Honeysuckle City Campus Development

University of Newcastle

Parking and Transport Assessment

Stage 1A

May 2019

SECAsolution

Honeysuckle City Campus Development Stage 1A
Honeysuckle Drive and Worth Place, Newcastle

Parking and Transport Assessment

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1 Executive Summary

Background and Proposed Development

Seca Solution Pty Ltd has been commissioned by APP Corporation on behalf of the University of Newcastle to prepare a parking and transport assessment for Stage 1 of the Honeysuckle City Campus Development (HCCD). This represents the ongoing development of the University in the City and forms part of the Newcastle City campus including NeW Space, the Conservatory of Music and other ancillary services in the CBD. The proposed site is located within the Honeysuckle Precinct in Newcastle between Honeysuckle Drive and Civic Lane with Worth Place on the western edge. This initial stage is located at the western end of the site being on the northern western corner of Worth Place and Honeysuckle Drive with Wright Lane, west of Settlement Lane, being incorporated into the site. This stage provides for the School of Creative Industries and the Innovation Hub incorporating a mixture of education delivery space, innovation and start up entrepreneurial space, community engagement space and retail/cafe and student services.

The development will provide a showcase for innovation with a 5 Green Star rating, Smart Cities applications and sustainable travel encouraged to access the site. A loading bay is included in the design, with provision for accessible parking in the vicinity of the site to be included as part of the detailed design. A Transport Access Strategy has been prepared (Seca Solution 2018) to inform the concept master plan and provide guidance on mode shift, active travel and public transport opportunities.

Existing Situation

This stage activates all three street frontages being Honeysuckle Drive, Worth Place and Wright Lane with Honeysuckle Drive providing the main street frontage to the site. This key corridor with an east-west orientation carries significant traffic flows associated with developments along its length as well as access to the foreshore and the eastern end of the City via Wharf Road. The Honeysuckle Precinct has been the subject of a master plan including traffic modelling and studies which have assessed the proposed development capacity for the area.

Metered on-street parking is available along Honeysuckle Drive, along with bus stops, loading zones and taxi drop off zones. Surrounding streets also provide for a mix of parking and loading areas. There is generally a high demand for parking in the locality of the site, both on-street and off-street. The Newcastle CBD parking has been investigated by Council as documented in the Newcastle Transport Strategy and in conjunction with the light rail development. Although parking has been impacted upon by the implementation of the light rail network the City's parking capacity has been determined as being adequate to provide for its future requirements along with the strategies to encourage public transport and active transport modes over vehicle travel. The question of the provision of parking within the City and surrounds is not limited to just that of parking supply but is also a matter of road capacity. As Newcastle City centre is on a peninsula with access provided along historical road links there are limited opportunities to provide for additional network capacity within the road network during peak periods and so alternate strategies including mode shift are necessary to accommodate the long term growth of the City.

As part of the development of the light rail, a transport interchange has been constructed at Wickham (Newcastle Interchange) that allows for connection to the heavy train network at this location. In the future (2020) a bus interchange shall also be incorporated into this with services proposed to utilise part of The Store site on Hunter Street. Train services at this location allow for connection south towards the Central Coast and beyond to Sydney as well as to the north to Maitland and beyond, with a high level of train frequency to cater for commuter as well as casual demands.

Light rail operation commenced in February 2019 with the light rail network providing six stations offering convenient commuting throughout the CBD. Civic Station and Honeysuckle Station shall provide stops within 100 metres of the subject site, with services operating between 5am and 1am, 7 days a week, every 7.5 minutes during peak times (weekdays between 7am and 7pm) and every 15 minutes at all other times. Bus stops are provided

along Honeysuckle Drive, however public bus routes no longer operate along this road with services operating along King Street.

Proposed Development Strategy

The renewal of Newcastle is based on an increase in the number of people living and working in the City with HCCD providing for significant staff and student over time. Stage 1A will see a user population in the order of 1,770 persons comprising of a mixture of students, academics and Innovation Hub members. As per typical University operations, users shall come and go throughout the day with some only being on site for an hour per day. Actual demand for the site is likely to peak at circa 550 at any particular time.

The HCCD Transport Access Strategy (TAS) considers the strategic policies for the City of Newcastle, including the Greater Newcastle Metropolitan Plan 2036; It also provides further insight into the University's existing mode share data; and analyses case studies of similar projects.

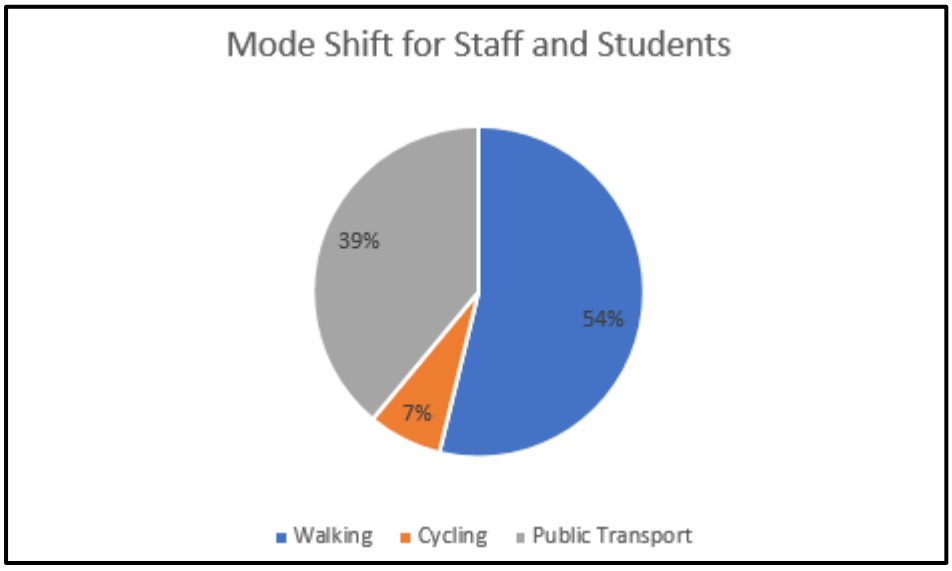
Overall the HCCD TAS has been developed with consideration to the future of the City and the university and supports the strategy which includes:

- 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;
- University 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.

As identified in the TAS it is expected that 66% of students and staff shall live within the CBD and its environs within a distance suitable for walking and cycling or able to affectively access public transport.

This provides a mode shift for HCCD as shown below:



Assessment

The subject site sees the amalgamation of three sites. One previously assessed for commercial development on the corner of Honeysuckle Drive and Worth Place, one being the commuter carparks provided to support the now redundant Civic Railway Station and the third being part of the heavy rail corridor. Traffic associated with these uses has been historically included in modelling for the precinct and included in the cumulative impact of traffic on the local road network, including key intersections. Such modelling was also undertaken for the Revitalisation of Newcastle, allowing for the forecast 6000 additional residents and 10,000 additional employees (NURS 2012).

As vehicle demands associated with Stage 1A are primarily related to servicing for the site with some demands for the pick up and drop off of people, the vehicle traffic generated by the subject site has been determined as being minimal and significantly less than that previously allowed for in modelling for the precinct. The cumulative impact of this has also been taken into consideration with the various road and intersection upgrades being undertaken in conjunction with the light rail project forecast forward to 2028. The impact of vehicle traffic on the local road network has therefore been assessed as acceptable.

Servicing of the site, including waste management, will be able to be accommodated along Honeysuckle Drive and Worth Place. Servicing for end users of the site eg cafe will be minimal and can be accommodated on-street, outside of peak hours, consistent with surrounding restaurants and venues in the immediate precinct. It is proposed to provide a short term loading zone on Honeysuckle Drive to allow for these demands whilst kerb-side collection of waste on Worth Place shall be managed to reduce potential impacts on through traffic and pedestrians.

Appropriate bike storage and end of trip facilities shall be provided for Stage 1A, with these included on the ground floor with an external bicycle hub and 3 showers provided within the amenities. During this transitional phase the development shall provide an interim bike parking solution including the provision for 28 bike parking spaces, with this equating to a rate of 1 space per 20 students. This is consistent with the bike parking rate for students in the NDCP for adult educational establishments. The long term planning includes permanent facilities to be incorporated into future stages of the campus development, which shall provide bicycle facilities in accordance with the sustainable travel goals outlined for the project. It is noted there are existing bike hub facilities also located within the NeW Space campus.

Changes to cycling, including bike share programs such as Bykko and the more affordable availability of electric bikes will require consideration of charging stations which is consistent with the Smart Cities program.

Access to public transport is readily available via the light rail system which sees two stations, Civic and Honeysuckle, both within 100m of the campus with appropriate pedestrian connectivity available. The light rail has been designed to accommodate the future demands of the City, of which HCCD is one of the key drivers. Therefore, there is adequate capacity available to meet the demands associated with the development.

The University currently operates a Campus Shuttle which provides connection between the City and Callaghan campus for staff and students who need to travel between both campuses for lessons etc. This service shall be reviewed in conjunction with the operation of the light rail and if appropriate shall be extended to include HCCD.

It is recognised that there may be some demands generated by people who do not choose to live within close proximity to the City and for whom public transport is not feasible. The University shuttle acts as a Park and Ride for those staff and students who choose to drive to Callaghan and then commute to the CBD. For the balance there may be some demand for parking. Such demands can be accommodated within the existing public parking supply available in the City which has been reviewed in conjunction with the various strategies and found adequate to accommodate the City's future needs. This includes parking within the Civic West carpark which is underutilised by NeW Space.

Therefore, allowing for the implementation of the Transport Access Strategy, supported by the promotion of active travel and public transport, the proposal to provide a small amount of specialised parking for accessible, bicycle and servicing along with drop off and pick up zones but with no general parking is supported.

2 Introduction

2.1 Background

Seca Solution Pty Ltd has been commissioned by APP Corporation on behalf of the University of Newcastle to prepare a transport impact assessment for Stage 1A of the proposed Honeysuckle City Campus Development (HCCD) to be located at the corner of Honeysuckle Drive and Worth Place, Newcastle.

Overall the subject development will see the consolidation of three sites, one being a site previously the subject of assessment as a commercial development and allowed for in the Honeysuckle Concept Masterplan and associated traffic study, one being space that formed part of the heavy rail corridor and the third being the commuter parking area off Worth Place that supported the Civic Railway Station which was made redundant with the truncation of the heavy rail line.

Accommodating the teaching accommodation of the School of Creative Industries, as well as the Innovation Hub, this first stage of the development will seek to provide a building fostering collaboration in the areas of creativity and entrepreneurial endeavour.

The development will provide a showcase for innovation with a 5 Green Star rating and sustainable travel encouraged to access the site.

2.2 Scope of Report

The scope of this report is to undertake an assessment of the existing traffic and transport situation, including changes to the public transport network in the City taking into consideration policies and strategies to provide for a "travel culture change favouring use of public transport, walking and cycling by 2022" in the Newcastle CBD and to subsequently determine the parking and transport requirements for Stage 1A of the proposed development. These requirements are to take into consideration the demographics and travel needs of the end users of the HCCD and respond to the SEARs issued for development.

2.3 HCCD Transport Access Strategy

The renewal of Newcastle is based on an increase in the number of people living and working in the City with HCCD providing for significant staff and student over time.

The HCCD Transport Access Strategy (TAS) considers the strategic policies for the City of Newcastle, including the Greater Newcastle Metropolitan Plan 2036; It also provides further insight into the University's existing mode share data; and analyses case studies of similar projects.

Overall the HCCD TAS has been developed with consideration to the future of the City and the University and supports the strategy which includes:

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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.

As identified in the TAS it is expected that 66% of students and staff shall live within the CBD and its environs within a distance suitable for walking and cycling or able to affectively access public transport.

2.4 Issues and Objectives of the study

The issues relative to the proposal are:

- Consider the Stage 1A proposal against the Concept Master Plan for consistency in determining the impact of the development on the road network, including pedestrian facilities, cycling facilities and public transport
- Consider the HCCD TAS on determining the parking demands for the development
- Review the service arrangement for the development; and
- Assess any other transport impacts associated with the proposal

The objective of the report is to document the impacts of Stage 1A and provide advice on any infrastructure work required as part of the proposal.

