



Regiment Mixed Use Redevelopment Project

Transport Impact Assessment

Client // Richard Crookes Constructions
Office // NSW
Reference // N112710
Date // 16/02/17

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Issue: D 16/02/17

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Quality Record

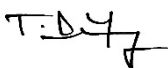
Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	17/1/17	Final	Dean Rance	Tim DeYoung	Tim DeYoung	Tim De Young
B	23/1/17	Final	Dean Rance	Tim DeYoung	Tim DeYoung	Tim De Young
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1. Introduction

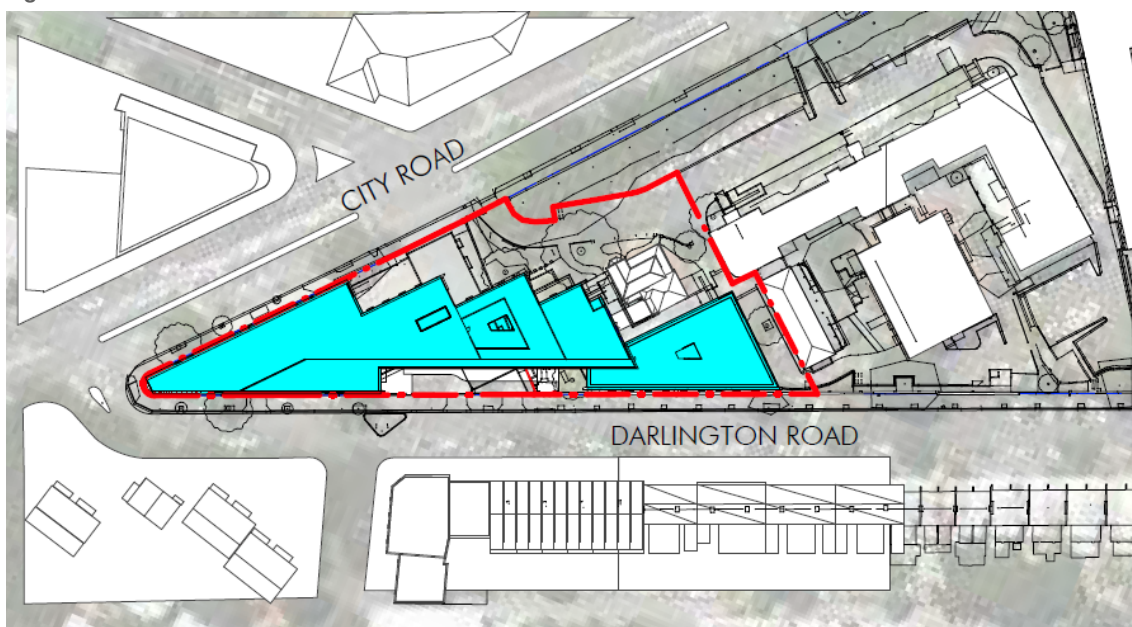
1.1 Background

It is understood that a State Significant Development Application (SSDA) is to be lodged with the City of Sydney for a proposed student housing development on land located at Darlington Road, Darlington.

This site of the proposed development is located within the Darlington Campus of the University of Sydney, with the proposal seeking to replace the existing Regiment and Darlington Centre with student accommodation of 656 student rooms and 2 x 2 bedroom apartments as well as associated ancillary facilities including dining, relaxation and study areas.

The location and boundaries of the site and the site are shown below in Figure 1.1.

Figure 1.1: Site Context



Source: Nettleton Tribe drawing number 10107_DA002 dated 12 December 2016

In October 2016, GTA Consultants (GTA) was commissioned by Richard Crookes Construction to undertake a transport impact assessment for the proposed development.

1.2 Purpose of this Report

This report sets out an assessment of the anticipated transport implications of the proposed development, including consideration of the following:

- i existing traffic and transport conditions
- ii parking and transport impact appraisal
- iii site layout and design
- iv pedestrian and bicycle facilities
- v the transport impact of the development proposal on the surrounding road network.

1.3 References

In preparing this report, reference has been made to the following:

- inspections of the site and its surrounds by:
 - Dean Rance on 25 November 2016
 - Tim De Young on 2 December 2016
- City of Sydney Local Environment Plan (LEP) 2012
- traffic surveys commissioned by GTA as referenced in the context of this report
- other documents and data as referenced in this report.

2. Existing Conditions

2.1 Site Context

The subject site is located at City Road, Darlington, on the corner of City Road and Darlington Road, within the University of Sydney's Darlington Campus.

