50 Honeysuckle Drive, Newcastle

Mixed Use Development

Doma Property Group

Traffic and Transport

Access Assessment

November 2017

SECAsolution

50 Honeysuckle Drive, Newcastle

Traffic and Transport Access Assessment

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Contents

1 Introduction

1.1 Background

Seca Solution was commissioned by Doma Property Group to prepare a Traffic Impact Assessment for the proposed 21HD mixed use development at 50 Honeysuckle Drive, Newcastle. This report will form part of the supporting documentation being prepared to support a Development Application (DA) to Newcastle City Council.

As this development is located within the Honeysuckle Precinct, the overall impact of the full development of the Honeysuckle Precinct has been completed by Honeysuckle Development Corporation, now Hunter Development Corporation (HDC) and the traffic impacts have been assessed for access in and out of the precinct for the full precinct development.

This traffic impact assessment has been prepared in accordance with Austroads Guidelines and the "RTA Guide to Traffic Generating Developments" published by the Roads and Maritime Services (RMS).

1.2 Scope of Report

The scope of this report is to review the traffic and parking impacts associated with the proposed development and to assess the access arrangements for the development. The report provides advice on road network capacity, access issues and green (active) travel opportunities.

1.3 Issues and Objectives of the study

The issues relative to the proposal are:

- Determine the future traffic generation for the development;
- Assess impact on the local road network due to the additional flows;
- Review the access arrangements for the development;
- Assess any other transport impacts associated with the development including active transport options as supported by the Newcastle Urban Renewal Strategy 2012 (NURS) and ongoing development of the Newcastle CBD.

The objective of the report is to document the impacts of the proposed development and provide advice on any infrastructure work required on the external road network as part of the development.

1.4 Planning Context

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

- RTA Guide to Traffic Generating Developments, Version 2.2 Dated October 2002;
- RMS TDT 2013/04 "Update Traffic surveys August 2013"
- Australian/New Zealand Standard - Parking Facilities Part 1: Off Street Car Parking (AS2890.1:2004)
- Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development
- NSW Planning Guidelines for Walking & Cycling
- Public Transport Service Planning Guidelines: Rural and Regional NSW 2015
- NSW Long Term Transport Master Plan 2012

1.5 Authority Requirements

The following issues were included in the SEARs issued for the development and are addressed in the following sections of this traffic impact assessment.

Table 1-1 SEARs Response

Comment	Report Inclusion
Detail access arrangements at all stages of the construction and measures to mitigate any associated traffic impacts	To be covered with future CTMP
Detail existing pedestrian and cycle movements within the vicinity of the site and determine the adequacy of the proposal to meet the likely future demand for increased public transport and pedestrian and cycle access	2.2.4 and 3.5
Describe the measures to be implemented to promote sustainable means of transport including public transport usage, pedestrian and bicycle linkages in addition to addressing the potential for implementing a location specific sustainable travel plan.	2.6 and 4.3.1
Demonstrate the provision of sufficient on-site car parking having regard to the availability of public transport.	4.5
Estimate the total daily and peak hour trips generated by the proposed development, including accurate details of the current and future daily vehicle movements and assess the impacts of the traffic generated on the local road network, including intersection capacity and any potential need for upgrading or road works, having regard to local planning controls.	Sec 4
Details service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times).	3.2.2 and 3.3.4

2 Existing Situation

2.1 Site Description and Proposed Activity

2.1.1 Site Location and Access

The site is located within the Honeysuckle Precinct on the corner of Honeysuckle Drive and Worth Place, with frontage to both of these roads (Figure 2-1 below). It currently provides an at-grade carpark with access for vehicles being via an existing driveway at the northern end of Worth Place which allows for left in and right out movements only.

The location of the site is shown below in Figure 2-1.

Source: Nearmap

Figure 2-1 - Site Location

Existing land use adjacent to the site is planned to be generally a mixture of commercial office development, residential units and entertainment e.g. restaurants and bars.

2.1.2 Zoning

The subject site is zoned B4 Mixed Use under the Newcastle Local Environment Plan 2012.

2.2 Existing Traffic Conditions

2.2.1 Road Hierarchy

The major road through the locality is Honeysuckle Drive which provides an important road link through the Honeysuckle Precinct linking with Hannell Street to the west and through to Merewether Street to the east (via Workshop Way). It provides a single lane of travel in both directions, with kerb side parking permitted along both sides of the road for the majority of its length. Honeysuckle Drive connects with Hannell Street via a 3-way signal controlled intersection and with Merewether Street via a 3-leg roundabout.

It provides a footpath along both sides of the road and operates under the posted speed limit of 50 km/h. There are street lights along the length of the road and the kerb side parking is provided with a marked parking / cycle lane.

Adjacent to the site Honeysuckle Drive connects with Worth Place via a 4-way roundabout, with the northern leg providing access to the site and a residential apartment driveway.

Worth Place

Worth Place adjacent to the site provides a short stub road offering two way traffic access to the site and to a multi-level apartment building. Opposite the site it is a one-way road which connects with Wright Lane and provides access to an existing at-grade carpark as well as a small number of private parking spaces. It carries very low traffic flows as it does not provide an attractive through route for traffic. It provides a single lane of travel with kerb side parking permitted along the majority of its length and operates under the posted speed limit of 50 km/h. It currently provides the only access to the existing at-grade car park, which is generally highly utilised by commuters within the city centre Monday to Friday as well as a popular car park at the weekend for social visits to the Honeysuckle Precinct.

Worth Place could be altered to allow for a through link to Hunter Street as part of the removal of the heavy rail line. Further details are provided in Section 2.3.7.

2.2.2 Roadworks

There are currently no road works occurring within the general locality of the subject site however Worth Place has been closed in conjunction with construction traffic for a site at 18 Honeysuckle Drive.

A review of the review of the 'Newcastle Light Rail: Associated Road Upgrades – Review of Environmental Factors' published by GHD in November 2016 indicates the following upgrades to Honeysuckle Drive associated with the Newcastle Light Rail project:

- Upgrades to the intersection of Honeysuckle Drive / Hannell Street including realignment and a new southbound slip lane into Honeysuckle Drive;
- Installation of new concrete medians on Honeysuckle Drive extending approximately 100 metres east of the intersection with Hannell Street.

Previous work completed as part of the project to remove the heavy rail line in Newcastle has allowed for road crossings at Worth Place and Steel Street. The current road work proposed as part of the Light Rail project does not specify these road crossings but the planning is still being completed for the road network upgrades.

Discussion between HDC and Transport for NSW has indicated that a new intersection will be constructed in the vicinity of Cottage Creek, to allow for access to the development land to both sides of Honeysuckle Drive in this location. This intersection could take the form of a roundabout or traffic signals and a U-turn facility for westbound traffic is considered desirable at this location.

2.2.3 Traffic Management Works

The construction of the roundabout at the eastern end of Honeysuckle Drive is the most recent upgrade in the location. It replaced the previous T-intersection control and has improved the operation of the road network by reducing the delays and congestion at this intersection. No further traffic management works are proposed along Honeysuckle Drive.

2.2.4 Pedestrian and Cycling Facilities

Pedestrian facilities are well developed in the Honeysuckle Precinct with footpaths along both sides of Honeysuckle Drive as well as along Worth Place and Wright Lane. The upgrade of the rail corridor provides multiple pedestrian crossing including at Steel Street, between buildings opposite the subject site and at Worth Place. Pedestrian facilities also connect along the foreshore with plazas and pathways connecting the subject site with the various commercial, retail and tourist destination associated with Honeysuckle and the harbour through to the east end beaches.

Photo 1 - Pedestrian pathways along the site frontage to Honeysuckle Drive.

Cycling facilities are also well established in the precinct. There is an existing shared pathway provided to the northern boundary of the site which connects the Honeysuckle Precinct along the Newcastle Foreshore to beaches in the east end and regional cycling routes along Hannell Street to the west.

It is understood that Newcastle City Council is currently reviewing the cycling pathways throughout the Newcastle City Centre associated with the ongoing city revitalisation and construction of the Newcastle Light Rail Project.

Photo 2 – Existing shared pathway adjacent to the subject site.

Figure 2-2 Newcastle City Council City Bike Map - currently being updated

2.3 Traffic Flows

2.3.1 Peak Hour Flows

The proposed development is located at 21 Honeysuckle Drive and as part of the study work, Seca Solution completed traffic surveys at the 4-way roundabout controlled intersection of Honeysuckle Drive and Worth Place. These surveys were completed during both the morning and afternoon peak periods on Thursday 16th February 2017. The current two-way flows on Honeysuckle Drive (west of Worth Place) were:

- 1,368, split 944 eastbound (69%) and 424 westbound (31%) in the morning peak between 7:45am and 8:45am; and
- 1,317, split 795 eastbound (57%) and 522 westbound (43%) in the afternoon peak between 4:45pm and 5:45pm.

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

- 195 vehicles during the morning peak, split between 154 inbound and 41 outbound; and
- 192 vehicles during the evening peak, split between 82 inbound and 110 outbound.

The RTA Guide to Traffic Generating Developments provides the following guide for the hourly capacity of an urban road:

Level of Service	One lane (vehicles / hour)	Two lanes (vehicles per hour)
A	200	900
B	380	1400
C	600	1800
D	900	2200
E	1400	2800

Based upon the above table, currently during the morning peak period Honeysuckle Drive is operating at a level of service of E for the eastbound movement and level of service C for the westbound movement whilst in the afternoon LoS D eastbound. In the afternoon the westbound movement would appear to perform at a LoS of C however the through volumes are constrained by the signalised intersection at Hannell Street (refer 2.3.7 below).

It was noted during the survey periods that this intersection carries significant numbers of eastbound vehicles doing U-turns.

2.3.2 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.

2.3.3 Daily Traffic Flow Distribution

There was a slight bias in eastbound traffic along Honeysuckle Drive observed during both the morning and afternoon peak hours. This reflects 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.

Similarly, during the morning peak there is a strong demand for vehicles travelling north along Worth Place (north of Honeysuckle Drive) and southbound during the evening. This would be reflective of the commuter demands associated with vehicles accessing the carpark during the morning and leaving at the end of the working day.

2.3.4 Vehicle Speeds

No speed surveys were completed as part of the study work. From on-site observations, it is considered that drivers do not speed in this location due to the interaction with the various intersections etc. as well as the interaction with kerb side parking along Honeysuckle Drive. The roundabout adjacent to the subject site reduces vehicle speeds adjacent to the subject site.