2.5 Planning Context

In preparing this document, the following guides and publications were used:

- RMS Guide to Traffic Generating Developments, Version 2.2 Dated October 2002;
- RMS TDT 2013/04 "Update Traffic surveys August 2013".
- Newcastle City Council Development Control Plan 2012
- Australian / New Zealand Standard – Parking Facilities Part 1: off-street car parking (AS2890.1:2004);
- Newcastle City Centre Parking Strategy April 2017
- Newcastle City Centre Cycleway Network Strategy 2017
- Newcastle Urban Renewal Strategy
- City of Newcastle Forecast.ID 2013
- Y Combinator Start Up School Podcasts 2015-2016 Stanford University
- HCCD Transport Access Strategy (Seca Solution 2018)
- HCCD Parking and Transport Assessment – Concept Master Plan (Seca Solution 2018)

2.6 Authority Requirements – Response to SEARs

Issue raised	Report Response
forecast total daily and peak hour trips likely to be generated by the proposed development including vehicle, public transport, pedestrian and bicycle trips, together with cumulative impacts of existing, proposed and approved developments in the area and any transport / traffic upgrade	Section 5 Transportation Analysis 5.1 Traffic Generation 5.2.1 Mode split
address the impacts of the proposed development on the operation of existing and future transport networks, including the public transport capacity and its ability to accommodate the forecast number of trips to and from the development including surrounding footpaths and cycleways	Section 3 Existing Situation 3.4.2 Roadworks 3.5.7 Road Network Operation Section 5 Transportation Analysis 5.5 Traffic Impact Assessment 5.7 Pedestrian Movements

	5.8 Cycling Movements 5.10 Public Transport
provide an assessment of the existing and future performance of key intersections providing access to the site, supported by appropriate modelling and analysis to the satisfaction of RMS and TfNSW. Traffic modelling is to be undertaken using, but not limited to, SIDRA network modelling for current and future years	Section 3 Existing Situation 3.4.2 Roadworks 3.5.7 Road Network Operation Section 5 Transportation Analysis 5.5 Traffic Impact Assessment
outline measures to mitigate impacts of the proposed development on the operation of existing and future traffic, public transport, pedestrian and bicycle networks, including any required upgrades	Section 6 Measure to promote Active Travel choices
detail proposed car and bicycle parking rates for students, staff and visitors, including consideration of the availability of public transport and the requirements of the relevant parking codes	Section 4.6.3 Pedestrian and Bicycle Facilities Section 5 Transportation Analysis 5.6 Parking Analysis
include details of likely servicing requirements	Section 5 Transportation Analysis 5.4 Site Servicing
the proposed access arrangements, including car and bus pick-up/drop-off facilities, and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and bicycle networks	3.4.1 Road Hierarchy 4.5 Site Servicing
detail measures to be implemented to encourage users of the development to make sustainable travel choices, including walking, cycling, public transport and car sharing, such as provision of adequate bicycle parking and end of trip facilities.	HCCD Transport Access Strategy and Section 6 Measure to promote Active Travel choices

2.7 Consultation with Authorities

Consultation has been undertaken regarding this project with RMS (Peter Mahler), Transport for NSW (Nicole O'Neill) and Newcastle Transport (Mark Dunlop).

3 Existing Situation

3.1 Site Description and Proposed Activity

The subject site is located within the Newcastle City centre in the Honeysuckle Precinct and is currently vacant land.

Stage 1A accommodates touch down workspaces and teaching accommodation of the School of Creative Industries, as well as the Innovation Hub.

3.2 Site Location

Located at the western gateway to the future HCCD, the design seeks to activate all three street frontages including Honeysuckle Drive (North), Worth Place (West) and Wright Lane (South).

The subject site is surrounded by commercial and mixed-use development to the north and west. East of the site is a small park area and Civic station, an area to be incorporated into a public space to connect Hunter Street with the harbourside. South of the site is a strip of shops and commercial space along Hunter Street with the University of Newcastle NeW Space (University of Newcastle City campus) on the corner of Hunter Street and Auckland Street with other University facilities located in close proximity.

The location of the site is shown below in Figure 3-1.

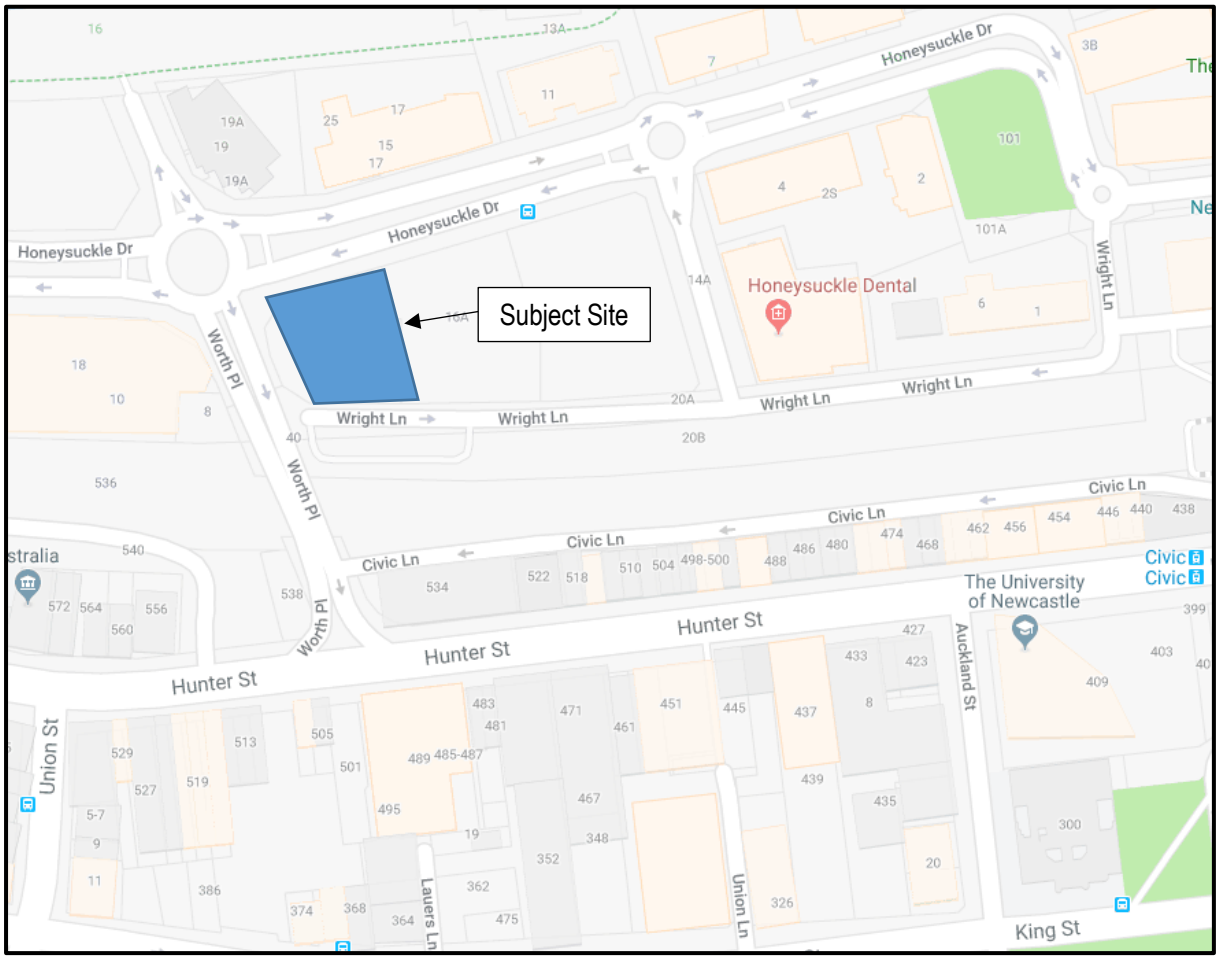

Figure 3-1 Site Location (Source: Nearmap)

3.3 Site Access

Historic vehicle access to the site has been available along Wright Lane, as well as directly from Worth Place.

3.4 Existing Traffic Conditions

3.4.1 Road Hierarchy

Honeysuckle Drive

The main road through the locality is **Honeysuckle Drive** that runs along the northern boundary of the site with an east to west orientation. It provides a single lane of travel in each direction separated by a wide grassed median. The pavement width (7 metres each side) permits parking along both sides of the road for the majority of its length with a marked cycling lane adjacent to the parking lane. The termination of parking on the approach to intersections is controlled by build outs with roundabouts at key intersections providing for all turning movements. Honeysuckle Drive is a local road which carries significant traffic volumes through the Newcastle CBD from Hannell Street in the west to Workshop Way east of the site. From Workshop Way it connects with Wharf Road via Merewether Street and continues east along the harbourfront to Nobbys Beach.

Honeysuckle Drive connects to the regional road network at Hannell Street (Stewart Avenue) to the west of the site at a signalised T-intersection. Honeysuckle Drive operates under a speed limit of 50km/hr.

Parking is available along Honeysuckle Drive and is generally controlled through parking meters. There are also taxi drop off areas, loading zones and bus stops to provide for the various commercial users and restaurants along the foreshore. There are wide footpaths provided along both sides of the road as well as street lights. Hunter Central Coast Development Corporation is the road authority for any new works on or adjacent to this road.

Photo 1 View to west showing Honeysuckle Drive along the site frontage left of photo.

Hunter Street

To the south of the site is **Hunter Street,** running parallel to Honeysuckle Drive and providing access to various retail and commercial spaces throughout the CBD. Historically Hunter Street has operated with two lanes of travel in each direction with widening to accommodate kerb side parking. It has footpaths along both sides, reflecting the pedestrian demands associated with the City centre.

Hunter Street in this location however, carries the recently constructed light rail network. This has reduced travel lanes and has impacted on the availability of parking, however shall provide convenient and fast public transport throughout the CBD.

Main intersections along Hunter Street are signalised allowing generally for all turning movements and pedestrian phases. Hunter Street in this location operates under a speed limit of 40km/hr.

Wright Lane

Wright Lane runs parallel to Honeysuckle Drive providing access to the lots to the north and south within the subject site. It has a width of approximately 6.5metres wide with no parking to either site allowing for two-way movements between Settlement Lane and its western end. It provides an area with 90-degree parking at its eastern end designated as Private Parking and operates as one way east to west. To the south of Settlement Lane the commuter carpark immediately adjoining the road edge. Wright Lane currently terminates at the western end with no access provided to Worth Place due to roadworks associated with the construction of the light rail and changes to the road network.

The extent of Wright Lane (Lot 5 and 6 DP 1247375) from Workshop Way through to the dead end to the west is owned by the University of Newcastle.

Photo 2 Wright Lane looking east of the site showing one way travel and intersection with Settlement Lane.

Worth Place

Worth Place has recently been upgraded and extended to connect with Hunter Street to the south. This roadway sees the light rail connect to Hunter Street to its immediate west travelling along the heavy rail corridor to the Newcastle Interchange.

It offers a single lane of travel in each direction and no parking is permitted along its length. It has quality pedestrian pathways being constructed as part of the local upgrades and has street lighting, with a posted speed limit of 40km/hr.

Worth Place connects with Honeysuckle Drive at a single lane circulating roundabout to the north. To the south the intersection of Worth Place and Hunter Street has been upgraded to traffic signals allowing for light rail vehicles. The intersection allows for a left in / left out arrangement for road-based vehicles.

Civic Lane

Civic Lane provides one-way access to the rear of various commercial and mixed-use developments fronting Hunter Street, running in an east-west orientation. The lane is accessed off Hunter Street via the former Civic Station drop off / pick up area with egress onto Worth Place. Historically, egress from Civic Lane has allowed for left turn onto Worth Place as well as access to a carpark on Steel Street, to the rear of TAFE NSW.

Time limited 2P parking is available along the southern side of the laneway together with several loading zones.

The access and operation of Civic Lane has been reviewed by Council in conjunction with its Civic Station Public Domain Works which allow for improved public access between Hunter Street and the foreshore for pedestrians and cyclists as well as open space in the vicinity of what was Civic Railway Station. It is understood that access to Civic Lane shall remain through a shared zone allowing for left turn movements off Hunter Street. Access to Worth Place shall most likely be restricted to left turn out due to the light rail with Civic Lane continuing to operate as a one-way roadway east to west.

Photo 3 Civic Lane with subject site to the right

3.4.2 Roadworks

The majority of road works associated with the light rail construction have now been completed within the immediate vicinity of the site. Ten intersections associated with the Revitalisation of Newcastle have been identified for upgrade to accommodate future growth and development including the introduction of the light rail (Figure 3-2).