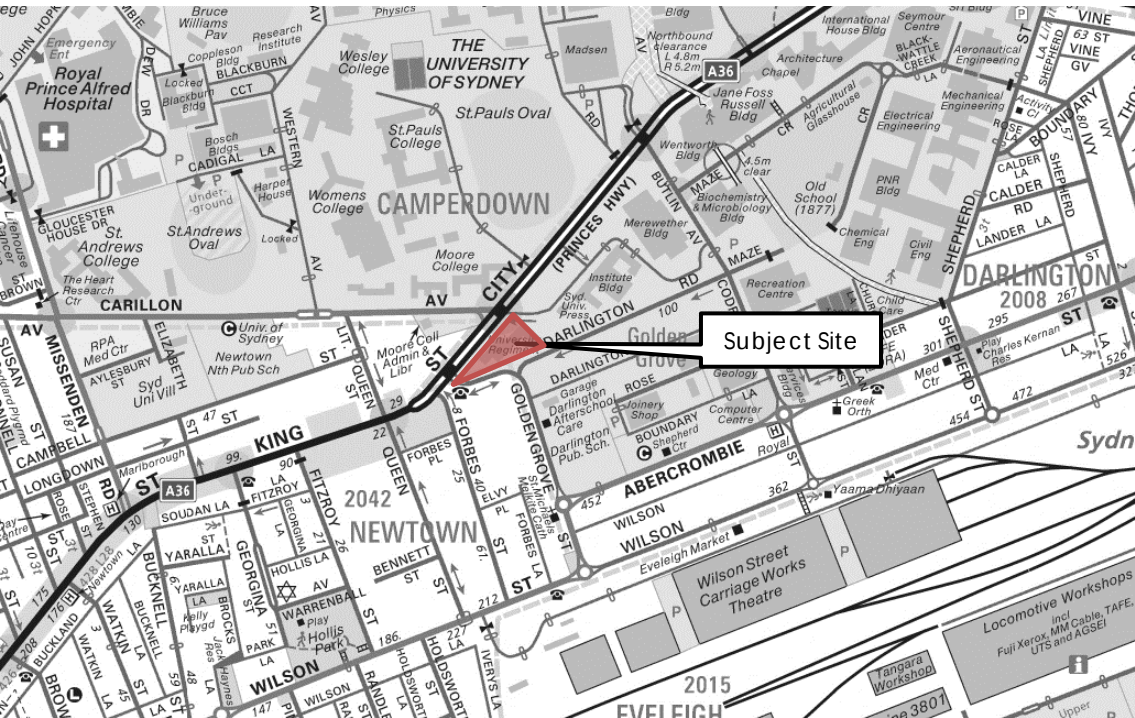
The site of approximately 5,000sqm has frontages of 100m to City Road and 140m to Darlington Road, and a Local Environmental Plan (LEP) 2012 land use classification of SP2 Infrastructure (Educational Establishment).

It has been communicated that the current use of the Regiment building is educational and office accommodation. The site also hosts a number of maintenance contractors that use the building for site office accommodation. It is further noted that a site inspection indicated that the land houses a number of maintenance and small service vehicles which would create a negligible number of traffic movements at present.

The site is surrounded by a mix of property uses including mixed and commercial uses (B2 and B4), residential (R1) and public recreation uses, as well as the University of Sydney to the north.

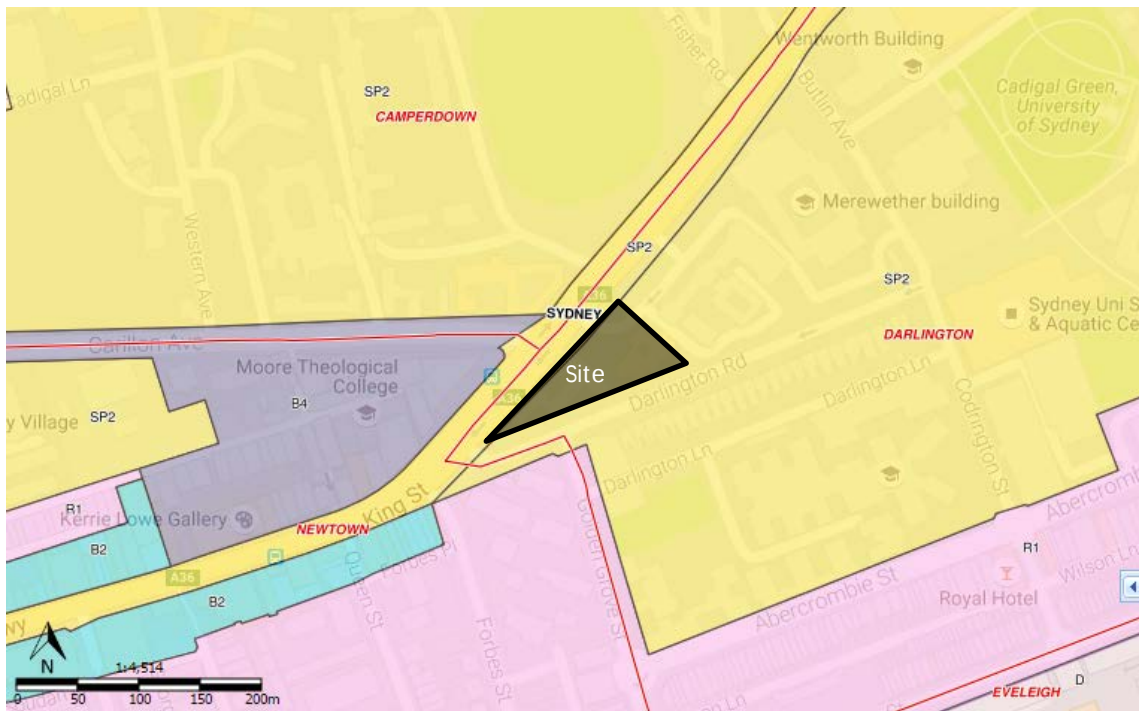
The location of the site and its surrounding environs is shown in Figure 2.1, with the local land zoning map shown in Figure 2.2.