2.3.5 Existing Site Flows

The site currently provides an at-grade carpark offering 258 spaces allowing for a combination of 4 hour and 8 hour parking. As such, the site currently generates a significant volume of traffic during the morning and evening peak, associated with the commuter parking demands for nearby businesses within the Honeysuckle Precinct and the Newcastle City Centre.

Surveys indicate that Worth Place (north) has 190 two way vehicle movements during the morning and evening peak hours. Observations on site show that the majority of these are associated with the carpark.

2.3.6 Heavy Vehicle Flows

Heavy vehicle movements in the vicinity of the subject site are very low, reflective of the road hierarchy and the lack of demand for heavy vehicle access in this locality. A number of heavy vehicles would access the area to service the nearby commercial / entertainment outlets but these numbers would be reasonably low. Council refuse trucks service the area as well as commercial refuse collection vehicles. During the survey periods, less than 20 heavy vehicles were observed over an hour along Honeysuckle Drive.

2.3.7 Current Road Network Operation

Observations on site during the morning and afternoon/evening indicate that the traffic movements along Honeysuckle Drive typically experience minor delays with the roundabout intersection of Honeysuckle Drive and Worth Place operating well with minimal congestion. It is noted however that during the evening peak significant delays and congestion can occur for westbound traffic along Honeysuckle Drive associated with delays and queuing which form to the west of the site in association with the Hannell Street traffic signals.

During the absolute peak (between 5.00pm and 5:30pm), the intersection of Honeysuckle Drive and Hannell Street creates significant delays and queuing which can extend past the roundabout intersection at Worth Place. Delays of up to 2 minutes were observed associated with vehicles queuing across this roundabout. Towards the end of this period, these queues quickly cleared and the intersection resumed to operate with only minor delays.

Outside of the peak hours the traffic flows along Honeysuckle Drive are much lower and the delays and congestion are minimal.

This precinct has been extensively modelled and is subject to ongoing review with upgrades proposed to accommodate changes in traffic demand associated with the Light Rail Project as well as development in conjunction with the masterplan.

2.4 Traffic Safety and Accident History

Accident data provided by the RMS for the locality shows that there have been four accidents recorded in the vicinity of the roundabout at the intersection of Honeysuckle Drive and Worth Place in the last 5 years. Two of these accidents involved vehicles running into the back of other vehicles at this roundabout, typical of roundabout controls. One accident involved a vehicle turning at the roundabout and one accident also involved a pedestrian.

The roundabout is well laid out and offers good approach sight distance. Honeysuckle Drive is relatively straight and with the raised central median separating opposing traffic movements offers a safe environment for road users. Overall it is considered that the road network in the general vicinity of the subject site offers a safe environment.

2.5 Parking Supply and Demand

2.5.1 On-street Parking Provision

Parking is permitted along both sides of Honeysuckle Drive within marked parking bays, controlled by parking meters. Parking is restricted in the vicinity of driveways and at intersections to maintain capacity. Parking is permitted along one side of Wright Lane only with no parking permitted on Worth Place adjacent to the subject site. There are currently 14 parking spaces fronting the subject site and of these a few spaces may be removed to allow for the new driveway cross-overs from Honeysuckle Drive.

2.5.2 Off-Street Parking Provision

There is a large amount of off street parking provided within the Honeysuckle precinct, in a mixture of private car parks within the various developments and public parking. The public parking is well used during the week by commuters to the CBD whilst at the weekend the parking demand is much lower, except when special events are occurring in the locality of Honeysuckle and the foreshore.

The proposed development will see the removal of 258 public parking spaces which are currently contained within the existing at-grade carpark.

2.5.3 Parking Demand and Utilisation

The off-street parking demand is high during the working week Monday to Friday, with the existing car park at the site being well used. The car park on Wrights Lane is also well used by commuters to the CBD. The on-street parking is reasonably well used with a regular turnover of the parking, associated with visitors to the nearby restaurants and shops, as well as visitors to the foreshore area. The at-grade parking area further to the west of the site on Honeysuckle Drive is not highly used.

2.5.4 Set down or pick up areas

There are taxi drop off / pick up zones to the east of the site, associated with patrons visiting the entertainment area to the east, which includes a number of restaurants and bars. There are also loading zones in this area.

There are a number of bus stops located along Honeysuckle Drive utilised by Newcastle Buses, including one adjacent to the subject site that allows for bus and private coach use.

2.6 Public Transport

2.6.1 Rail Station Locations

The subject site is well located to benefit from the future public transport opportunities and improvements to existing services which are currently planned for this area. The Newcastle Transport Interchange is currently being constructed at Wickham around 600 metres to the west of the site and once completed will provide access to light rail through the Newcastle CBD and heavy rail services along both the Hunter Line and Central Coast and Newcastle Line.

The Newcastle Light Rail project will see the introduction of light rail within the existing rail corridor between Hannell Street and Worth Place with the service then continuing along Hunter Street. Plans for the proposed light rail service show the nearest station being located less than 100 metres to the south of the subject site.

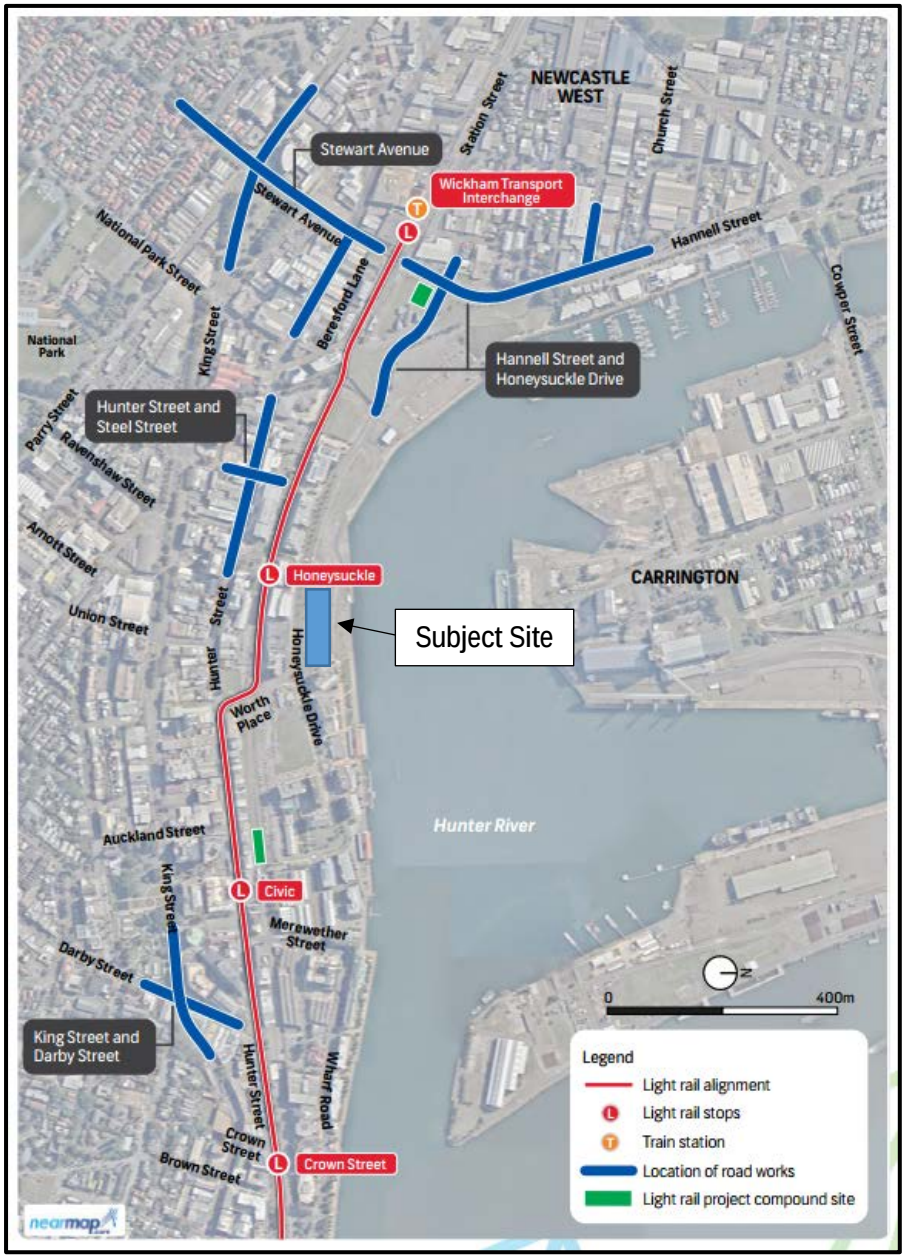


Figure 2-3 – Proposed light rail line showing the location of the light rail stops and Newcastle Transport Interchange in comparison to the subject site.

2.6.2 Bus Stops and Associated Facilities

Bus stops are located along Honeysuckle Drive, 200m to the west of the site or less than 200m to the east of the site for outbound services whilst a bus stop for inbound services is located approximately 300m to the east of the site. Newcastle Buses service the precinct with Route 106 and 107 between Newcastle and Jesmond via Mayfield and Warabrook. Further services are available from Hunter Street adjacent to the former Civic Railway Station which service Newcastle and regional areas. Details are provided below in Table 2-1.