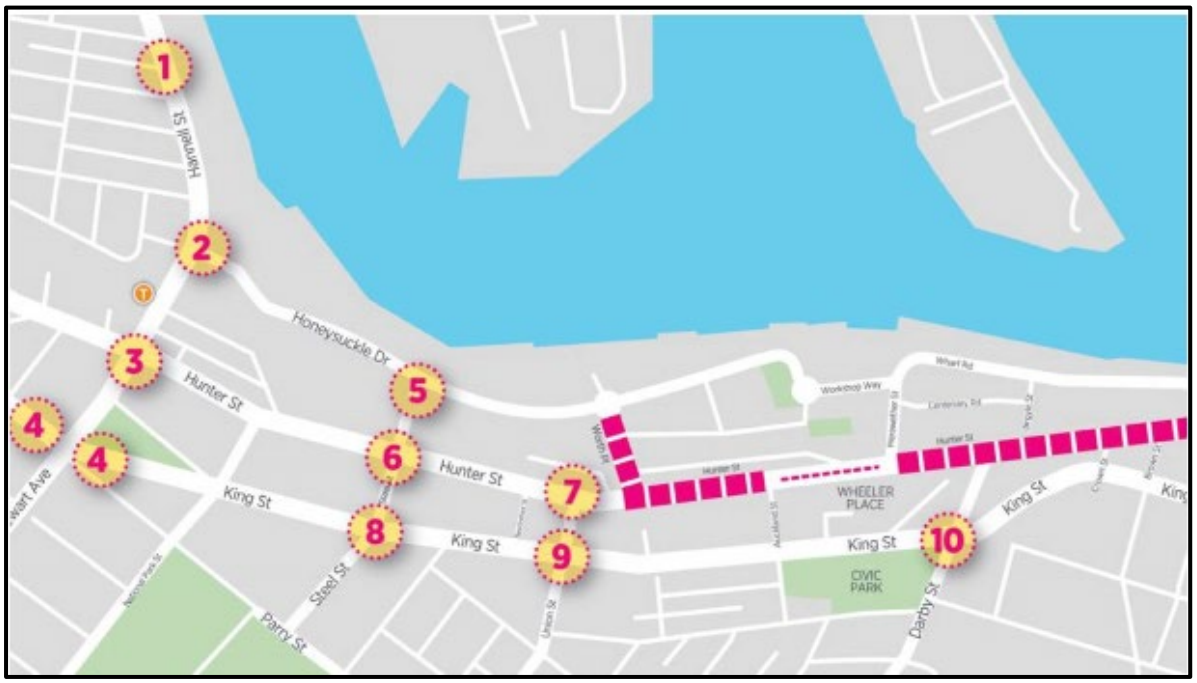

Figure 3-2 Intersections identified for upgrades in conjunction with light rail project

This project is being completed by Transport for NSW and as part of the project work, a Technical Working Paper and SEE has been prepared by GHD that has assessed the impact of the light rail on the road network. The report modelled the road network operations, for the design year 2028 with and without the above road upgrades, allowing for background growth. A summary of the results of this modelling is shown to follow in Table 3-2, with results based on Level of Service (LoS).

The LoS is the performance standard adopted by the RMS Guide to Traffic Generating Developments when assessing the operation performance and efficiency of an intersection. It is a qualitative measure which represents the effects of factors such as speed, traffic volumes, geometric features and delays on the capacity and efficiency of an intersection. LoS is determined from a quantitative assessment of the average delays and queuing in accordance with the criteria shown in Table 3-1.

Table 3-1 Level of Service (LoS) criteria for intersections (Source: RMS Guide to Traffic Generating Developments)

Level of Service	Average Delay per Vehicle (secs)	Traffic Signals & Roundabouts	Give Way & Stop Signs
A	d ≤ 14.5	Good operation	Good operation
B	14.5 ≤ d ≤ 28.5	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	28.5 ≤ d ≤ 42.5	Satisfactory	Satisfactory, accident study required
D	42.5 ≤ d ≤ 56.5	Operating near capacity	Near capacity, accident study required
E	56.5 ≤ d ≤ 70.5	At capacity; excessive delays; roundabout requires other control mode	At capacity, requires other control mode
F	70.5 ≤ d	Unsatisfactory, requires additional capacity	Unsatisfactory, requires other control mode

Note: The average delay for signalised intersections is for all movements. For roundabouts and sign controlled intersections, the average delay is for the critical movement.

Table 3-2 Intersection Levels of Service

Location	Reference (Figure 3-2)	2028 without light rail		2028 with light rail No Roadworks		2028 with light rail and roadworks	
		AM	PM	AM	PM	AM	PM
Throsby Street/Hannell Street	1	A	F	B	C	B	F
Honeysuckle Drive/Hannell Street	2	C	F	B	F	B	C
Hunter Street/Stewart Avenue	3	F	F	C	D	C	C
King Street/Stewart Avenue	4	C	C	E	D	E	C
Hunter Street/Steel Street	6	A	B	B	D	B	C
Hunter Street/Union Street	7	B	C	C	B	B	B
King Street/Steel Street	8	B	C	C	B	C	C
King Street/Union Street	9	D	D	D	F	D	F
Hunter Street/Merewether Street	-	B	C	B	B	B	B
Hunter Street/Darby Street	-	C	B	C	D	C	C
King Street/Darby Street	10	C	C	C	D	B	C

3.4.3 Pedestrian and Cycling Facilities

There are extensive pedestrian footpaths in the vicinity of the site, which extend throughout the Honeysuckle Precinct and the CBD as well as the local attractions, including Honeysuckle Precinct, Marketown, Darby Street entertainment precinct and the major new developments including NeW Space and the Law Courts. There are footpaths along both sides of the roads in this location, with large pedestrian refuges allowing for north south connection across Honeysuckle Drive. The roundabouts at Worth Place and Settlement Lane each have splitter islands with pedestrian refuges providing for pedestrian movements. Within the CBD all major crossings are controlled by traffic signals which incorporate pedestrian phasing, ensuring that pedestrian movements can be safely managed and controlled. These pedestrian crossings include drop kerbs to cater for wheel chair users as well as prams etc.

There is an east-west shared pathway along the harbour foreshore throughout Honeysuckle which extends north through Wickham and along Throsby Creek where it becomes part of the No 6 cycling route to Callaghan campus (Figure 3-4). Cyclists are also able to ride on the roads, with a number of sections of parking / cycle lanes provided in the locality of the site. There are a number of regional and local cycle routes signposted in this location (Figure 3-3), which allow for access to the major attractions including the CBD and the beaches and wider afield such as University of Newcastle (Callaghan), Kotara, Glenrock and the Fernleigh Track as well the sporting / entertainment precinct at Broadmeadow. Cycling upgrades are proposed in conjunction with the light rail construction.

Improvements to the public domain adjacent to Civic Railway Station shall include improvements to pedestrian facilities and connectivity between the harbourside and Hunter Street.

Figure 3-3 Newcastle CBD Cycling Routes (Source: Newcastle City Council)

Figure 3-4 City to Callaghan campus Cycling Map (Source: Newcastle City Council)

3.5 Traffic Flows

3.5.1 Peak Hour Flows

Seca Solution completed traffic surveys at the 4-way roundabout controlled intersection of Honeysuckle Drive and Worth Place. These surveys (Figure 3-5 and Figure 3-6) were completed during both the morning and afternoon peak periods on Thursday 16th February 2017 prior to the majority of roadwork interruption occurring in the CBD. These traffic surveys were conducted within the last three years and as such are considered valid by the road authority. It is noted that traffic flows in the area shall experience significant changes in the short term due to development occurring along Honeysuckle Drive and in particular the planned realignment of this road.

From the survey conducted, the two-way flows on Honeysuckle Drive (east of Worth Place) were:

- 1,082 split 671 eastbound (62%) in the morning peak between 7:45am and 8:45am; and
- 1,118 split 761 eastbound (68%) in the afternoon peak between 4:45pm and 5:45pm.

The two-way flows on Worth Place (south of Honeysuckle Drive) are significantly lower with:

- 195 vehicles during the morning peak, 84% southbound; and
- 215 vehicles during the evening peak, 72% northbound

The RMS Guide to Traffic Generating Developments provides guidance on the hourly capacity of an urban road which shows that during both the morning and afternoon peak period Honeysuckle Drive is operating at a level of service of D for the eastbound movement. Due to queues along Honeysuckle Drive for westbound traffic during the afternoon peak traffic flows appear lower than the actual demand. Queues associated with the Hannell Street signalised intersection come back past the Worth Place roundabout and constrain traffic flows. It is important to note that these observed queues were prior to the existing road works in the Newcastle CBD which have forced significant changes to travel patterns for road users.

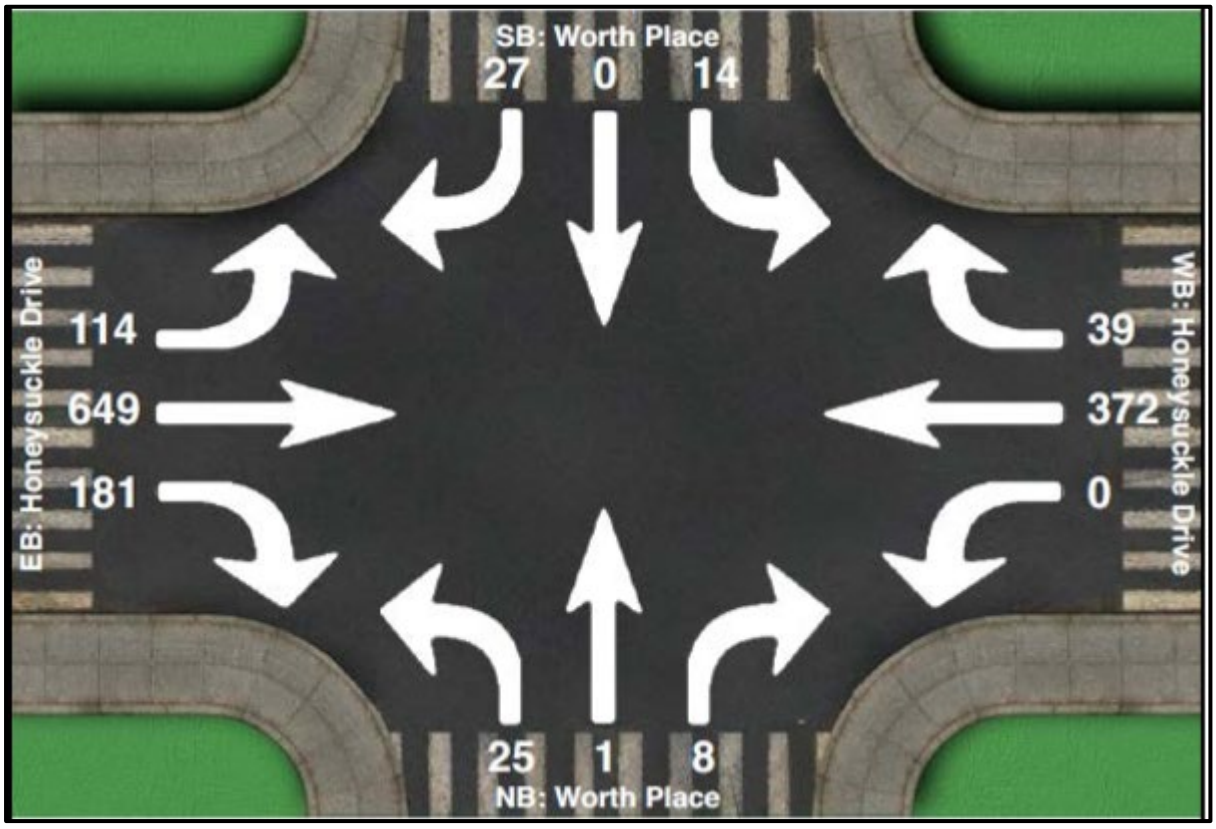

Figure 3-5 AM Traffic Surveys at the Intersection of Honeysuckle Drive and Worth Place

