The University provides accommodation on campus as well as promoting off campus facilities.

Active Transport Measures

Secure, undercover storage is provided for 10 student bicycles. In addition, lockable, undercover storage is provided for 6 staff bicycles. Showers, changing facilities and lockers are provided for cyclists.

A dedicated, well lit and signposted pedestrian route, linking the site to public transport nodes and other nearby amenities is provided

The building handbook provides details for bus and rail transport as well as outlining cycling facilities.

Parking Context

The Bond University provides parking throughout the campus.

Other

6 Star Green Star Education Building

Waterfront Building - University of Tasmania



Project Description

Located on the Hobart waterfront this facility provides teaching and research facilities for approximately 290 staff and students with a GFA of 5350m².

Public Transport Context

Forming part of the University of Tasmania's Hobart Campuses this building is located in the Salamanca precinct on the waterfront and is well located to take advantage of public transport. Buses (Metro) service the precinct directly with bus stops within close proximity to the building.

Parking Supply

1 disabled space and very limited short term parking for visitors

Student Accommodation within the vicinity

The University's Sandy Bay campus provides on-campus accommodation whilst various off-campus options are also available.

Active Transport Measures

There is space for 80 bikes to be stored externally and 30 internal spaces including 3 electronic bicycle charging stations. There are 34 lockers in the Waterfront Building for staff/student use.

Showers and change rooms can be accessed via internal bicycle storage area.

Public transport is promoted by the University.

Parking policy supports active transport modes.

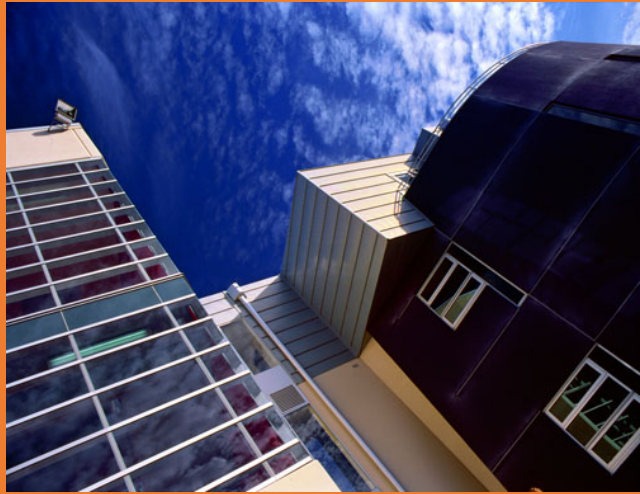
Parking Context

On-street and public parking stations controlled by Hobart City Council.

Other

5 Star Green Star Education Building

Camp Street Campus – Federation University Australia



Project Description

Located in Ballarat's central business district, the Camp Street Campus is home to the Arts Academy. The integration of new and historic buildings provides a central precinct for the University's visual and performing arts. It incorporates 8,000 square metres of space for students and staff.

Public Transport Context

Located in the Ballarat CBD the campus is 5 minutes walk from the Ballarat Railway Station which also provides interchange to all local bus routes. There are 20 local bus services which operate between 6am and 9pm with most services between 30 and 60 minute intervals. V/Line provides railway services connecting Ballarat with Melbourne whilst regional bus services connect Ballarat with Geelong.

Parking Supply

The Camp Street Campus provides no free nor permit parking spaces. Limited parking is provided for student accommodation associated with the campus.

Student Accommodation within the vicinity

Student accommodation is available in both privately owned and university owned off-campus residences. There is on-campus accommodation for 38 art students.

Active Transport Measures

The Federation University provides clear transport information encouraging bus and active transport options prior to information about driving.

Parking Context

No campus parking is available at Camp Street Campus..There is a variety of short, medium and long-term free and paid parking available on-street around central Ballarat.

Other

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