Table 2-1 Bus Route Index for Hunter Street

Route	Details	
100	Charlestown-Garden Suburb-JHH-Lambton-Jesmond-University-Mayfield-Tighes Hill-Islington-Newcastle	NB
118	Newcastle-Tighes Hill-Mayfield East-Mayfield North-Kooragang-Stockton	NB
130	Fingal Bay-Nelson Bay-Salamander Bay-Newcastle Airport-Newcastle	PSC
131	Shoal Bay-Nelson Bay-Salamander Bay-Newcastle Airport-Newcastle (express)	PSC
138	Lemon tree Passage-Salt Ash-Newcastle Airport-Fern Bay-Mayfield-Newcastle	PSC
140	Lakeside shops-Raymond Terrace-Tomago-Hexham-Mayfield-Newcastle	HVB
152	Hawks Nest-Raymond Terrace-Newcastle	BW
160	Cessnock-Weston-Kurri Kurri-Black Hill-Newcastle	RC
201	Hamilton-Merewether-The Junction-Bar Beach-The Hill-Newcastle-Marketown	NB
222	Wallsend-Elermore Vale-Rankin Park-JHH-Kotara-Adamstown-Newcastle	NB
226	Glendale-Elermore Vale-Wallsend-Jesmond-University of Newcastle-Waratah-Broadmeadow	NB
230	Wallsend-Birmingham Gardens-Shortland-Jesmond-Lambton-Broadmeadow-Newcastle	NB
231	Wallsend-Silver Ridge-Jesmond-Lambton-Broadmeadow	NB
267	Seahampton-West Wallsend-Barnsley-Edgeworth-Glendale-Wallsend-Jesmond-Univeristy of Newcastle	NB
317	Belmont-Floraville-Tingira Heights-Windale-Mount Hutton-Charlestown-Kotara-New Lambton-Broadmeadow-Newcastle	NB
322	Belmont-Jewells-Redhead-Dudley-Whitebridge-Charlestown-Kahibah-Kotara-New Lambton-Broadmeadow-Newcastle	NB
334	Glendale-Cardiff-Macquarie Hills-Cardiff South-Garden Suburb-Kotara-Adamstown-Broadmeadow-Newcastle	NB
350	Swansea Heads-Caves Beach-Swanse-Belmont-Jewells-Gateshead-Charlestown-Adamstown-Broadmeadow-Newcastle	NB
363	Warners Bay-Speers Point-Boolaroo-Argenton-Glendale-Cardiff-JHH-New Lambton-Broadmeadow-Newcastle	NB

2.7 Other Proposed Developments

The Honeysuckle Precinct is not fully developed and further land will be developed within the precinct. The block of land located on the southeast corner of Honeysuckle Drive and Worth Place has been previously approved for a mixed use development but is currently not being developed. A number of additional developments will occur along Honeysuckle Drive in accordance with the Precinct Development plan for Honeysuckle.

A number of developments are occurring within the Newcastle CBD, including the University of Newcastle NeW Space on the corner of Hunter and Auckland Street, as well as residential units at Markettown and others throughout the CBD. This is all part of the revitalisation of the Newcastle CBD.

Development adjacent to the heavy rail corridor is uncertain at this current time.

3 Proposed Development

3.1 The Development

The proposal is for a mixed use residential development consisting of:

- 154 one, two, three and four bedroom apartments provided across 7 levels;
- 226 m^2 of commercial space across three ground floor tenancies fronting Honeysuckle Drive or Worth Place;
- Shared use facilities for residents including a gym, pool, and residents meeting room.

Three separate buildings are proposed with each building providing separate parking for visitors and the commercial uses. A shared basement carpark will be provided below the entire development with a total of 190 parking spaces across the site.

Pedestrian access will be provided off both Honeysuckle Drive and Worth Place with separate vehicle access provided for ground level and basement parking provided off Honeysuckle Drive.

3.1.1 Phasing and Timing

The development could potentially be constructed in three phases but for this assessment it has been assumed that the development will be constructed in a single stage and the traffic and parking impacts have allowed for the full development to occur.

3.1.2 Access and Circulation Requirements

Vehicle access will be provided via separate access driveways on Honeysuckle Drive which allow for left in and left out traffic only. The western most access driveway will allow for access to the basement carpark for the whole development together with a small amount of ground level parking. A second driveway will be provided further to the east which will allow for access to ground level parking for the two eastern buildings. Both access driveways will allow for two-way movements.

The internal design of the car park shall allow vehicles to manoeuvre within the car park and exit in a forward direction.

The access driveways on Honeysuckle Drive shall be designed in accordance with the requirements of Newcastle Council to ensure good visibility available for drivers exiting the site. The final design and layout of the access driveways will be confirmed as part of the detailed design for this project.

3.2 Access

Both driveways will be designed and constructed in accordance with Council requirements and will allow for left in and left out traffic movements only, due to the raised central median along Honeysuckle Drive.

The western most driveway (main driveway) allows for light vehicle movements only and provides a minimum width exceeding 6.2 metres with a roller door at the entry for security. This door will be located in accordance with AS2890.

The eastern driveway will provide access to ground floor parking within the two eastern buildings with an entry width of more than 9 metres at the roadway. Entry to individual carparks is controlled by roller security doors with a button push located within the access driveway and will be located in accordance with AS2890.

The gradients of any access driveway do not exceed 1 in 20 (5%) across the property line or footpath and for at least the first 6 metres into the carpark. Ramps within the site do not exceed a gradient of 1 in 6 (16.7%). This is consistent with AS2890. Whilst no grade transitions are shown on the plan, these will be required for any change in grade exceeding:

- 12.5% for summit grade changes; or
- 15% for sag grade changes.

3.2.1 Driveway Location

The main driveway is located on a relatively straight section of Honeysuckle Drive close to the western boundary of the site. A second driveway will be provided further east along Honeysuckle Drive, approximately 50 metres to the west of the roundabout intersection with Worth Place.

3.2.2 Service Vehicle Access.

The majority of the servicing will be completed by small commercial vehicles such as a Toyota HiAce which shall be provided a parking space within the site. Larger service vehicles will park on street with no access within the building footprint. Excluding waste management, the servicing requirements for the development are relatively low. This is a similar arrangement to the majority of similar developments in the locality and can be safely managed on street.

A loading zone is proposed on Honeysuckle Drive to the front of the eastern-most building and close to the bin storage area. This loading zone will only operate at set times and will allow for all waste collection to occur on street. The development will utilise bulk waste collection bins for both resident and commercial waste which will be stored within a bin storage area located off the eastern access driveway. A roller door will be provided onto this driveway which will allow for bins to be wheeled out to the loading zone for collection and then returned.

Waste collection would typically occur in the early morning outside of the road peak hour. Three services per week are expected for the site.

The location of this zone together with the current bus / coach zone on the site frontage will need to be reviewed and discussed with Council and Newcastle buses to ensure that the zone and the bus zone can operate efficiently. Waste collection typically occurs outside of peak periods and the option for a loading zone to be provided between 5.00 and 8.00 AM could be considered with this area then forming part of the bus zone at all other times.

3.2.3 Access to Public Transport including planned light rail

The site is well connected to public transport with footpaths along the roads providing access to bus services along Honeysuckle Drive and Hunter Street.

The site is also well located to benefit from the Newcastle Transport Interchange which is currently being constructed near the western end of Honeysuckle Drive and the future light rail service which will operate along the existing rail corridor. As shown in Figure 2.3 the Honeysuckle light rail station is located on Hunter Street within 100m of the subject site.

Pedestrian footpaths currently connect Honeysuckle Drive through to Hunter Street at the location of this proposed light rail stop for the Honeysuckle Precinct.

3.3 Circulation

3.3.1 Pattern of circulation

All vehicles will be able to enter and exit the site in a forward direction from the local road network. The internal design of the car park levels will be designed in accordance with AS2890 permitting vehicles to turn around within the car park and exit in a forward direction.

3.3.2 Road width

The internal circulating aisles allow for two-way traffic movements, with a width of 5.8 metres in accordance with AS2890. The entry / exit points exceed 6.0 metres wide and permits for two-way movements in accordance with AS289 (less than 300 spaces accessing a local road).

3.3.3 Internal Bus Movements

No internal bus movement required for this development.

3.3.4 Service Area Layout

No service area is provided. All servicing will be via kerb side parking with waste collection to be completed on-street within a time specific loading zone provided on Honeysuckle Drive. This may require an adjustment to the existing bus zone adjacent to the site frontage in the location of the access point. This will be reviewed and detailed as part of the detailed design for the project with discussion with Newcastle City Council and Newcastle Buses.

3.4 Parking

The parking for the development will be provided within the building envelope to cater for the residential and commercial parking demands (including visitors).

Parking will be provided over two levels with ground level parking for visitors, commercial use and several enclosed garages for residents provided within each building and a basement carpark for residents provided below.

A total of 190 car parking spaces will be provided including:

- 154 parking spaces for residents (including 16 adaptable in the basement car park and 1 on the ground floor) within the basement carpark;
- 31 parking spaces for visitors (ground floor); and
- 5 parking spaces for the commercial uses.

12 motorcycle parking spaces will also be provided, 9 at ground level and three in the basement. Bicycle parking is provided within 3 separate bike storage rooms on the ground floor.

The parking layout has been designed in accordance with AS2890 and allows for two-way circulating aisles to ensure all vehicles can enter and exit in a forward direction.

3.5 Pedestrian and Bicycle Facilities

The site connects well with the existing pedestrian facilities in Honeysuckle enabling resident, worker and visitor access between the site and the broader Honeysuckle and CBD precincts. It is considered that pedestrian movements associated with the site will be important with interaction between this and adjacent sites, tourist facilities and the surrounding commercial, residential, education and transport precincts being significant. The Honeysuckle Masterplan allows for quality pedestrian and shared path facilities throughout the precinct.

Cyclists can be accommodated on the local roads and the shared pathway along the Honeysuckle Foreshore with dedicated bicycle storage to be provided on site in accordance with the Council DCP. Council is currently planning to upgrade local cycling with separated cycling lanes to be provided in conjunction with upgrades associated with the light rail. This will see additional facilities within the CBD for cyclists travelling along Hunter and King streets. The facilities can be access via new crossings associated with the rail corridor as well as the existing shared path along the foreshore.

4 Transportation Analysis

4.1 Traffic Generation

As the majority of traffic associated with Honeysuckle Drive during the traditional morning and afternoon peak periods are commuters arriving to the CBD for work, the traffic associated with the development will not have a major impact during this period. During the morning period, the majority of the traffic will be outbound movements associated with the residential development with inbound traffic movements primarily associated with the commercial element of the development.

Given the location of the site within the Newcastle City Centre it is considered that many residents who live at the site would work within the Newcastle CBD, using public transport (free services within the city centre), walking or cycling to travel to work. Once completed, future residents would also be able to use the light rail service as an alternative means of transport within the Newcastle CBD.

Outside of the peak periods, the development will generate much lower traffic flows and minimal flows during the evening / night time period.

4.1.1 Daily and Seasonal Factors

The nature of the development will lead to typical morning and afternoon peak hour traffic generation associated with the workers arriving and leaving the site of the commercial / retail elements, with opposing traffic movements associated with the residential use. There will be limited annual variation expected although a potential reduction in flows during Christmas / New Year periods could be expected.

4.1.2 Sight Distances

Both access driveways are located on Honeysuckle Drive, which provides a relatively straight road alignment. For the posted speed limit of 50 km/h and based upon AS2890, the required sight distance is 69 metres desirable and 45 metres as a minimum. Based upon the concept plans prepared for the project (Appendix A), and following a review of the sight visibility lines at the proposed driveway locations these sight distances will be available. Sight distances exceed 70 metres at both access driveways looking west along Honeysuckle Drive.