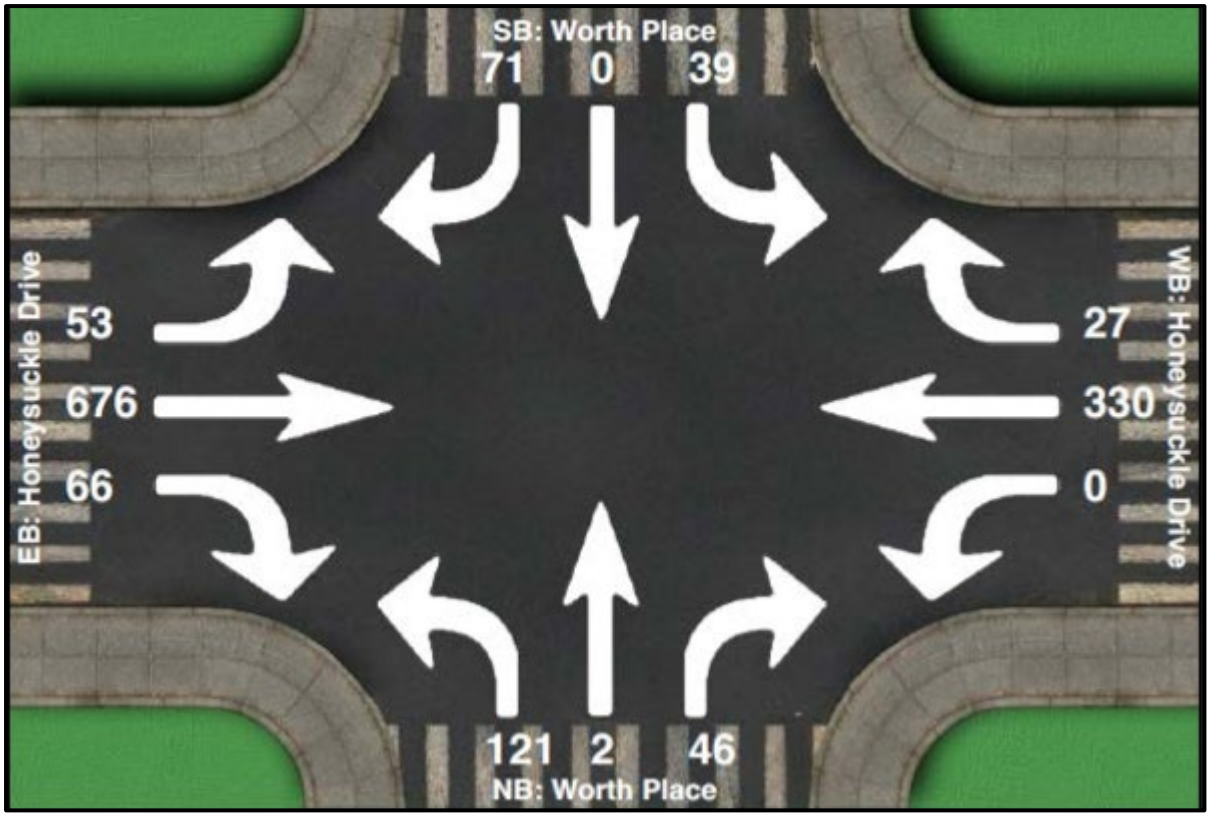

Figure 3-6 PM Traffic Surveys at the Intersection of Honeysuckle Drive and Worth Place

3.5.2 Daily Traffic Flows

Typically, peak hour flows represent in the order of 10% of the daily flows and on this basis the daily traffic flows along Honeysuckle Drive could be in the order of 14,700 vehicles per day.

3.5.3 Daily Traffic Flow Distribution

A slight bias in eastbound traffic along Honeysuckle Drive is observed during both the morning and afternoon peak hours reflecting a combination of local demands associated with parking and development along Honeysuckle Drive as well as the opportunity to turn right into Honeysuckle Drive from Hannell Street. The right turn into Hunter Street from Stewart Avenue (Hannell Street) has been banned as part of the changes to traffic associated with the truncation of the heavy rail.

As noted above westbound flows are delayed due to queues associated with the signals at Hannell Street which continues to have a significant impact upon the operation of the traffic signals at Hannell Street and Honeysuckle Drive.

3.5.4 Vehicle Speeds

No speed surveys were completed as part of the study work. It is considered however that drivers do not speed in this location due to its interaction with the intersections and pedestrian crossings as well as drivers manoeuvring in and out of the parking spaces along the streets.

3.5.5 Existing Site Flows

Uses on the site have changed in recent times with the previously vacant northern lots along Honeysuckle Drive being used as depots for construction of the light rail whilst the carparks previously associated with commuter parking next to Civic Station are catering for local parking demands, particularly given that access to Hunter Street has been restricted due to light rail construction.

The site along Honeysuckle Drive has previously been assessed for a commercial development and this use has been allowed for in the traffic modelling associated with the Honeysuckle Precinct master plan.

3.5.6 Heavy Vehicle Flows

Heavy vehicle demands along Honeysuckle Drive are typically low, primarily associated with deliveries within the Newcastle CBD. This reflects the lack of through traffic available in this area. Settlement Lane has a load limit whilst Worth Place has a restriction for 12.5m vehicles. Due to the nature of the City the majority of servicing for site is undertaken by small trucks or large Hi-Ace style vans.

There is currently a higher demand for heavy vehicles along Honeysuckle Drive due to the ongoing construction works for developments in the surrounding area. These movements are managed by site specific Construction Traffic Management Plans (CTMPs).

3.5.7 Current Road Network Operation

The network operation has been assessed by GHD as referred to above (Section 3.4.2) and the results of this assessment are provided below (Figure 3-7 – Figure 3-9) being extracts from the GHD report. Key intersection upgrades have been nominated to allow for the revitalisation of the City including the expectation of 6000 additional residents and 10,000 additional employees (NURS 2012).

Observations on site show that traffic movements in the vicinity of the site generally operate well, however during the PM peak periods delays created by the signal-controlled intersection of Honeysuckle Drive and Hannell Street see queues forming back into the Worth Place roundabout. This intersection has been identified for upgrades however the critical right turn onto Hannell Street shall remain constrained. The opening up of Steel Street west of the site does provide an alternate route for traffic able to travel north-south between Honeysuckle Drive and Marketown.

Figure 3-7 GHD Assessment of Existing Intersection LoS in 2015 associated with the development of the Light Rail (★ Subject Site)

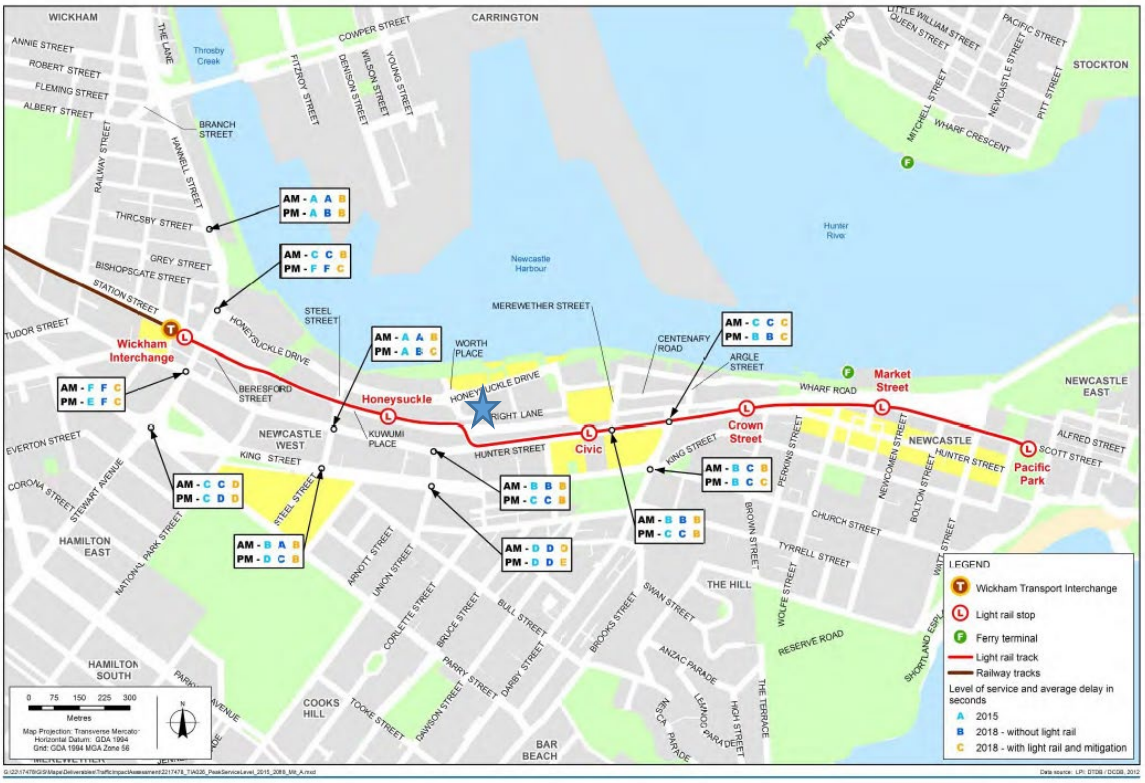

Figure 3-8 GHD Assessment of Intersection associated with the development of the Light Rail - LoS with and without proposal in 2018

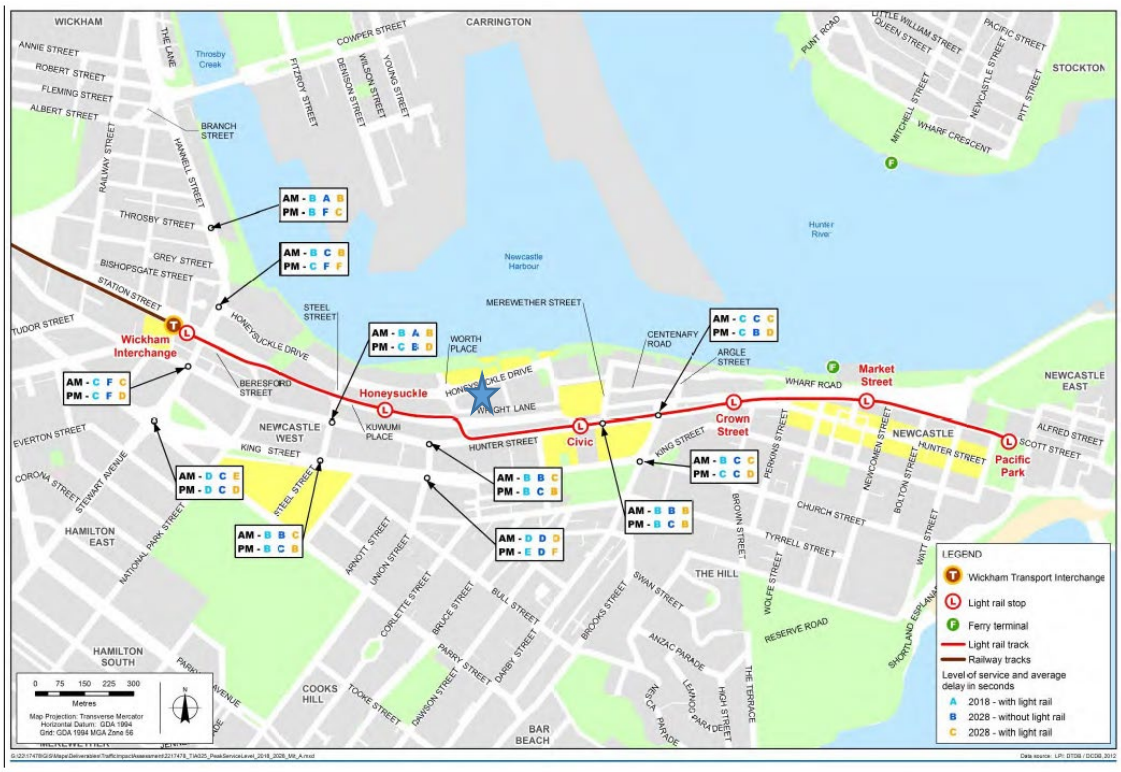

Figure 3-9 GHD Assessment associated with the development of the Light Rail Intersection LoS with and without proposal in 2028

3.6 Traffic Safety and Accident History

The roads in the vicinity of the subject site are well laid out, with good forward visibility on all approaches. The major intersections have roundabouts (along Honeysuckle Drive) or are signal controlled (on Hunter Street) to manage both turning traffic movements as well as pedestrian movements. It is considered that the road network in the vicinity of the site provides a safe overall layout and ensures that there are no road safety concerns.

Accident data show that accident occurrence is low in the vicinity of the roundabout.

3.7 Parking Supply and Demand

3.7.1 On-street Parking Provision

Parking is generally available along Honeysuckle Drive adjacent to the northern boundary of the site, which is time controlled by parking meters (2 hour) 9am-5pm. Some restrictions are in place to allow for bus services and loading zones. Since the implementation of light rail, public bus services no longer utilise stops along Honeysuckle Drive, however school services and private coaches continue to travel along this road.

Along the eastern boundary of the site parking is available along Settlement Lane adjacent to the site frontage. On the eastern side of Settlement Lane loading zones and 5 minute parking areas are in place.

3.7.2 Off-Street Parking Provision

Off-street parking is available to the public in the Civic car park which forms part of the overall HCCD project site. This carpark previously provided for commuters using the Civic Station but with the truncation of the heavy rail now provides for general parking. To the east of the site there is a parking station located on Argyle Street whilst to the west of the site there is a carpark off Honeysuckle Drive. The Civic West carpark, at the western end of Gibson Street, south of the site provides capacity for over 470 vehicles.

It is noted that historically the majority of established developments throughout the City have not provided off-street parking and have been reliant upon public transport, public parking stations or on-street parking.

3.7.3 Historical Parking Provision

Elements of the subject site are reclaimed lands associated with the Honeysuckle Redevelopment which has seen the renewal of derelict industrial land along the Newcastle railway line and waterfront.

Land to the south of the site has also provided parking for commuters using the Civic Railway Station. This railway station has closed and so the demand for such parking has moved to other stations such as Hamilton or Wickham. This parking area now provides 2P, 4P and 8P metered parking.

3.7.4 Parking Demand and Utilisation

There is generally a high demand for parking in the locality of the site, both on-street and off-street. This is associated with the close proximity to the Law Courts and Civic Theatre, as well as demands generated by businesses located along Hunter Street and Honeysuckle Drive. The Newcastle City Centre Parking Strategy has originally identified 2500 public parking spaces available within the CBD during periods of peak demand (12-2pm) however changes associated with the light rail and other developments within the Honeysuckle Precinct have impacted upon these numbers. The REF undertaken for the light rail indicated that the reduction in parking associated with the light rail could be accommodated within the excess parking available within the City. Surveys undertaken by Seca Solution Pty Ltd support this and indicate that parking is available throughout the CBD.

3.7.5 Short term Set down or pick up areas

There are set down/pick up areas available for light vehicles in the locality of the site on the northern side (east bound) of Honeysuckle Drive. These allow for the setting down and picking up of visitors to the precinct including tourists and people visiting the various entertainment venues.

3.8 Public Transport

3.8.1 Rail Station Locations

3.8.1.1 Heavy Rail

As part of the development of the light rail in Newcastle, a train interchange has been constructed at Wickham (Newcastle Interchange) that allows for connection to the heavy rail at this location. The trains at Wickham allow for connection south towards the Central Coast and beyond to Sydney as well as to the north to Maitland and beyond, with a high level of train frequency to cater for commuter demands as well as other casual demands.

3.8.1.2 Light Rail

The development of the light rail network along Worth Place, Hunter Street, Scott Street and beyond includes six stations providing convenient commuting throughout the CBD (Figure 3-10). The site is located midway between Honeysuckle and Civic light rail stations with Civic providing a stop on Hunter Street south of the subject site.

3.8.2 Bus Routes and Associated Facilities

Bus routes through the Newcastle CBD are shown in Figure 3-10, utilising bus stops along Hunter Street and King Street in the vicinity of the subject site. There are bus stops located on Honeysuckle Drive which service school buses and private coaches, with no public bus routes along this road.

Figure 3-10 Public transport services in the Newcastle CBD (Source: Newcastle Transport) (★ - subject site)

3.8.3 Ferry Services

Newcastle Transport operates a harbour ferry service between Queens Wharf and Stockton. These services run Monday to Friday from 5am to 11pm, Saturday from 5.30 am to midnight, Sunday from 8.45am to 10pm. Additional bus services operate from Queens Wharf to Stockton on Friday and Saturday nights with the last departure from Queens Wharf at 2.45am, with the bus route 118. Ferry services generally run half hourly, more often during the peak periods.

3.8.4 Rail and Bus Service Frequencies

As the hub for most bus services through Newcastle and the region, the CBD provides access to a wide range of bus services with high frequency reflecting its importance as a major transport interchange. Newcastle Transport has a commitment to provide high frequency (15 minute) services currently on four of the routes (11,12,13,14) with half hour services on the "20" routes in the peak hour.

Train services run every hour during the morning and afternoon peak periods to Sydney and return along the Central Coast and Newcastle Line with more frequent services to Wyong and Gosford servicing local stations from

Newcastle to Morisset. Similar services operate between Newcastle and Maitland with less frequent services to Scone and Dungog along the Hunter Line.

3.9 Pedestrian and Cycling Network

There is a well-developed network of footpaths in the locality, allowing for good connectivity to local attractions throughout the Newcastle CBD.

The truncation of the heavy rail has enabled access for pedestrians to the foreshore from the CBD and in the vicinity of the subject site a new Civic Station Public Domain area shall see shared zones and public park area connecting Honeysuckle with Hunter Street in the vicinity of the Civic light rail station.

There are established cycling facilities throughout the CBD as detailed above in Sec 3.4.3. Honeysuckle Drive provide for on street shared cycling through the provision of road markings with a dedicated off-road path along the harbour foreshore. Bike racks are located throughout the Honeysuckle Precinct.

Revitalising Newcastle has released the Newcastle City Centre Cycleway Network Strategy 2017 which outlines proposed changes to cycling facilities to provide quality riding opportunities as well as supporting cycling as a mode of travel in the City. Figure 3-11 illustrates these proposed improvements to the cycling network.

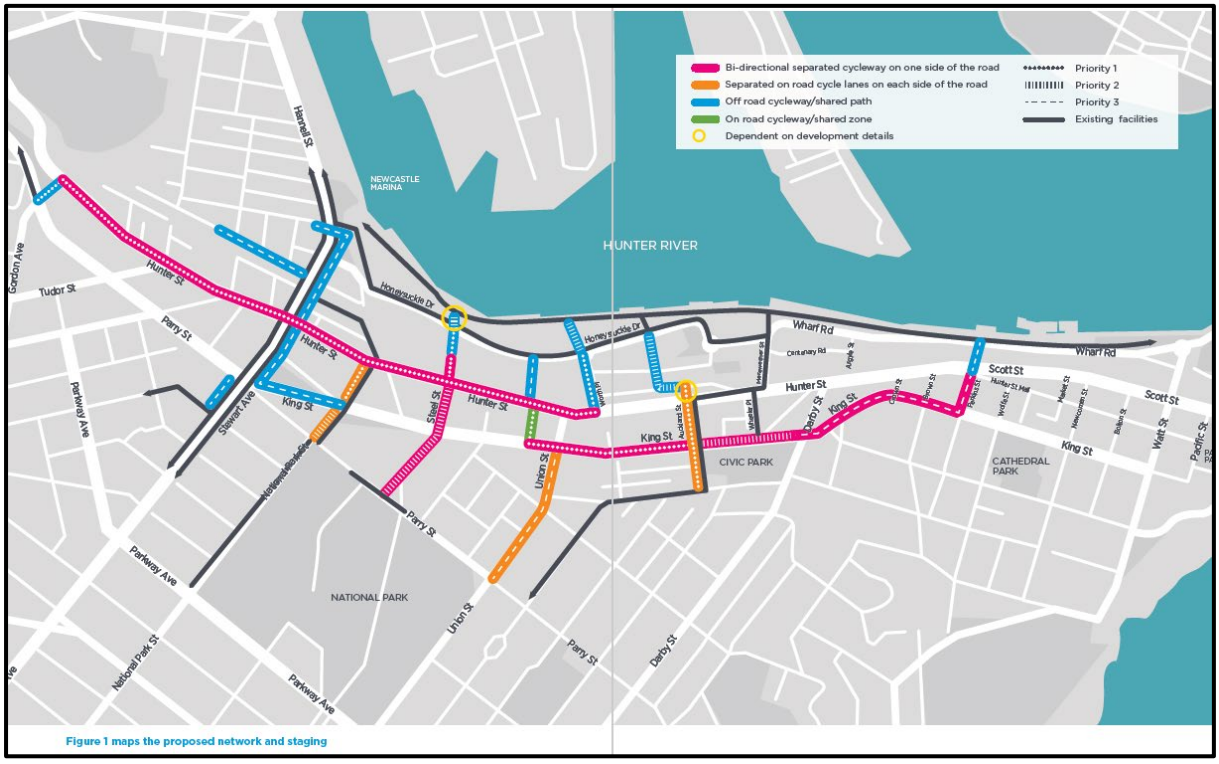

Figure 3-11 Proposed Cycling Network and staging

3.10 Other Proposed Developments

There is current construction work occurring on a number of sites in the locality including various mixed use and tourist developments throughout the Honeysuckle Precinct. There is also other significant developments occurring across the CBD, with a large number of these providing residential units.

The Honeysuckle Precinct has been the subject of a masterplan including traffic modelling for the various proposed developments as well as having been modelled along with the CBD in association with the light rail development.

Based upon the various strategies for the revitalisation of Newcastle there shall be ongoing development throughout the City during the coming years.

4 Proposed Development

4.1 Proposed Development

Stage 1A of the Honeysuckle City Campus Development (HCCD) shall accommodate the School of Creative Industries and the Innovation Hub being proposed as the next phase in the development of the University of Newcastle's City campus and builds on NeW Space (Law and Business Faculties) which opened in 2017 as well as the University's historic presence in the City.

A review of the plans and the initial design documentation indicate the following uses proposed for the site:

- Black Box Studio to facilitate largely teaching and learning usage. The studio has been located to allow expansion for possible audience and external staging. It offers a double height space.
- Control Room – potential to build into the Black Box Studio Space as part of the ongoing development of the design
- Animation Lab (Level 1)
- Fast Lab – locate within Studio suite of three studios (Ground Floor)
- Seminar Rooms – two similarly sized and serviced to accommodate an Audio Visual Presentation, including AV, further enhanced by the proximity to break out space and kitchen facilities.
- Premium office space – forming part of the Innovation Workspace
- Service Area– a service area has been provided on the southern side of the site which shall allow for the storage and management of waste etc.

Bicycle parking (minimum provision for 28 spaces) and end of trip facilities including three showers are incorporated into the design. Consideration will be given for on-street drop off zones, as well as interim provision for accessible parking which will be provided within the immediate vicinity of the site in the existing at-grade car park located to the south of the site. This parking shall be provided in accordance with AS2890.6. Long term solutions for accessible parking shall be provided within the public domain plan to service the precinct, which shall include appropriate facilities to service the precinct in its entirety. This will be considered in conjunction with the overall planning for the Honeysuckle campus, with confirmation as part of the detailed design.

Staff and attendees on site are anticipated to peak at circa 550 at any particular time, with:

- Technical Officers – 3-4 Technical Officers stationed within the building.
- Academic Staff – Academic staff shall be provided with access to hot desks as there shall be no academics solely dedicated to the building. Hot Desks shall provide working space for staff between teaching commitments throughout the day.
- Students– circa 400
- Innovation Hub members – circa 130
- Academics & Public – circa 20

4.2 Innovation Hub

The inclusion of an Innovation Hub within the Stage 1A building allows for approximately 130 members to access the various start-up/business development spaces. Of these 30% are anticipated to be directly related to existing University clientele with the balance being available to the wider start-up and entrepreneur community. Users will also be able to access accelerator and incubation programs on site.

The start-up and innovation community have a unique demographic. Reviewing start-up programs (primarily overseas) eg Y Combinator, an elite business accelerator associated with Stanford University, shows that the average age of the entrepreneurs funded is 26. An analysis undertaken by the Harvard Business Review of the age of founders of a series of $1 billion Venture Capital -backed private companies shows that 25% were between the age of 20-24 with a further 25% between 30-34 when they founded their start up. Approximately 18% were 25-29 years old. In total 68% were 34 years old or younger.

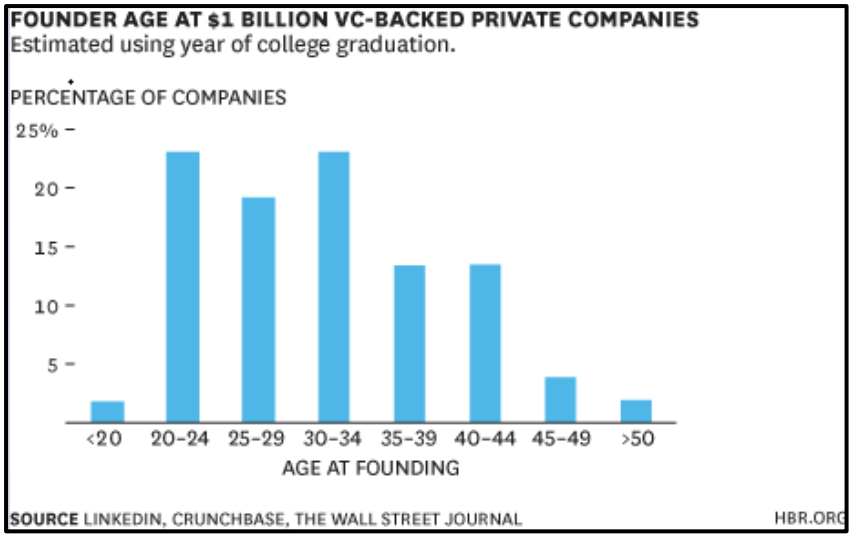

Figure 4-1 Founder age at $1 billion VC backed private companies (source HBR.org)

Start-ups traditionally develop their products and start their businesses whilst either at university or having just completed university. Many will work part time around developing their business or shall work full time and work on the start-up after hours. As such the need for a work space varies considerably around their time availability. The need to be located within a work space can be driven by the desire to be part of a collaborative work environment, it can be dictated by the need for high speed, quality internet facilities, for convenience and a space away from other distractions, or the need to have a formal work environment to support the development and application of a start-up process. Access to mentors, courses and facilitators can also determine the location chosen by start-up founders. This is consistent with a survey of users of the existing Three76 Hub (the Universities current small site incubator) which shows that the frequency of use by attendees of the facility is less than 3 days per week.