Due to the raised central median all vehicle movements are left in and left out and therefore drivers do not need to be able to observe any vehicles travelling westbound on Honeysuckle Drive.

4.1.3 Queuing at entrance to site

There are no vehicle queues expected at site entry / exit points. Given the multiple access driveways, low overall traffic demands associated with the future development and the left in / left out traffic arrangements it is considered that drivers will experience minimal delays. As part of the development the kerbside parking along the site frontage on Honeysuckle Drive will be modified to provide for access into the site. This will be consistent with other developments along Honeysuckle Drive.

4.1.4 Comparison with existing site access

The existing access driveway off Worth Place will be removed and two new access driveways provided on Honeysuckle Drive. Any redundant cross-overs will be removed and kerb and guttering reinstated as required.

4.1.5 Pedestrian Movements

The development is expected to attract a significant number of pedestrian movements, associated with resident trips to and from the site as well as visitors and employees to the commercial uses on the ground floor. The site is well linked to pedestrian paths, with footpaths provided along both sides of Honeysuckle Drive as well as along Worth Place / Wrights Lane. Pedestrian pathways within the site will connect with the existing shared pathway on the northern boundary of the site and provide access to the entertainment precinct along foreshore. There are also strong pedestrian links across the rail corridor at various locations which allow for connection to Hunter Street and the Newcastle CBD. With the future light rail link, pedestrian access to Hunter Street will be improved and access will be maintained to the future light rail stops along Hunter Street. It is also expected that there will be pedestrian movements between the subject site and the other retail / restaurants / bars within the Honeysuckle Precinct.

4.2 Traffic Distribution and Assignments

The location of the access and the raised central median allows for left in and left out traffic movements only. It is considered many of the future residents choosing to live at the site would work within the Newcastle City Centre and as such will have an origin/destination to the east or south of the site. In line with the revitalisation of the Newcastle, the majority of these trips would be anticipated to be completed by foot, as cyclists or on the future light rail or buses.

The demand for visitors accessing the site will be relatively low, less than 10% of traffic, with most of these trips arriving from the west via the regional road network including Hannell Street, Maitland Road, Donald Street and Steward Avenue. It is considered that the demand for visitors from within the Newcastle CBD would be very low with these visitors likely walking or cycling to the site or using public transport including the future light rail.

Allowing for the above, the majority of the trips generated by the site would occur to the west associated with residents who work outside of the Newcastle CBD. These vehicles would likely travel south along Stewart Avenue for destinations to the south towards Charlestown, or west along Maitland Road (via Hunter Street) for destinations to the west with others traveling north along Hannell Street and Industrial Drive.

While the proposed driveways do not allow for westbound connection onto Honeysuckle Drive, vehicles can complete a U-turn at the roundabout at Worth Place after exiting the site to travel west towards Hannell Street.

Similarly, as there is no right turn into the site from Honeysuckle Drive, all vehicles will be required to approach the site from the west. Most of the traffic generated by the site will be regular users who are familiar with the site access and will therefore know to approach the site from the west.

For the purposes of this assessment, it is expected that some 75% of the trips would have an origin / destination towards the west of the site along Honeysuckle Drive towards Hannell Street with the balance being to the east towards Merewether Road or Watt Street.

4.2.1 Origin / destinations assignment

For traffic having a destination to the north, west or south, all vehicles would be required to exit the site east along Honeysuckle Drive then complete a U-turn at the roundabout at Worth Place to travel west along Honeysuckle Drive towards Hannell Street. These vehicles would then return east along Honeysuckle Drive and turn left into the site.

Vehicles with an origin / destination north of the site would then turn right onto Hannell Street and return along the reverse route. This is considered to represent approximately 20% of the traffic movements.

Vehicles with an origin / destination west of the site would turn left out of Honeysuckle Drive onto Hannell Street before dispersing over a several potential routes connecting west towards Broadmeadow and the University of Newcastle. Vehicles would then return along this route in the reverse direction. This is considered to represent approximately 55% of the traffic movements.

For vehicles with a destination to the east or south, drivers would turn left onto Honeysuckle Drive towards Merewether Road or Wharf Road for connection towards Darby Street, Charlestown and beaches in the east end. As there is no right turn into the site from Honeysuckle Drive, inbound vehicles would be required to access the site from the west (via Hannell Street). This is considered to represent approximately 25% of the traffic movements.

It is noted however that the Hunter Development Corporation together with the Department of Transport are considering a four-way intersection to the west of the site, adjacent to Cottage Creek. While no specific details or plans have been provided for this upgrade, this intersection would allow for westbound vehicles to complete a U-turn to travel east along Honeysuckle Drive.

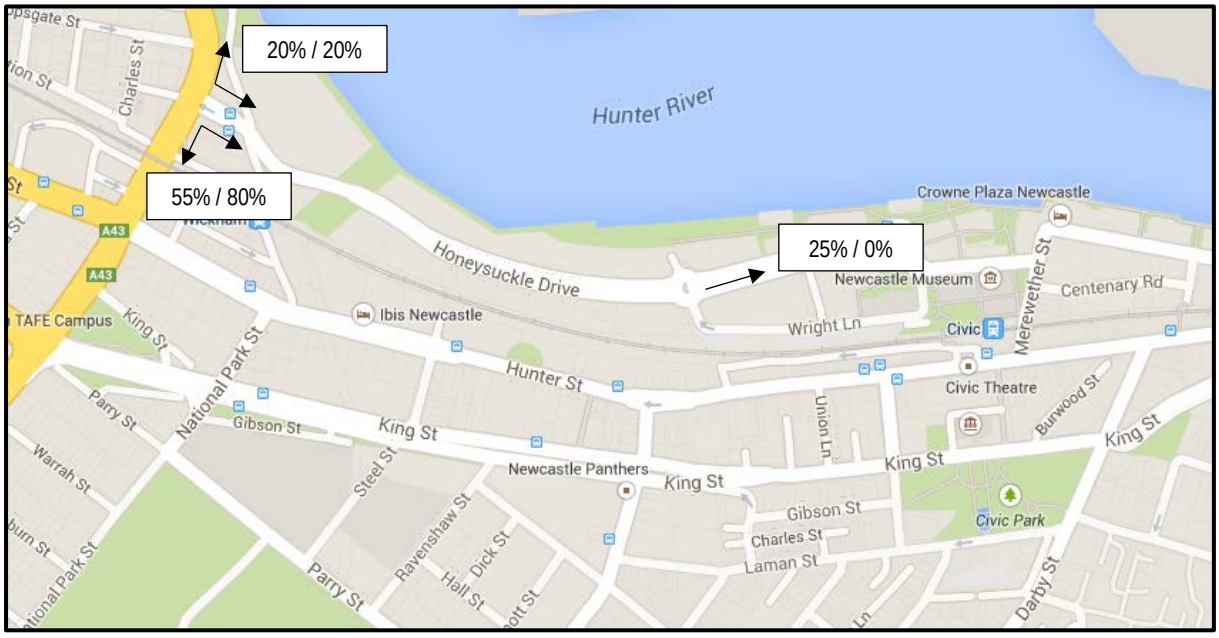


Figure 4-1 Destination / origin of traffic from / to the subject site.

4.3 Impact of Generated Traffic

4.3.1 Impact on Daily Traffic Flows

When reviewing the traffic movements associated with the proposed development, it is important to note that the development is ideally located for public transport use and for walking / cycling trips. It is located close to the numerous bus routes that run up and down Hunter Street and is within 100 metres of a future light rail stop for the Honeysuckle Precinct. It is located within easy walking distance of the Newcastle CBD as well as entertainment / recreational centres such as the Honeysuckle Precinct, the beaches and the foreshore area.

The Newcastle Urban Renewal Strategy 2012 (NURS) is underpinned by a range of state, regional and local planning instruments including the State Plan and forms the underlying plan for the city's future, of which the Honeysuckle Precinct forms an integral part. It outlines the key initiatives and guidelines and has inter-related components which can be broadly categorised in three sections as:

1 place-based
2 economic
3 transport-related.

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

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

The guiding principles as they relate to the Transport and Access requirements for Honeysuckle and the subject site are:

Transport, access and connectivity

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

Housing mix and affordability

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

The key transport-related initiatives as they relate to Honeysuckle and the subject site are:

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

To be successful NURS needs to be embraced by all facets of government, stakeholder, developers and the community as it provides a framework for a cohesive, vibrant and exciting future for the city.

<u>NURS Transport Key Points</u>

- 7,500 parking spaces utilised whilst the overall supply is nearly 10,500 spaces (GTA 2008)
- Recommended that carparking be capped to 11,000 spaces (AECOM 2012)
- Newcastle has a well-established and extensive public transport network
- Strategic initiatives seek to provide a more balanced transport network with lesser reliance on private car use by encouraging the use of more sustainable forms of transport, such as public transport and active transport (walking and cycling)
- Further investigation recommended to determine whether there is scope in:
    - Reducing the current rate for non-residential development or adopting a maximum rate.
    - Allowing for some of the parking for non-residential development to be reduced based on availability of carparking in nearby parking stations
    - Amending the current maximum rate of visitor carparking spaces for residential development to allow for a lesser number of spaces.
- Investigate Car Share

The site is ideally situated to embrace the desires of the NURS and the State Plan with direct and easy access to the city centre, future light rail and the harbour foreshore. It is further considered that future commercial tenants, as well as residents, will embrace the lifestyle offered by the city centre living and be less reliant upon the use of private motor vehicles.

The RTA Guide to traffic generating developments provides traffic generation rates for commercial developments including offices, retail shops and cafes. As the intended use of the proposed commercial space has not yet been determined, specific traffic generation rates cannot be applied. It is noted however that depending on its use, the commercial space on the ground floor could allow for a significant percentage of passing trade from Honeysuckle Drive while also providing good opportunities for use by future residents within the Honeysuckle Precinct. As such it is considered that the proposed commercial space would generate minimal traffic demands with the majority of the vehicle movements being for staff. For the purposes of this assessment a rate of 5 vehicles per hour has been allowed for.