The start-up demographic (20-34 years of age) correlates with the three largest categories (20-24, 25-29, 30-34) choosing to live and work in the City of Newcastle with this number forecast to grow over time (City of Newcastle Forecast.ID 2013). The flexibility required by Start-Ups means that the Innovation Hub will rarely be fully utilised at any given point in time but rather people will come and go throughout a week and across a 24 hour day as necessary. The Innovation Hub will provide a convenient workplace for this cohort who, living in the City, won't need to travel by car but rather can walk, cycle, uber (or similar) or use public transport and as such will not create a demand for parking. The balance of people using the Start Up facility (30%) are those who are already associated with the University and most likely based in the City at HCCD or NeW Space. For these people, the Innovation Hub is an additional work space, ancillary to their other roles within the University. As they are already based in the City they create no additional traffic or parking demands.

Other users of the Innovation Hub will be the general public who will have access to the lower level. This space is designed to engage with the community through active displays and various participatory activities. The inclusion of a café on the lower level provides for people working within the start-up space but also promotes engagement with people passing by, encouraging them to enter the ground floor and immerse themselves in the Hub. These people will be passers-by or may be local business people or residents of the City who would use the space to meet. Apart from the employees associated with the café, who again are likely to be living in the City, this space will not generate traffic or parking demands in its own right.

4.3 Phasing and Timing

Construction of Stage 1A shall commence in late 2019 with the scheduled completion being July 2020 subject to SSD approval and the appointment of a contractor.

4.4 Access

The Entry Foyer and adjoining Flexible Event Space has been located along the majority of the Worth Place Street Front, however building entry opportunities exist on all three street frontages. Thus, the building is well located to benefit from connectivity to the City centre with quality pedestrian networks, cycling routes and light rail all immediately accessible. Light rail stations are at Civic and Honeysuckle, both less than 100m from the site although with the primary entry foyer located along Worth Place street frontage it is anticipated that there will be significant connectivity between the site and Honeysuckle light rail.

Access to bus services and heavy rail are less than a kilometre to the west of the site at the Newcastle Interchange while ferry connections are available less than a kilometre to the east at Queens Wharf, near Market Street light rail station.

The site is also conveniently located to the existing City campus including NeW Space on Hunter Street.

Wright Lane is owned by the University and as such is considered to act as an internal road for the development. Long term it is proposed as primarily a pedestrian and cycling boulevard which shall function as a shared zone.

Figure 4-2 Key pedestrian desire lines to the site

4.4.1 Emergency Vehicle Access

In the event of an emergency response vehicles shall be able to pull up along the street frontage of any of the surrounding roads, with flashing lights to signal drivers if these vehicles are not stopped within marked parking. The fire hydrant booster will be located at the south-west corner of the site with a Fire Emergency Vehicle able to access this off Worth Place or Wright Lane. Wright Lane is also suitable to cater for an ambulance vehicle if required.

4.5 Site Servicing

Servicing of the site will not be significant with service vehicles typically being waste vehicles (anticipated to be twice per week) and delivery vehicles associated with the café being generally small vans e.g. Hi-Ace and i-load. Access will however be required for occasional larger vehicles associated with the Flexible Event Space.

The Masterplan is seeking to establish Wright Lane as the pedestrian boulevard through the campus operating as a shared space primarily for pedestrians and cyclists.

Some on-street loading areas are available along the local streets including Settlement Lane and Honeysuckle Drive with a short term loading zone proposed on Honeysuckle Drive in conjunction with this development.

It is noted that Settlement Lane is subject to a weight restriction (23t) that may impact on access for some larger vehicles.

4.5.1 Service Area Layout

A service area is provided along the southern edge of the building for the storage of waste etc.

This service area shall be managed to allow for the kerb-side pick-up of waste from Worth Place, out of peak hours as is the case throughout the CBD, reducing potential conflicts with pedestrians and through traffic. Waste bins shall then be returned to the service area for storage.

4.5.2 Access to Public Transport

The site is well serviced by public transport as well as having good pedestrian and cycling connectivity.

Bus services within the CBD and the light rail (2019) provide excellent transport opportunities for people living and working within the City.

The Newcastle Interchange and the existing bus interchange provides access to public transport options between the City and the Greater Hunter area.

The University of Newcastle will extend its inter campus shuttle for staff and students to include connection between HCCD and Callaghan campus.

4.6 Parking

4.6.1 Proposed Supply

The subject site is to be developed as part of the revitalisation of Newcastle and forms part of the University of Newcastle's City campus. The development draws on the Newcastle Urban Renewal Strategy to provide a framework for the long-term redevelopment of the City. Located as it is, central to the CBD, the proposed development allows for trip containment within the City centre by providing services and facilities, including meeting spaces and student accommodation.

The development is consistent with the Council's mode share targets and long-term parking strategy as detailed in the HCCD Transport Access Strategy (Seca Solution 2018) and shall be designed to achieve a Green Star Rating for the development. It will provide bicycle facilities, accessible parking provision, a loading area and drop off zones along the street frontages. It will not provide general parking.

4.6.2 Council code and local parking policies and plans

The Newcastle DCP provides a parking rate of 1 space per 60m^2 in the City Centre.

The NDCP rate for bicycle parking for educational establishments – adult education is:

- 1 space per 20 staff (class 2).
- 1 space per 20 students (class 3).

Class 2 (medium security level): Bicycles locked to a rack within a secure room, enclosure, compound or cage.

Class 3 (low security level): Bicycles locked to high quality rack in public area, with users providing their own locking device.

The Newcastle City Centre Parking Plan has a vision that by 2022 there will be a travel culture change favouring the use of public transport, walking and cycling.

4.6.3 Pedestrian and Bicycle Facilities

The site connects with existing pedestrian facilities and provides activated site frontages to engage the community with the broader space. As a City campus the site benefits from the existing pedestrian network that supports the majority of streets and roads throughout the CBD.

Austroads Guide to Road Design Part 6A: Pedestrian and Cyclist Paths provide guidelines on the widths of pedestrian facilities to accommodate pedestrian demands (Figure 4-3).

Table 6.1: Width requirements for footpaths

Situation	Desired width (m)	Comments
General low demand	1.2 to 1.0 (absolute minimum)	General minimum is 1.2 m for most roads and streets. Clear width required for one wheelchair. Not adequate for commercial or shopping environments.
High pedestrian volumes	2.4 m (or higher based on demand)	Generally commercial and shopping areas.
For wheelchairs to pass	1.8 to 1.5 (desired minimum)	Allow for two wheelchairs to pass (1.8 m comfortable, 1.5 m minimum) Narrower width (1.2 m) can be tolerated for short distances.
For people with other disabilities	1.8 to 1.0	

Notes:

Whilst the minimum width may be used where demand is low it is generally desirable to provide a path that will accommodate two pedestrians side by side.

Wider than the minimum width (e.g. up to 5 m) may also be necessary at locations where pedestrian flows are high or where pedestrians gather such as in the vicinity of schools and associated road crossings, at recreation facilities and at important bus stops.

Where demand is significant it may be necessary to provide adequate congregation areas clear of the path required for through movement of pedestrians.

Figure 4-3 Austroads Guide to Road Design Part 6A: Pedestrian and Cyclist Paths Table 6.1

Therefore, the pedestrian interface between the campus access points and the broader pedestrian network shall be designed to meet these guidelines.

The distribution of pedestrian traffic across various routes will see the impact of pedestrian volumes reduced. Pedestrians with a desire line to the two key light rail stations shall use the existing path network along Hunter Street as well as upgrades along Worth Place and the public domain associated with Civic Station.

Pedestrians with an origin/destination to the east will be able to use the existing Honeysuckle foreshore which is paved with lighting and includes shared facilities for cyclists. Similarly, footpaths are provided along Hunter Street and King Street, both with an east-west orientation. These roads have footpaths designed as part of the City centre which historically carried very high pedestrian demands.

To the west there are footpaths along both sides of Honeysuckle Drive to Hannell Street/Stewart Avenue. There are shared path facilities along the harbour foreshore to the west towards Wickham with new developments through this area integrating pedestrian and cycling facilities.

Bicycle storage (Class 2) for a minimum of 28 spaces is to be provided to support this initial stage of the development. Further permanent bike storage facilities shall also be incorporated into the later stages of the campus development to allow for the ongoing mode share goal for cycling. Shower facilities (three showers) are included in this initial stage suitable for use by cyclists and walkers to the campus, with these provided on the ground floor as shown below in Figure 4-4.

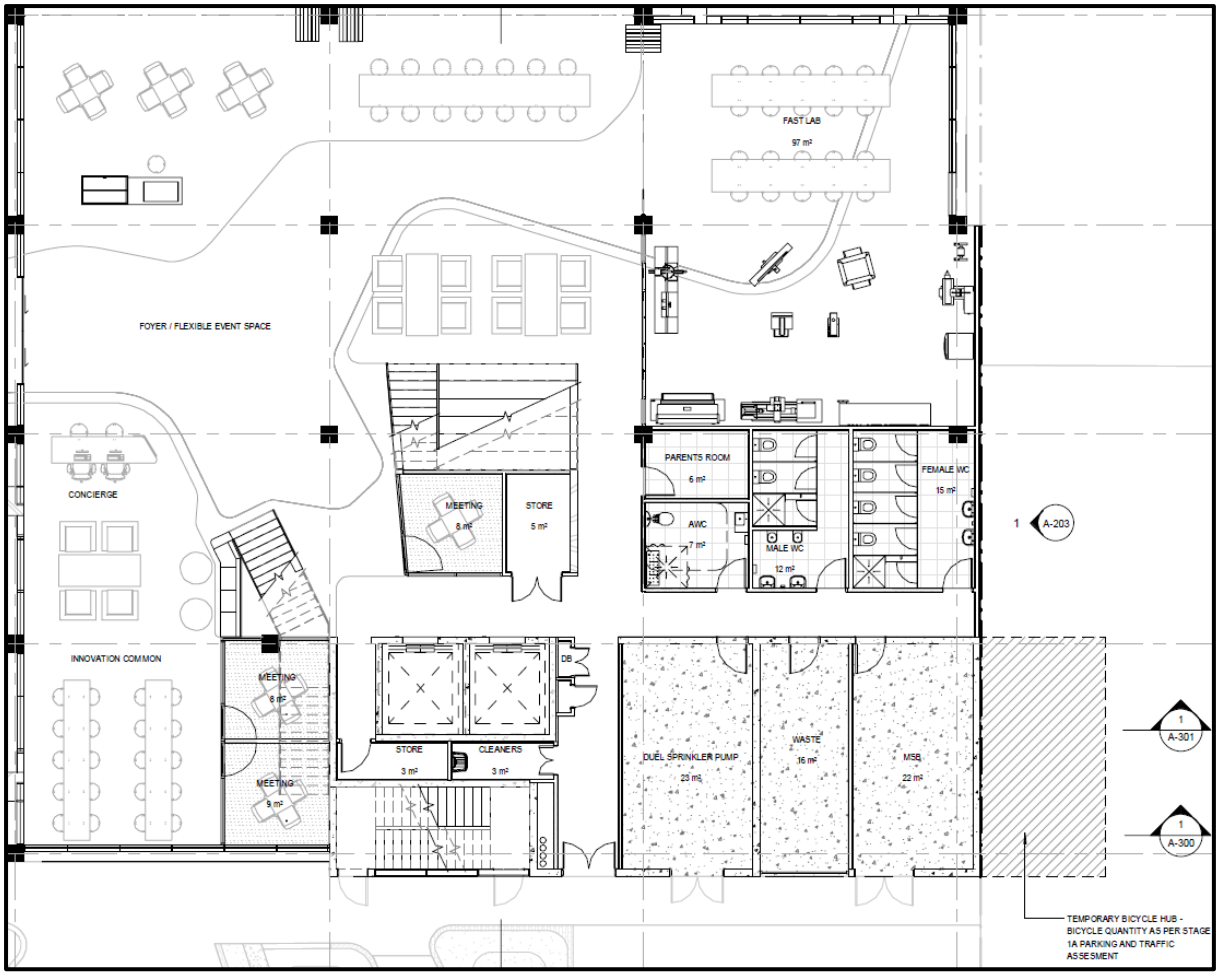

Figure 4-4 Ground floor plan showing location of showers and bicycle hub

E-Bikes are available within close proximity to the campus in conjunction with the trial bike sharing scheme (Bykko) in Newcastle (Figure 4-5). This project, in conjunction with Transport for NSW, sees a series of charging hubs located throughout the City to enable easy access to bikes able to be rented and returned to any hub within the network.