Traffic generation rates for a high density residential development in regional NSW have been published by the RMS in a technical direction to the RTA Guide (TDT 2013/04a) which includes updated traffic surveys of similar developments:

- Weekday morning peak hour trips: 0.53 trips per dwelling
- Weekday evening peak hour trips: 0.32 trips per dwelling
- Weekday daily trips: 4.58 trips per dwelling

A summary of the expected daily traffic movements associated with the development are provided below:

Table 4-1 –Summary of Daily traffic movements

Element	Daily rate	Units / Area (m^2)	Daily traffic flows
Residential	4.58 per unit	154	706
Commercial	Not specified	226m^2	Less than 50 per day (1)
Total	-	-	756

Notes: 1 – the commercial space, regardless of use, will generate minimal traffic demands. A retail store or café would complement the existing retail outlets in the area and not be significant destination. Alternatively, traffic demands associated with an office space would be minimal, consisting primarily of staff arriving in the morning and leaving at the end of the working day.

The daily traffic volumes identified above are considered to be at the upper end of the scale, with the updated RMS publication showing for example that the daily trip rate within Sydney for residential dwellings is 1.52 compared with the 4.58 shown above for regional areas. Given the sites close proximity to the city centre, the expanding public transport opportunities and the lifestyle within the Honeysuckle precinct it is considered that the actual rates could be much lower than 4.58 per unit per day.

Based upon Table 4.1 above, the development could generate some 756 vehicle movements per day, which would be reasonably evenly split between 378 entering the site and 378 exiting the site per day. The site however currently generated traffic associated with the carpark on site. Surveys indicate that these flows are in the order of 150 vehicles per peak hour. The carpark allows for 103 4 hour parking spaces, 147 8 hour spaces and 8 accessible spaces. This could equate to a daily traffic flow in the order of 700 vehicle movements.

Using the splits identified in Section 4.2.1 above, it can be seen that the biggest impact would be to the west of the site with daily flows along Honeysuckle Drive (west of the site) increasing by 662 vehicles per day (284 westbound, 378 eastbound) to 15,662 vehicles. The impact on daily flows to the east of Worth Place would be significantly lower with an additional 94 vehicles per day (eastbound).

It is noted that the subject site and the proposed land use is in keeping with the overall Masterplan for the Honeysuckle Precinct and as such, the traffic impacts have been previously assessed and the appropriate road

upgrades identified. Extensive traffic modelling has been complete for the Honeysuckle precinct and the Light Rail project has completed traffic modelling and allowed for the full development of the Honeysuckle Precinct.

The majority of the traffic associated with the development shall travel west in the morning when Honeysuckle Drive currently operates at a LoS C for this movement, returning in the afternoon eastbound when this movement operates at LoS D. As well there will be a reduction in traffic volumes associated with the existing operation of the carpark, reducing the flows eastbound in the morning which operate at LoS E as well as westbound in the afternoon when traffic flows are constrained due to queues associated with the Hannell Street intersection.

4.3.2 Peak Hour Impacts on Intersections

The peak hour traffic volumes associated with the development have been determined based upon the information provided by the RMS and are summarised below:

Element	Peak rate	Units / Area (m^2)	Peak hour flows
Residential- AM	0.53 per unit	154	82
Residential - PM	0.32 per unit	154	50
Commercial	-	226	Less than 5 per hour (1)

Notes: 1 – based on staff only movements in the peak periods

Using the above values, the development could generate some 87 vehicle movements during the morning peak period and 55 vehicle movements during the evening peak period. Using the splits from Section 4.2.1 above, the development could increase the peak hour flows on Honeysuckle Drive (west of Worth Place) by 70 vehicles per hour during the morning peak (split 50 westbound, 20 eastbound) and 52 vehicles per hour during the evening peak (split 41 eastbound, 11 westbound).

Observation on site indicate that Honeysuckle Drive (westbound) can experience delays and congestion during the evening peak (5.00-5.30PM) which is associated with delays and queuing at the intersection of Hannell Street and Honeysuckle Drive. During this time the proposed development will only increase the westbound flows along Honeysuckle Drive approaching this intersection by 11 vehicles, corresponding to one vehicles every 5 minutes on average. This represents a minimal increase and as such will not have a significant impact upon the operation of this intersection.

The change of use of the site from the existing public car park including significant commuter parking will see an overall improvement to the road network and intersections within the vicinity of this site. The majority of traffic currently associated with the site is typical commuter flows contributing to the existing demands on Honeysuckle Drive and its intersection with Hannell Street.

Outside of the evening peak hour this intersection operates well and does not create significant delays or queuing. Improvements on Hannell Street including the removal of the heavy rail crossing to the south of Honeysuckle Drive have improved its overall capacity to accommodate the current demands.

4.3.3 Background traffic and other developments

There are a number of vacant sites within the Honeysuckle Precinct which will be developed over the coming years. A number of these will take into account the benefits associated with the removal of the heavy rail line and will be constructed in line with the aims and objectives of the NURS. This will help reduce the traffic demands associated with these developments.

The plans for the balance of the Honeysuckle Development allow for a similar mix of development as per the subject site which have been assessed as part of the Honeysuckle masterplan and associated infrastructure works.

4.3.4 Impact of Construction Traffic

The majority of construction work will be contained within the site so there will be minimal impact upon the external road network. There will be a requirement for construction machinery to access the site and traffic associated with workers. A Traffic Management Plan will be required for work on site and access controls. This will be completed as part of the design process by the contractor on site. All works on site will be governed by the requirements of Newcastle City Council as stipulated within any development consent granted including hours of work.

Access to the site will require large vehicles, a crane and un-loading facilities. It is proposed that a construction zone be provided on the street frontage on Honeysuckle Drive, which will be located within the existing parking lane provided in this location. All vehicle access is anticipated to be provided off Honeysuckle Drive for the construction, in the location of the future driveway to the site.

An important element for the construction work will be managing the vehicles associated with the construction staff, to ensure the kerb side parking in the location is not fully utilised by the construction staff vehicles. Construction staff can be directed to park within the off-street public parking in the Honeysuckle Precinct or utilise public transport to access the location.

Pedestrian access will be maintained along the site frontage through the construction phase of the development, as the construction work will be within the site and not located on the footpath. A site office could be located overhead along the footpath, and this will allow for the continuation of the footpath through the construction phase with adequate lighting to maintain safety.

4.4 Impact on Road Safety

The additional traffic flows associated with the development of the subject site will have a relatively low impact upon traffic safety. The site access is located on a straight section of Honeysuckle Drive offering good visibility for drivers entering and exiting the subject site. The driveway is restricted to left in and left out only, due to the raised central median. The additional traffic movements associated with the development are relatively low and represent a minor increase over the existing traffic flows, and as such it is considered that they will have a minimal impact upon the road safety on the adjacent road network.

4.5 Parking Analysis

4.5.1 Authority Parking

The Newcastle Local Environment Plan 2012 indicates that the subject site is located within the Newcastle City Centre.

The Newcastle Development Control Plan 2012 provides the following car parking requirements for residential flat buildings within the Newcastle City Centre:

- Small dwellings (one bedroom or less than 75 m^2) – 0.6 spaces per dwelling;
- Medium dwellings (two bedrooms or between 75 m^2 and 100 m^2) – 0.9 spaces per dwelling;
- Large dwellings (three bedrooms or greater than 75 m^2) – 1.4 spaces per dwelling; and
- Visitors – one space for the first three dwellings and one space per every five dwellings thereafter or part thereof.

Car parking for non-residential developments within the Newcastle City Centre is provided at the rate of one space per 60 m^2 gross floor area.

Based upon the authority requirements above together with the desire to ensure that there are no off site parking impacts created by the project, the parking provision for the proposed development would be as follows:

Figure 4-2– Parking Requirements

Parking For	Based On	Spaces Required DCP City Centre	Proposed Supply
One Bedroom Units (0.6 per unit)	48 dwellings	28.8	
Two Bedroom Units (0.9 per unit)	60 dwellings	54	
Three & Four Bedroom Units (1.4 per unit)	46 dwellings	64.4	
Residential Sub total		147.2	138 plus 16 accessible
Visitors (1 space for first 3 units then 1 space per 5 units)	154 dwellings	31.2	31
Commercial/Retail	226 m^2 GFA	3.77	5
Total		182.17	190

However, under the Council DCP for residential land use the provision of a minimum of one space per dwelling is the requirement across the city generally and should be considered for this project.

For the 154 units this gives a requirement for 7 additional spaces giving a total parking provision of 190 parking spaces under the DCP. This includes the provision of a parking space within the site suitable for servicing of the site by small Hi-Ace style vans.

Therefore, the proposed parking would see:

- Residential (154 dwellings) 154 spaces
- Visitor parking 31 spaces
- Commercial/Retail 5 spaces including 1 for servicing

Total 190 spaces

4.5.2 Parking Demands

Overall the proposed supply of parking (190 spaces) is in accordance with the authority parking requirements, ensuring no off-site parking impacts are created by the proposed development and reflective of market demands for residential development such as this.

There is currently a very high demand for parking along Honeysuckle Drive and across this precinct as a whole. The subject site currently provides a public carpark facility which will be removed as part of the development and is therefore likely to see an increase in the demand for on-street parking in this location. The provision of the additional parking spaces within the site will ensure that parking demands can be contained within the site and that visitors are able to park within the site and therefore reduce the need to rely on on-street parking along Honeysuckle Drive.

Secure bicycle storage for residents, visitors and the commercial uses will also be provided throughout the site to accommodate the potential demands for these facilities as required by the Newcastle Development Control Plan.

4.6 Public Transport

4.6.1 Options for improving services

It can be seen that the site is very well located for public transport access and use. It is located within easy walking distance of the numerous bus routes that operate along Hunter Street, with bus stops located close to the intersection of Hunter Street and Merewether Street.

With the development of the light rail line within the Newcastle CBD, access to public transport will improve. Plans for the light rail show the nearest stop being located within the existing rail corridor between Hunter Street and Honeysuckle Drive around 100 metres to the south of the site. Pedestrian footpaths are provided between Honeysuckle Drive and Hunter Street which connect through to the proposed light rail stop in this location. This will allow for ease of connections within the CBD as well as connections to the wider public transport network to access other suburbs around Newcastle and beyond.

Overall it is considered that access to public transport for the site is good and no improvements are required. The implementation of a green travel plan for the project is not considered necessary, given the ongoing improvements to public transport in this vicinity this information is expected to be readily available and promoted in the public domain.

5 Improvement Analysis

5.1 Improvements to Accommodate Existing Traffic

The existing road network in the immediate vicinity of the subject site is well developed and there are no road network upgrades currently occurring. With the construction of the light rail in the Newcastle CBD, the road network may be altered with new road connections established between Honeysuckle Drive and Hunter Street. This will help to disperse the traffic movements associated with the site and reduce the impact at any one location.