Figure 4-5 Bike charge stations and hubs throughout the Newcastle network

Photo 4 Bykko charge station

5 Transportation Analysis

5.1 Traffic Generation

The proposed development will generate minimal additional vehicle traffic however will see an increase demand for cycling facilities and public transport use. Such demands are consistent with the Newcastle Transport Plan and the Hunter Transport Plan with the activation of the CBD fundamental to the revitalisation of the City including the improvements in transport, (light rail and changes to public bus services) public domain and cycling that have been implemented throughout the City.

The vehicle demands associated with HCCD Stage 1A are primarily related to servicing for the site with some demands for the pick up and drop off of people as well as for those staff or students requiring accessible parking which in the short-term shall be provided within the at-grade car park to the immediate south of the site. Long term solutions for accessible parking shall be provided within the public domain plan to service the precinct. Based on the above demands, the vehicle traffic generated by the subject site are determined as being less than that previously allowed for in modelling for the precinct. The cumulative impact of this has also been taken into consideration with the various road and intersection upgrades currently being undertaken in conjunction with the light rail project forecast to 2028.

5.2 HCCD Transport Demands and the Active Travel Zone

The TAS identified the Active Travel Zone as an area, based on post code data, where the majority of students 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), allowing up to eight kilometres, which could allow for cycling and public transport access.

Based on the analysis of the Active Transport Zone, 66% of the future students attending the School of Creative Industries would be expected to live within this area. This number is based on the long-term cohort and is not necessarily reflective of the initial student body who transfer across to the City campus from Callaghan. These students have existing housing arrangements which they are not necessarily in a position to change. Over time, as new students commence, and as more suitable accommodation within the City and its immediate environs becomes available, these accommodation patterns and in turn travel patterns will become more evident with a larger percentage being able to walk or comfortably cycle to the CBD.

5.2.1 Staff and student mode split

The desire of future students and staff to live in Newcastle and surrounds because they are studying and working in the City and the desirability of Newcastle to be a lifestyle study/living/work choice is a large driver behind the Revitalising Newcastle strategy. Based on the viability of walking and cycling including the use of E-bikes, as effective transit modes and given the significance placed on this by the various strategies adopted to support Newcastle, it is assumed that people living within a walking or cycling distance from HCCD will utilise these modes of travel.

The future population of Stage 1A has been estimated as outlined in Section 4.1. These numbers are based on the peak capacity of the site and do not reflect actual numbers on site at any one time. Actual attendance is likely to peak at approximately 75% of this at any particular time.

The predicted staff and student numbers are shown below in Table 5-1. Cohort numbers have then been allocated to be either living in or out of the ATZ with the mode split determined in the HCCD TAS applied to this. This provides guidance on the total number of possible students and staff accessing the campus by various modes.

Table 5-1 School of Creative Industries - Mode split by place of residence (within or out of the ATZ)

	Living in the Active Transport Zone			Living out of the Active Transport Zone		
		Students 66%	Staff 59%		Students 34%	Staff 41%
Stage 1A		264	12		136	8
		-	-		-	-
Walking	82%	217	10			
		-	-			
Cycling	10%	26	1	2%	3	0
		-	-		-	-
Public Transport	8%	21	1	98%	133	8
		-	-		-	-
TOTAL		264	12		136	8

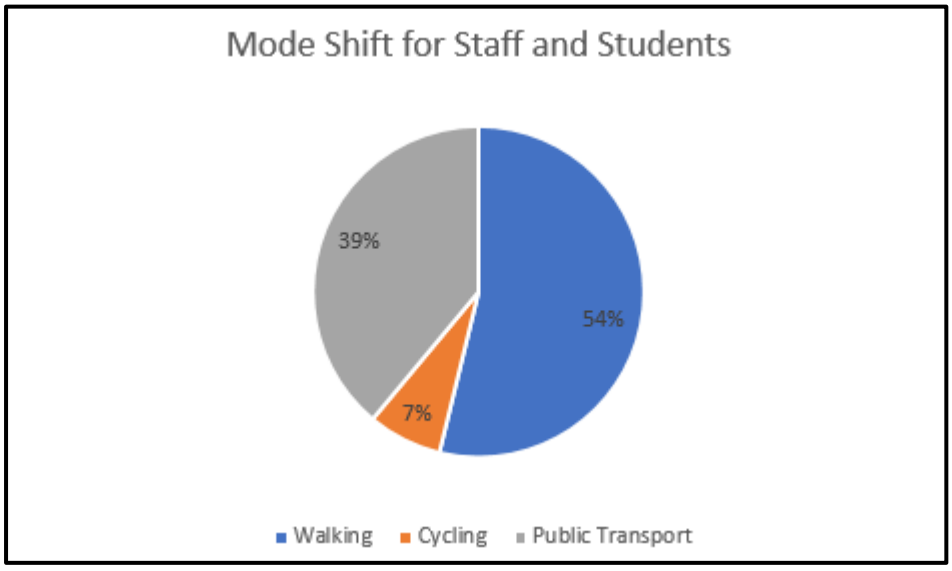

Figure 5-1 Mode shift for staff and students

The use of public transport (either bus or train) with interchange to light rail where appropriate in the future will enable effective travel to the City Centre for those students and staff not living within the ATZ. Ongoing improvements to bus services by Newcastle Transport further supports these as viable travel options for the vast majority along with park and ride opportunities at Callaghan campus for the campus shuttle.

5.3 Innovation Hub

- 30% of site users being associated with the University. The Innovation Hub will provide ancillary learning and business development space for users who shall see this area as an extension of the NeW Space and City campus and so will not generate site specific traffic or parking demands.
- The majority of site users who are not part of the existing University Cohort will be local entrepreneurs living within the City and its immediate environs (Wickham/Islington/Cooks Hill) and now working there as well. Entrepreneurs from outside the City have other spaces conveniently available in other area eg Maitland, Muswellbrook, Lake Macquarie.
- These users will be able to utilise active travel options (public transport, car sharing such as uber, cycling and walking) to access the site and so will have no need for on-site parking. This is consistent with Newcastle City Council vision for 2022.
- Visitors to the site from the general public shall include local business people, tourists and people living in the City who would use the café and foyer space. The foyer display space will appeal to tourists and visitors to the City. These people are already within the City and so do not generate additional parking demands.
- The site may occasionally host events focused on Innovation and Smart Cities. Such events would most likely be held of an evening or of a weekend when parking demands are at their lowest. Attendees could stay in the City and walk or catch taxis/light rail.

5.4 Site Servicing

As detailed above the servicing for the site shall include waste management with some demands for deliveries and servicing/maintenance of equipment and facilities by contractors. There may be further demands associated with retail deliveries (café), as well as SOCI and Innovation Hub materials.

Many of these services are provided in conjunction with other sites throughout the City e.g. waste collection, parcel deliveries, facility servicing and as such don't generate additional traffic demands but rather become part of a shared trip.

Such servicing is consistent with the permitted uses for the site which have been modelled in conjunction with the Honeysuckle Master Plan. This allowed for a significant part of the site to be a commercial development with associated servicing demands. Given the size of this initial Stage 1A development such servicing requirements shall be minimal.

A short term loading zone is proposed along Honeysuckle Drive which shall allow for these minimal servicing requirements. Waste collection will be via a kerb side pick up along Worth Place which shall occur outside peak hours to reduce conflicts between vehicles as well as pedestrian demands. This is consistent with waste collection throughout the city centre with the bins being returned to the

5.5 Traffic Impact Assessment

Given that much of the site has been previously modelled to allow for a commercial use and allowing for the traffic previously generated in conjunction with the commuter parking provided adjacent to Civic Railway Station the future traffic flows associated with the site will be less than that historically provided for across the site.

The development of the HCCD has been generally allowed for in the plans for the revitalisation of Newcastle and in the intent to include a City University campus as part of the ongoing City development. Extensive modelling of the traffic requirements for the City have been undertaken as part of the strategy for the revitalisation and appropriate road and intersection upgrades identified. Stage 1A of HCCD is consistent with this and given that there is no proposal to provide parking, further assessment of the traffic is considered unnecessary at this stage. With the impact of this vehicle traffic on the local road network considered acceptable.

The project has been discussed with RMS who agree on this approach.

5.6 Parking Analysis

The parking demands associated with the proposed development are expected to be minimal, primarily associated with some attendees from further afield who may choose to drive rather than use public transport or Park and Ride opportunities.

The parking analysis undertaken for the City centre has identified that there is spare parking capacity within the CBD. Such parking, either paid on-street or in parking stations, can provide for those participants who choose to drive. The cost of parking and the constrained supply is however the driver for change that will see the majority use alternate travel modes, consistent with State and Local Government strategies.

A review of parking provided in the Civic West carpark for use in conjunction with NeW Space has shown that this supply still has spare capacity.

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.

Access to this parking shall therefore provide a cost effective option for those staff and students who choose to drive.

5.7 Pedestrian Movements

Pedestrian access to the site will be available using the local pedestrian network throughout the City. The proposed development would see an increase in pedestrian traffic within the vicinity of the site and throughout the City between the campus and key venues and residential developments. Safe pedestrian connections shall be provided between the site and the main pathways along Honeysuckle Drive whilst connection to Hunter Street is available through improvements to the public domain associated with Civic Railway Station. The provision of pedestrian phases on signalised intersections on Hunter Street is appropriate to accommodate these additional pedestrian demands whilst there are existing pedestrian refuges provided across Honeysuckle Drive to access the foreshore.

5.8 Cycling Movements

The proposed development will encourage cycling by its occupants with the provision of suitable bike storage and access to end of trip facilities. Upgrades to the cycling facilities within the CBD have been identified in the Newcastle City Cycling Strategy 2017. Such facilities will provide for local connection throughout the City as well as connecting to those suburbs within a comfortable commute.

5.9 Impact on Road Safety

The additional traffic flows associated with the development of the subject site will have a minimal impact upon traffic safety. Increases in pedestrian and cycling traffic are within the capacity of the local facilities with upgrades to cycling able to enhance those facilities already available and the provision of pedestrian phases on lights able to safely provide for crossing of busy streets.

5.9.1 Impact of Construction Traffic

The construction work shall require a number of trucks, to deliver materials including concrete to the site.

Stage 1A is consistent with other mixed use developments in the City and will occur over a number of months as the site is developed. The current light rail construction shall be completed by the end of 2018 which shall see a significant improvement in traffic arrangements throughout the City. Construction of capital works along the foreshore to the north west of the site as well as three key construction sites along Honeysuckle Drive (Doma) shall require consideration in the preparation of a construction traffic and pedestrian management plan (CTPMP). A draft CTPMP has been prepared to support this assessment and to provide guidance for the future contractors.

The size of the lot for Stage 1A shall see the construction zone contained within the site. Only work zones on the adjoining roads will be required during specific elements.

All works on site will be governed by the relevant EP&A rules and as stipulated within any development consent granted. This will include hours of work.

5.10 Public Transport

5.10.1 Options for improving services

A demand for public transport will be generated by the new site proposal. This demand is accommodated within the planning for the revitalisation of Newcastle strategy and has been taken into consideration in the planning for the light rail and other future public transport services. The impact of this initial stage is well within the capacity of these services.

5.10.2 Pedestrian Access to Bus Stops and Light Rail Stations

Pedestrian access is available to the light rail stations along existing and new pathways. The location of future bus stops is uncertain but given the quality of the pedestrian network surrounding the site it is considered that pedestrian access shall be available.

5.11 Evaluation

The demands associated with additional traffic will be minimal. Pedestrians and cyclists can be accommodated within existing and planned facilities in the CBD and the development of the light rail network will provide for the future public transport demands of the site.

6 Measures to promote Active Travel choices

6.1 Promotion of quality pedestrian routes

The CBD is supported by an historic network of good quality pedestrian pathways, generally provided along both sides of the roads with additional pedestrian paths through parks and open space. As the Newcastle CBD is revitalised the ongoing development of quality pedestrian routes with adequate pathways, activity nodes, weather protection, lighting and security will occur. The promotion of such routes to students and staff can be undertaken through the publication of route maps showing links between HCCD and transport hubs, accommodation zones, entertainment precincts, beaches etc.

6.2 Transport Management Strategy

The mode split being adopted for HCCD is a result of the application of the various key strategies including the Greater Newcastle Metropolitan Plan 2036, Greater Newcastle Future Transport Plan, Connecting Newcastle, Local Planning Strategy, the Newcastle Transport Strategy and the Newcastle Urban Release Strategy and promotes the key transport elements of walking, cycling and public transport. To ensure these are adopted by staff and students a Travel Demand Management Strategy will be developed that actively encourages behaviour change and a shift away from travel by private vehicle. The implementation and monitoring of this strategy shall be overseen by the University through its facility management services.