As the Honeysuckle Precinct has been modelled in conjunction with its masterplan it is considered that no other road upgrades are required to accommodate the existing traffic movements.

5.2 Improvements to Accommodate Background Traffic

Road upgrades and improvements associated with the introduction of the light rail will significantly improve the road network in the locality of the subject site and the Newcastle CBD and will accommodate the future growth in traffic in the CBD. It is further considered that the nature of development in the CBD and the Honeysuckle precinct (including the subject site) is complimentary and as such, will not generate significant increases in private motor vehicle access in and out of the Newcastle CBD and Honeysuckle Precinct.

5.3 Additional Improvements to Accommodate Development Traffic

It is considered that there are no improvements required to the local road network as a direct consequence of the traffic movements associated with the subject development site. The additional traffic movements associated with the development are relatively low and can be accommodated on the local road network. The overall redevelopment of the Honeysuckle Precinct has been assessed and reviewed as part of the planning process for the precinct, and the subject development has been designed in accordance with this planning. It is therefore considered that the impacts of the development fall within the overall impacts associated with the precinct and as such do not require any network upgrades as a direct consequence of this development site.

5.4 Alternative Improvements

It is considered that the proposed works will not have any impact on the adjacent developments in the general locality of the subject site.

Parking for the site is in accordance with the DCP ensuring no impact upon the external on-street parking demands.

6 Summary and Recommendations

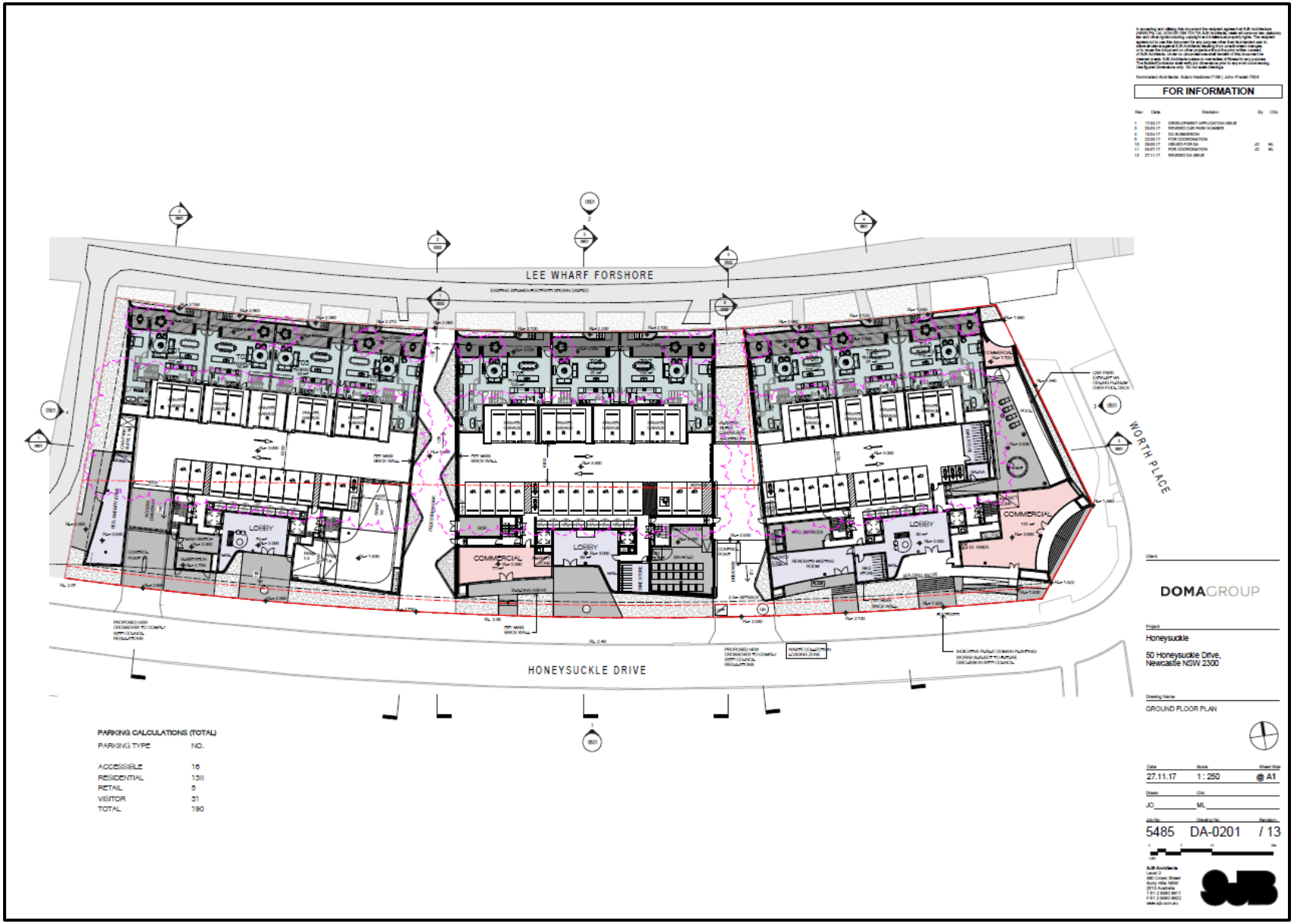
6.1 Summary

The following conclusions are drawn from the investigations into the proposed mixed-use development on 50 Honeysuckle Drive:

1. The proposal allows for a mixed-use development consisting predominately of residential apartments together with commercial floor area fronting Honeysuckle Drive. All vehicle access will be provided via two new driveways on Honeysuckle Drive and parking will be provided on site for the future users.
2. The site is located within the Honeysuckle Precinct and is well located for access via the current and future public transport within the Newcastle CBD. The site is within walking distance of the proposed light rail stop for the precinct as well as bus routes that operate along both Honeysuckle Drive and Hunter Street.
3. With the truncation of the heavy rail and the provision of the light rail within the Newcastle CBD, access to the site will be improved with direct pedestrian access available to the improved public transport that will operate along the Hunter Street corridor.
4. The re-development of the whole of the Honeysuckle Precinct has been previously assessed and reviewed and the impacts have been addressed as part of the planning for the precinct. The subject development falls within the planning for the precinct, which allows for a mixed-use development on the site.
5. The overall traffic movements associated with the development will be relatively low, as the location of the site will encourage the use of public transport for connections within the CBD as well as other locations throughout Newcastle. For the residential element, it is considered that the lifestyle attractions of living within the Honeysuckle / CBD district will reduce the reliance upon the use of private motor vehicles, with future residents able to walk around the general locality and utilise public transport.
6. The change of use of the site from the existing public car park will see a reduction in peak hour trips in the immediate vicinity of the site with an overall improvement in the performance of Honeysuckle Drive and its intersection with Hannell Street.
7. The parking demands associated with the residents and staff working within the site have been determined and the parking provision satisfies these requirements. The parking for visitors to the residential units is catered for within the site in accordance with the DCP and is supported by good access to the site via public transport including the light rail system. The site also provides a complimentary attraction to the various retail, cafes, restaurants and bars within the Honeysuckle Precinct. This reduces the parking demands associated with any one site and reflects the existing developments in the locality that do not provide parking for visitors and patrons.

The overall conclusion from the investigations is that traffic and access arrangements for the development proposal are satisfactory and that there is no traffic or access impediments to the development. Parking has been provided in accordance with the authority parking requirements outlined within the Newcastle Development Control Plan which will ensure that all resident and visitor parking demands can be contained within the site. A space has also been provided for general servicing by Hi-Ace style vans. This will ensure that there is no impact on the existing parking demands within the Honeysuckle Precinct.

Appendix A: Site Plan



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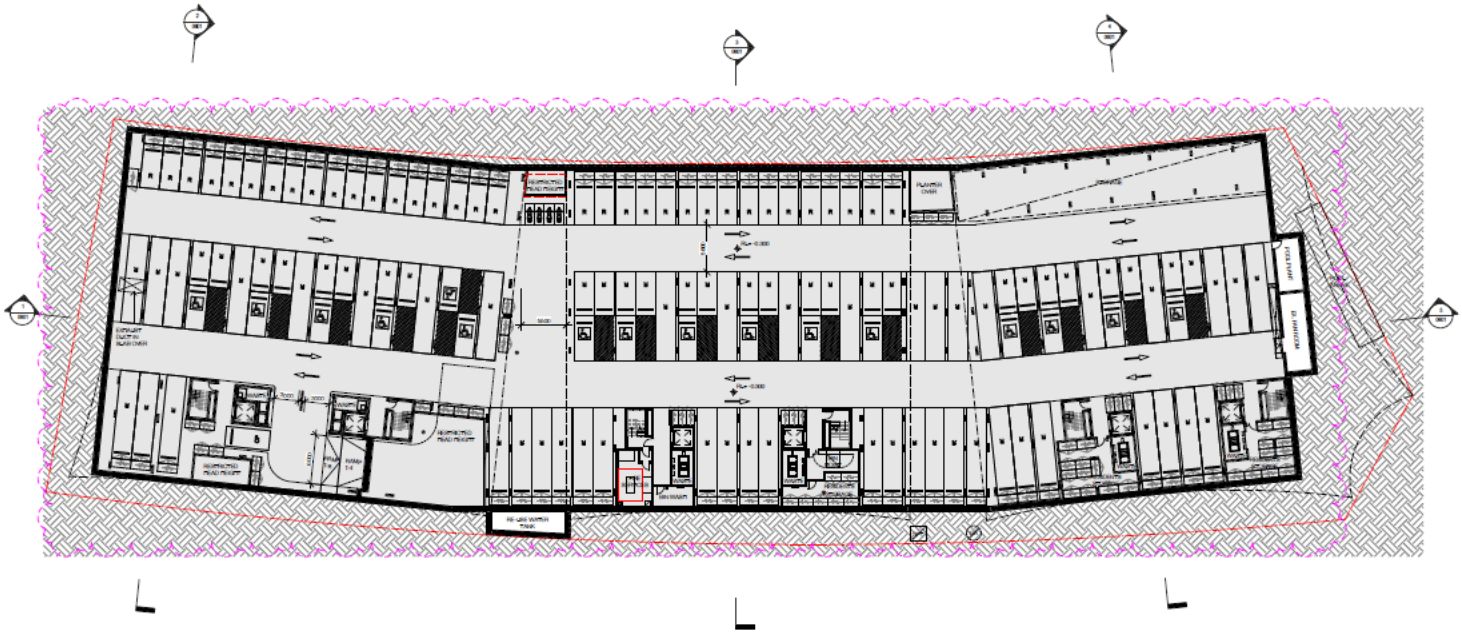