This strategy would include the following.

Education and awareness programs

Particularly focussing on the move to and the excitement of the new campus for students and staff. These programs can build on the existing University web site for off-campus accommodation and travel options to the City campuses. They importantly focus on the message that being a student in Newcastle City 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 as appropriate such as BYKKO, Go Get, Uber, bicycle rider groups.

Promote and develop Ride to Campus and Walk to Campus days, cycling buddies etc.

Workplace travel plan

A Workplace Travel Plan (WTP) will be developed for the site to influence mode shift for staff moving to the new campus from Callaghan. The WTP will include information on available travel options including the inter-campus shuttle, public transport, car pooling and walking and cycling. There will also be ongoing development of programs that support a shift to public transport, active transport and park and ride options for all staff and students.

University travel plan

Travel Access Guides (TAGs) for students are regularly updated to allow for current travel opportunities to both Callaghan and the City campuses. They provide information on access to the City but also provide information on inter-campus travel to Callaghan and other relevant transport information.

The travel plan as part of the University web site may include information about adopting technology as a commuter, information from Newcastle Transport, trip planning, walking and cycling apps, bike routes and bike user groups (BUGs) as well as E-Bike schemes, car sharing schemes, online shopping and local grocery delivery options.

The following provides examples of actions that may be considered appropriate for HCCD and may be included in a workplace and campus travel plan.

Active Transport

1. Introduce the role of Transport Coordinator to oversee the implementation and management of the Workplace and Active Travel Plan.
2. Maintain Travel Access Guides to include HCCD.
3. Provide specific information for attendees at HCCD to access light rail stations and bicycle storage.
4. Educate all staff about their travel choices and provide an information pack to encourage active transport and shared travel as part of the staff induction procedure. Include accommodation, local public transport, walking and cycling information.
5. Encourage shared travel across the various Faculties, including those in NeW Space to maximise travel options.
6. Provide participants with information that makes their travel choices easy to make.

Bicycle and Pedestrian Travel

1. Ensure that those who are intending to ride are well supported including allocation of lockers, provision of route information, secure and easy to access bike storage, end of trip facilities.
2. Promote riding and walking to Uni during orientation.
3. Promote riding buddy groups and Bike User Groups (BUGs).
4. Promote use of E-bikes for casual bike travel.
5. Promote specific Ride to Work/Uni days.
6. Install NSW Transport Cycling trip planners on staff and student workstations.
7. Promote the benefits of walking and cycling to all staff and student that live within the Active Transport Zone.

Public Transport

1. Ensure students and staff who are open to travelling by public transport have sufficient information and support for this to be a positive experience. Deal with any problems that arise to assist them trying public transport travel again.
2. Add up to date travel information and trip planning to individual workstations and intranet.
3. Investigate new technology being implemented by Transport for NSW and incorporate into staff and student information.
4. Provide information about public transport to new staff and students as part of the induction/orientation program.
5. Investigate the feasibility for staff to purchase tickets and passes through payroll deductions.
6. Promote the Campus Shuttle to provide for inter-campus travel for staff and student. Include information on parking at Callaghan to use the shuttle.
7. Ensure ticketing for public transport is readily available and staff and students are aware of how to access ticketing.

Telecommuting

1. Investigate options for telecommuting to reduce demands on private vehicle usage.

Parking Policy

1. Implement parking policy which supports the HCCD Strategic Transport Plan.

6.3 Quality End of Trip Facilities for walking and cycling

Extensive consideration was given to the inclusion of quality end of trip facilities for staff and students within NeW Space as well as casual bike storage to compliment this where appropriate. From this the future planning for suitable storage and end of trip facilities shall be included in the various stages of the HCCD.

Stage 1A shall have interim bike storage provision for a minimum of 28 spaces to accommodate the initial demands of the campus. There are 3 showers available within the new building. Further bike storage and resources are available at the Bike Hub within NeW Space, 300metres from Stage 1A.

6.4 Car Share Programs

The University has an existing car share program (Liftango app). It is recommended that the City of Newcastle investigate and support commercial car share programs. These programs are well supported by Gen Y and the implementation of such a program could support student choosing to live in the CBD “car free”. The Stage 1A part of the campus development is unlikely to provide the critical mass necessary to make such programs viable however they should continue to be investigated and promoted.

The use of Uber within the City has been a popular addition allowing for ride sharing. On street pick up and drop off zones are conveniently available along Honeysuckle Drive for use by taxis and uber services.

7 Summary and Recommendations

7.1 Summary

Stage 1A represents only a small part of the total Honeysuckle City Campus Development for which the total traffic is predicted to be less than that allowed for in traffic modelling for the Honeysuckle Precinct.

This original modelling not only allowed for a commercial use on one site but also the carparks previously associated with the now redundant Civic Railway Station. This modelling took into consideration the cumulative impacts of development through the Honeysuckle Precinct as well as that associated with the Revitalisation of Newcastle.

The HCCD Transport Access Strategy, has been developed applying the earlier analysis undertaken for NeW Space and assessed against current data and transport trends. It has also taken into consideration the latest government strategies (Greater Newcastle Future Transport Plan and Greater Newcastle Metropolitan Plan 2036) and benchmarked against City based university developments such as University of technology Sydney (UTS) and University of NSW (UNSW).

This strategy demonstrates that as the campus and the City evolve over time, with new students and staff choosing to locate within close proximity to the campus, 66% of students and 59% of staff will live within the ATZ and be able to walk or cycle to the City or have access to public transport. For the Stage 1A development this equates to 264 students and around 15 staff as well as those participating in the Innovation Hub (up to 130).

An assessment of the site demonstrates that it is well located to benefit from the light rail and broader public transport network. It is also well connected to the CBD and surrounds enabling people to walk and cycle to the campus and therefore not be reliant on private car usage.

For those staff and students who will live outside the ATZ the broader bus and heavy rail network along with the Campus Shuttle enables access to the City.

For those who choose to drive to the City, prior studies demonstrate that there shall be adequate public parking to provide for the future demands of a Revitalised Newcastle. These people can make use of the existing public parking supply as well as commercial car parks eg Civic West where there is parking available in association with the university.

7.2 Recommendations

To accommodate the active travel requirements for the site the provision of suitable bike storage and end of trip facilities should be provided on site along with the promotion of active and public transport options relevant to the end users.

Active travel options can be promoted by encouraging campus users to access Active Travel information from the University web site.

The overall conclusion from the investigations is that traffic and parking arrangements for Stage 1A are consistent with State and Local Government strategies and support the ongoing Revitalisation of Newcastle. The proposed access and service parking is satisfactory and there is no traffic or parking impediment to this first stage of the development

SECA solution
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Technical Design Note

Project: P1069 HCCD Stage 1A

Subject: Record of Consultation with Authorities

Date: 23 July 2019

Attention: Matthew Watson

The following document has been provided as a record of consultation with relevant authorities as part of the proposed development of Stage 1A of the Honeysuckle City Campus Development (HCCD) for the University of Newcastle.

Consultation was undertaken with:

- Transport for NSW (Nicole O'Neill),
- Newcastle Transport (Mark Dunlop),
- Roads and Maritime Services (Land Use Assessment Hunter).

Attachment A

Agreed summary of meeting agenda and discussion points from consultation meeting with Transport for NSW and Newcastle Transport on Monday 17th December.

Attachment B

Email correspondence with RMS Land Use Assessment Hunter regarding the project.

Ground Floor, 161 Scott Street
Newcastle NSW 2300
Ph (02) 4032-7979

SECAsolution

Attachment A

Quality Traffic Advice

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Newcastle NSW 2300
Ph: (02) 40327979
admin@secasolution.com.au

11 February 2019

P1069 UoN TfNSW Consultation

Transport for New South Wales
Infrastructure & Services
Wharf Road
Newcastle NSW 2300

Attn: Nicole O'Neill

Dear Nicole,

Consultation Meeting Discussion Points - Monday 17th December

We thank you for the opportunity to meet with you and Mark Dunlop in December and further to that meeting provide the following as a record of our discussion.

In Attendance:

Nicole O'Neill – Transport for New South Wales
Mark Dunlop – Newcastle Transport
Ethan Clarke – APP Corporation
Cathy Thomas -Seca Solution Pty Ltd

Overview of the Honeysuckle Campus project, its approach to mode share based on the active travel zone with this being supported by no provision for parking.

TfNSW agreed with this approach and supported the no parking strategy.

Discussion was also held on the constrained nature of the CBD and that as a peninsula there are minimal opportunities to increase road capacity to accommodate significant increases in traffic over time. As such, encouraging people to drive to the CBD will see more pressure on the network in the future. Measures to promote alternatives are important to avoid future traffic bottlenecks not just within the CBD but also on the corridors into the city.

How proposed changes to travel patterns of buses etc in conjunction with the implementation of the light rail may impact on the project site.

It was explained that bus travel patterns within the CBD would continue to change in conjunction with both the light rail and the opening of the bus interchange in late 2020.

Honeysuckle Drive would not carry bus movements in the future with King Street being the main corridor for these whilst Hunter Street/Scott Street would carry the light rail.

Operational elements of the implementation of the light rail and other local transport initiatives.

Ticketing for the light rail would be consistent with existing ticketing models.
The fair free zone is being reviewed.
Council's Park and Ride is a trial and would be subject to ongoing review.

Changes to the bus services

Mark explained about the On Demand bus scheme being trialled in the Charlestown/Valentine area. It has seen ongoing take up and hasn't detracted from patronage on regular services.

Future bus services within the area are being constantly appraised for opportunities to improve services and meet commuters needs.

Your sincerely

Cathy Thomas

Director

From: ONeill, Nicole <Nicole.ONeill@transport.nsw.gov.au>
Sent: Friday, 22 February 2019 3:08 PM
To: Cathy Thomas <cthomas@secasolution.com.au>
Subject: FW: P1069 UoN TfNSW Consultation

Hi Cathy

This appears to be a correct record of the discussion.

Regards

Nicole

Nicole O'Neill
A/Principal Manager

Newcastle Integrated Services

Customer Technology & Services

Transport for NSW

T 0402539272 |
Level 3, 237 Wharf Rd NEWCASTLE NSW 2300

Attachment B

From: Sean Morgan [mailto:smorgan@secasolution.com.au]
Sent: Thursday, 29 November 2018 6:41 PM
To: MARLER Peter C
Cc: Cathy Thomas
Subject: Newcastle University building - Honeysuckle Precinct

Hi Peter- we are currently working on the Newcastle Uni proposal in the Honeysuckle Precinct and as part of this project we need to consult with a number of agencies including the RMS.

The development allows for a mixture of student accommodation, teaching facilities and other related users on site. The University is providing less than 15 parking spaces on site for the overall Masterplan, allowing for the Active Travel Zone for the precinct, light rail, students living in town etc. It is being developed in much the same way the NeW Space was in terms of active transport.

We previously discussed the NeW Space with you during the planning stage, and basically the RMS view was that if there is very limited parking site, then it follows that there is no real traffic movements associated with the project and therefore no issues from the RMS with regard to traffic impacts.

Do you wish to meet with us to discuss this project as part of our consultation process or are you happy to accept this email as consultation and on the basis that there is no parking and hence no traffic the RMS do not have any comments / concerns with the project.

Your prompt reply would be appreciated to allow us to complete this project work, as there is pressure for this to be completed prior to the Xmas / New year shut down.

If you wish to discuss this further or have any questions please do not hesitate to contact me or Cathy Thomas on 4032 7979.

Regards

Sean Morgan

Director

SECA Solution Pty Ltd

Your traffic engineering specialist

Mobile 0499 196 100

Office (02) 4032 7979

Email smorgan@secasolution.com.au

Ground Floor, 161 Scott Street,

Newcastle NSW 2300

www.secasolution.com.au

From: Development hunter <Development.hunter@rms.nsw.gov.au>
Sent: Wednesday, 5 December 2018 9:47 AM
To: Sean Morgan <smorgan@secasolution.com.au>
Subject: RE: Newcastle University building - Honeysuckle Precinct

Hi Sean,

We are happy to accept this email as consultation. We would appreciate a copy of the draft Traffic Impact Assessment when available for our records.

Thanks,

Kate

Land Use Assessment Hunter

Network & Safety Hunter | Regional & Freight
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T: 02 4908 7688

Every journey matters

Roads and Maritime Services
Level 8, 266 King St, Newcastle NSW 2300

Locked Bag 2030, Newcastle NSW 2300