FOR INFORMATION

Rev	Date	Revision	By	Chk
1	17.03.17	DEVELOPMENT APPLICATION ISSUE		
3	23.03.17	REVISED CAR PARK NUMBER		
4	10.04.17	DA SUBMISSION		
8	28.05.17	FOR COORDINATION		
10	29.05.17	ISSUED FOR DA	JO	ML
11	04.07.17	FOR COORDINATION	JO	ML
13	27.11.17	REVISED DA ISSUE		

Client

DOMAGROUP

Project

Honeysuckle

50 Honeysuckle Drive,
Newcastle NSW 2300

Drawing Name

BASEMENT PLAN

Date	Scale	Sheet Size
27.11.17	1 : 250	@ A1

Drawn	Chk.
JO	ML

Job No.	Drawing No.	Revision
5485	DA-0200	/ 13

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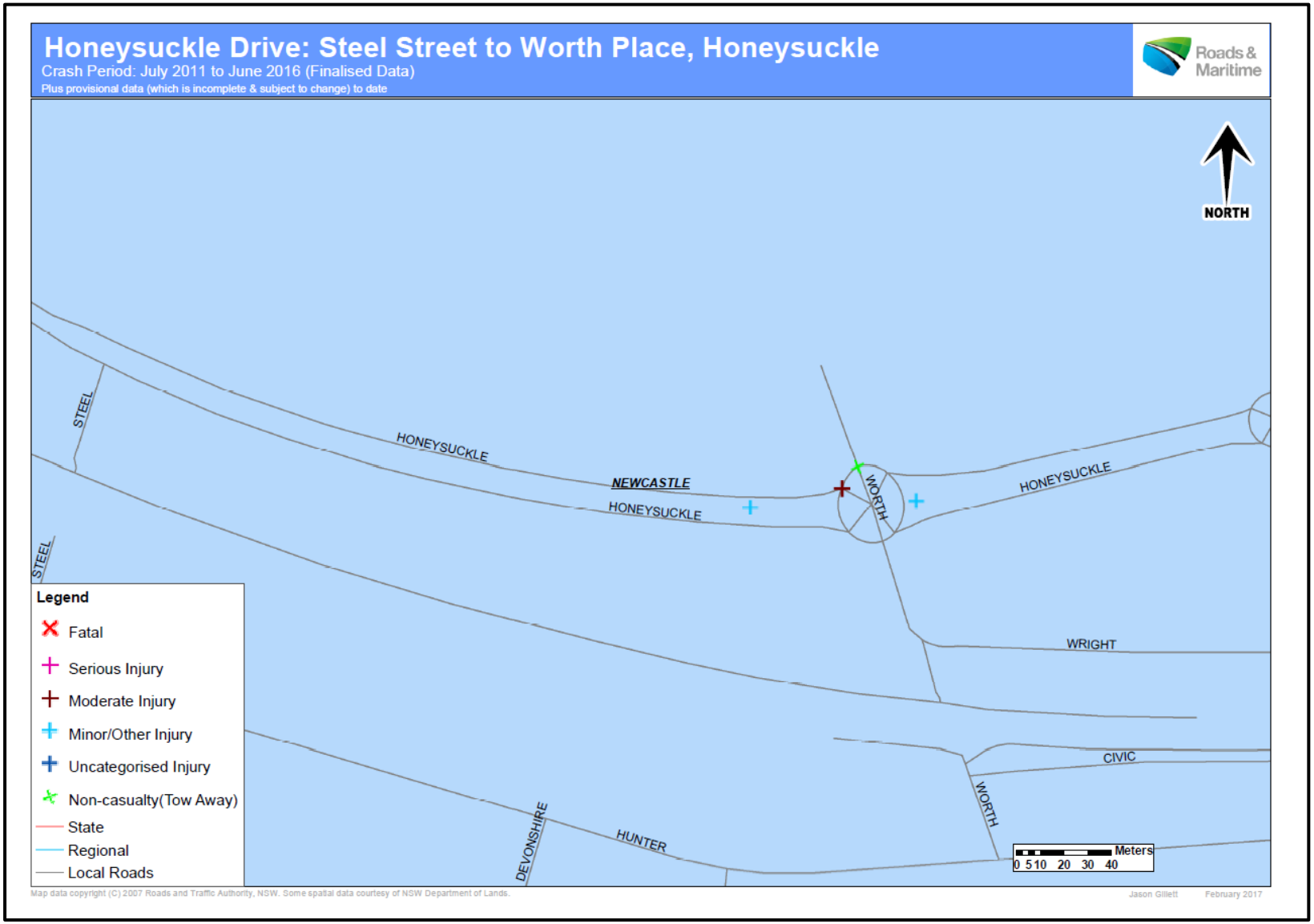
Appendix B: Accident Data



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Summary Crash Report

NSW GOVERNMENT Transport for NSW
Centre for Road Safety

# Crash Type		
Car Crash	3	75.0%
Light Truck Crash	2	50.0%
Rigid Truck Crash	0	0.0%
Articulated Truck Crash	0	0.0%
'Heavy Truck Crash	(0)	(0.0%)
Bus Crash	0	0.0%
"Heavy Vehicle Crash	(0)	(0.0%)
Emergency Vehicle Crash	0	0.0%
Motorcycle Crash	0	0.0%
Pedal Cycle Crash	1	25.0%
Pedestrian Crash	1	25.0%

' Rigid or Artic. Truck " Heavy Truck or Heavy Bus
These categories are NOT mutually exclusive

Location Type		
*Intersection	2	50.0%
Non intersection	2	50.0%

* Up to 10 metres from an intersection

Collision Type		
Single Vehicle	0	0.0%
Multi Vehicle	4	100.0%

Road Classification		
Freeway/Motorway	0	0.0%
State Highway	0	0.0%
Other Classified Road	0	0.0%
Unclassified Road	4	100.0%

Contributing Factors		
Speeding	0	0.0%
Fatigue	0	0.0%

Weather		
Fine	4	100.0%
Rain	0	0.0%
Overcast	0	0.0%
Fog or mist	0	0.0%
Other	0	0.0%

Road Surface Condition		
Wet	0	0.0%
Dry	4	100.0%
Snow or ice	0	0.0%

Natural Lighting		
Dawn	0	0.0%
Daylight	1	25.0%
Dusk	1	25.0%
Darkness	2	50.0%

Crash Movement		
Intersection, adjacent approaches	1	25.0%
Head-on (not overtaking)	0	0.0%
Opposing vehicles; turning	0	0.0%
U-turn	0	0.0%
Rear-end	2	50.0%
Lane change	0	0.0%
Parallel lanes; turning	0	0.0%
Vehicle leaving driveway	0	0.0%
Overtaking; same direction	0	0.0%
Hit parked vehicle	0	0.0%
Hit railway train	0	0.0%
Hit pedestrian	1	25.0%
Permanent obstruction on road	0	0.0%
Hit animal	0	0.0%
Off road, on straight	0	0.0%
Off road on straight, hit object	0	0.0%
Out of control on straight	0	0.0%
Off road, on curve	0	0.0%
Off road on curve, hit object	0	0.0%
Out of control on curve	0	0.0%
Other crash type	0	0.0%

Speed Limit					
40 km/h or less	0	0.0%	80 km/h zone	0	0.0%
50 km/h zone	4	100.0%	90 km/h zone	0	0.0%
60 km/h zone	0	0.0%	100 km/h zone	0	0.0%
70 km/h zone	0	0.0%	110 km/h zone	0	0.0%

~ 07:30-09:30 or 14:30-17:00 on school days	~ 40km/h or less		~ School Travel Time Involvement		
	0	0.0%		0	0.0%

Day of the Week												
Monday	0	0.0%	Wednesday	0	0.0%	Friday	0	0.0%	Sunday	0	0.0%	WEEKEND	2	50.0%
Tuesday	1	25.0%	Thursday	1	25.0%	Saturday	2	50.0%	WEEKDAY	2	50.0%			

CRASHES	4	
Fatal	0	0.0%
Serious inj.	0	0.0%
Moderate inj.	1	25.0%
Minor/Other inj.	2	50.0%
Uncategorised inj.	0	0.0%
Non-casualty	1	25.0%

Self Reported Crash	1	25%

Time Group		% of Day	
00:01 - 02:59	0	0.0%	12.5%
03:00 - 04:59	0	0.0%	8.3%
05:00 - 05:59	0	0.0%	4.2%
06:00 - 06:59	1	25.0%	4.2%
07:00 - 07:59	0	0.0%	4.2%
08:00 - 08:59	0	0.0%	4.2%
09:00 - 09:59	0	0.0%	4.2%
10:00 - 10:59	0	0.0%	4.2%
11:00 - 11:59	0	0.0%	4.2%
12:00 - 12:59	0	0.0%	4.2%
13:00 - 13:59	0	0.0%	4.2%
14:00 - 14:59	0	0.0%	4.2%
15:00 - 15:59	0	0.0%	4.2%
16:00 - 16:59	0	0.0%	4.2%
17:00 - 17:59	0	0.0%	4.2%
18:00 - 18:59	0	0.0%	4.2%
19:00 - 19:59	2	50.0%	4.2%
20:00 - 21:59	0	0.0%	8.3%
22:00 - 24:00	1	25.0%	8.3%

Street Lighting Off/Nil		% of Dark
0	of 2	in Dark 0.0%

CASUALTIES	3	
Killed	0	0.0%
Seriously inj.	0	0.0%
Moderately inj.	1	33.3%
Minor/Other inj.	2	66.7%
Uncategorised inj.	0	0.0%
^ Unrestrained	0	0.0%

^ Belt fitted but not worn, No restraint fitted to position OR No helmet worn

Crashes		Casualties
1	2015	1
2	2013	1
1	2011	1

McLean Periods		% Week	
A	1	25.0%	17.9%
B	0	0.0%	7.1%
C	0	0.0%	17.9%
D	0	0.0%	3.5%
E	0	0.0%	3.6%
F	0	0.0%	10.7%
G	1	25.0%	7.1%
H	1	25.0%	7.1%
I	0	0.0%	12.5%
J	1	25.0%	10.7%

#Holiday Periods																
New Year	0	0.0%	Easter	0	0.0%	Queen's BD	0	0.0%	Christmas	1	25.0%	Easter SH	0	0.0%	Sept./Oct. SH	1	25.0%
Aust. Day	0	0.0%	Anzac Day	0	0.0%	Labour Day	1	25.0%	January SH	0	0.0%	June/July SH	0	0.0%	December SH	1	25.0%

Crashid dataset Honeysuckle Drive: Steel Street to Worth Place, Honeysuckle - 1/7/2011 to 2017*

***Note:** Crash self reporting, including self reported injuries began Oct 2014. Trends from 2014 are expected to vary from previous yrs. More unknowns are expected in self reported data. Reporting yrs 1996-2004 and 2016 onwards contain uncategorised inj crashes.*

Percentages are percentages of all crashes. Unknown values for each category are not shown on this report.

SECAsolution

Detailed Crash Report - sorted

Transport for NSW — Centre for Road Safety

Crash No. / Data Source	Date	Day of Week	Time	Distance	ID Feature	Loc Type	Alignment	Weather	Surface Condition	Speed Limit	No. of Tus	Tu Type/Obj	Age/Sex	Street Travelling	Speed Travelling	Manoeuvre	Degree of Crash	Killed	Injured	Factors
Natural Lighting																				**S F**
Hunter Region		**Newcastle LGA**			**Newcastle**									**Honeysuckle Dr**						
771168 P	01/10/2011	Sat	23:00	20 m E	WORTH PL	2WY	STR	Fine	Dry	50	2	CAR	F26	E in HONEYSUCKLE DR	40	Proceeding in lane	I	0	1	
E47654382			Darkness			RUM:	0	Ped nearside				PED	M U	S in HONEYSUCKLE DR		Run across carriageway				
Hunter Region		**Newcastle LGA**			**West Newcastle**									**Honeysuckle Dr**						
857107 P	24/10/2013	Thu	19:30	50 m W	WORTH PL	2WY	STR	Fine	Dry	50	2	CAR	F27	E in HONEYSUCKLE DR	10	Proceeding in lane	I	0	1	
E51903560			Dusk			RUM:	30	Rear end				TRK	M47	E in HONEYSUCKLE DR	0	Stationary				
Hunter Region		**Newcastle LGA**			**Newcastle**									**Honeysuckle Dr**						
1002703 P	09/11/2013	Sat	19:38	at	WORTH PL	RDB	STR	Fine	Dry	50	2	WAG	F18	E in HONEYSUCKLE DR	40	Proceeding in lane	N	0	0	
E52826127			Darkness			RUM:	30	Rear end				CAR	M19	E in HONEYSUCKLE DR	0	Stationary				
Hunter Region		**Newcastle LGA**			**Newcastle**									**Honeysuckle Dr**						
1090550 S	29/12/2015	Tue	06:50	at	WORTH PL	RDB	STR	Fine	Dry	50	2	P/C	F28	N in WORTH PL		Turning right	I	0	1	
E60008026			Daylight			RUM:	11	Right far				TRK	M41	E in HONEYSUCKLE DR	Unk	Proceeding in lane				

Report Totals: Total Crashes: 4 Fatal Crashes: 0 Injury Crashes: 3 Killed: 0 Injured: 3

Crashid dataset Honeysuckle Drive: Steel Street to Worth Place, Honeysuckle - 1/7/2011 to 2017*

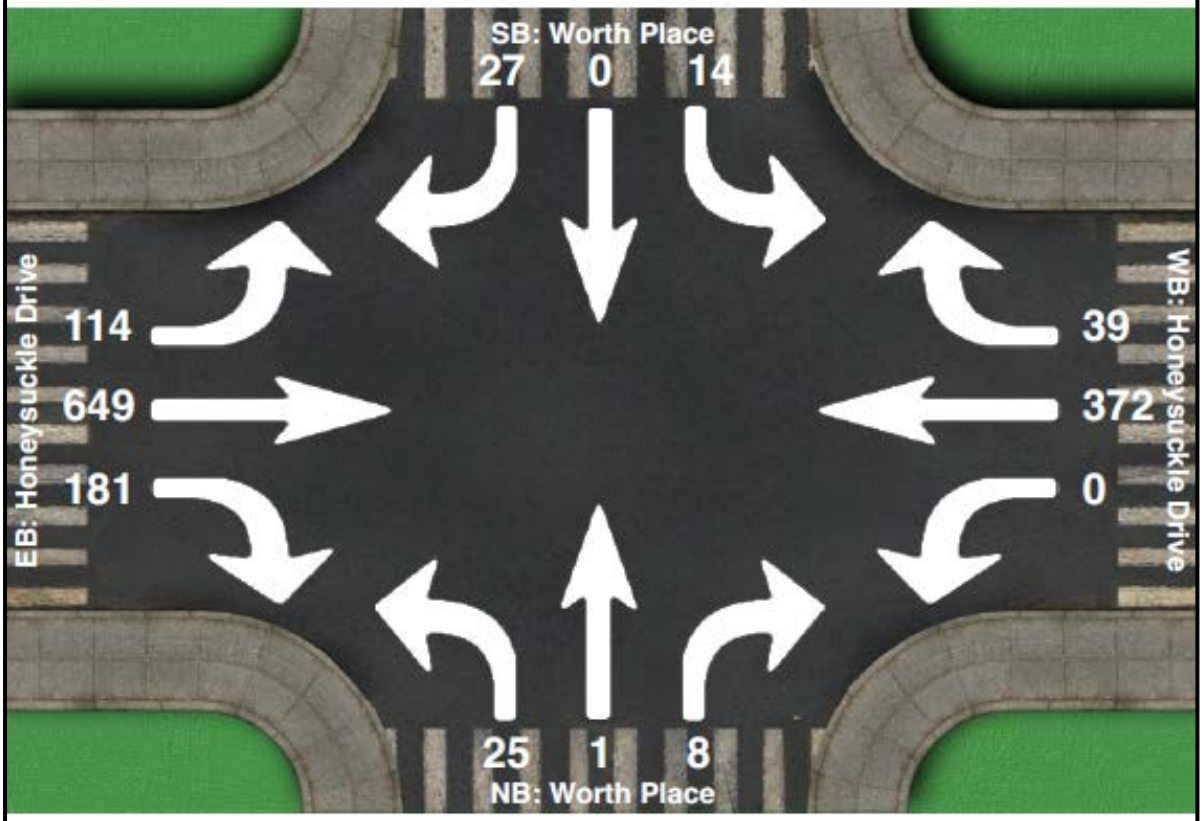
Note: *Ordered by: Crash Date.*

Crash self reporting, including self reported injuries began in Oct 2014. Trends from 2014 are expected to vary from previous years. More unknowns are expected in self reported data. For further information refer to Data Manual or report provider.

Appendix C: Traffic Surveys Worth Place and Honeysuckle Drive

Intersection Peak Hour

Location: Worth Place at Honeysuckle Drive, Newcastle
GPS Coordinates:
Date: 2017-02-16
Day of week: Thursday
Weather:
Analyst: SL

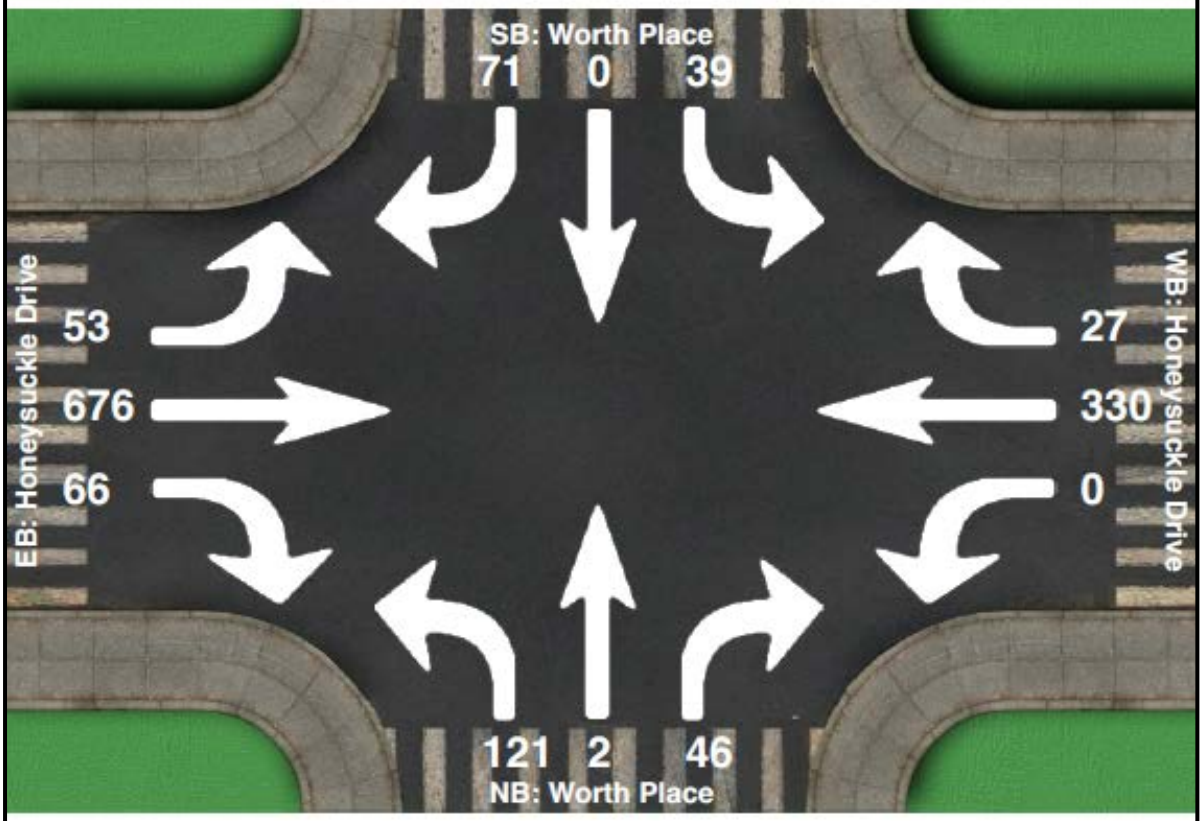


Intersection Peak Hour

07:45 - 08:45

Intersection Peak Hour

Location:	**Worth Place at Honeysuckle Drive, Newcastle**
GPS Coordinates:	
Date:	**2017-02-16**
Day of week:	**Thursday**
Weather:	
Analyst:	**SL**



Intersection Peak Hour

16:45 - 17:45