Figure 2.1: Subject Site and Its Environs



(Reproduced with permission from Sydney Publishing Pty Ltd)

Figure 2.2: Land Zoning Map



Source: https://www.planningportal.nsw.gov.au/find-a-property/property/3501734_96-148_City_Road_1_Darlington_DP790620, accessed 15 November 2016

2.2 Road Network

2.2.1 Adjoining Roads

City Road/King Street

City Road is classified as a state road in the Roads and Maritime Schedule of Classified Roads.

In the vicinity of the site, City Road is aligned in a north-east to south-west direction and is configured with three lanes in each direction and one additional southbound right hand turning bay into Carillon Avenue. City Road has a speed limit of 60km/hr and is estimated to carry approximately 15,000 vehicles per day in each direction¹.

Kerbside parking is permitted outside of clearway times, between 6am-10am (northbound) and 3pm-7pm (southbound), subject to four-hour time restrictions.

City Road is shown in Figure 2.3.

Darlington Road

Darlington road functions as a local road and is a one-way westbound road connecting surrounding local streets through to City road.

Kerbside parking is permitted on the eastern side of the road, subject to a two-hour time restriction. Perpendicular parking spaces are marked on the western side of the road, subject to paid four-hour time restriction.

Darlington Road is shown in Figure 2.4.

¹ Based on surveys outlined later in this report and assuming a peak hour to daily ratio of 1:12.5.

Figure 2.3: City Road, Looking South



Figure 2.4: Darlington Road, Looking West



2.2.2 Surrounding Intersections

The following intersections currently exist in the vicinity of the site:

- City Road/Carillon Avenue (signalised)
- City Road/Darlington Road (unsignalised).
- Darlington Road/Golden Grove Street (unsignalised)

2.2.3 Traffic Volumes

GTA Consultants commissioned a traffic and pedestrian movement survey at the intersection of City Road and Carillon Avenue on Tuesday 29 November 2016 between 7am-9am and 4pm-6pm.

Due to the timing of GTA engagement on the project, it is noted that the surveyed time was outside of normal University teaching periods, which may result in atypical pedestrian volume patterns in particular. Darlington Public School was functioning normally during the survey period. This is discussed later in this report.

The AM and PM vehicle movement summaries are shown below in Figure 2.5 and Figure 2.6, with detailed summary data, including records of pedestrian movements provided in Appendix A. It is noted that the summary data indicates that a total of 193 and 353 pedestrians passed through the intersection during each respective peak hour.

Figure 2.5: AM Peak Hour Traffic Volumes

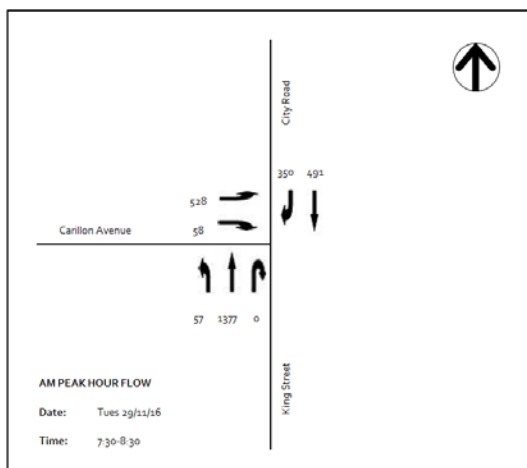
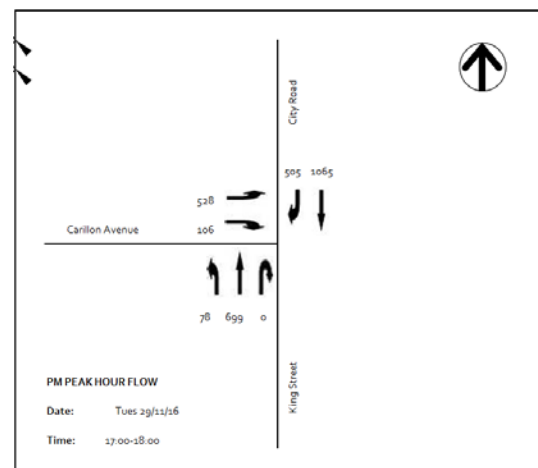


Figure 2.6: PM Peak Hour Traffic Volumes



2.2.4 Intersection Performance

Observations during the visit undertaken by GTA indicated that all legs of the intersection were operating satisfactorily, with no unacceptable delays on any legs of the intersection.

2.3 Car Parking

As outlined above, car parking surrounding the site predominantly occurs on-street, and is subject to various short-term metered (paid) time restrictions. Darlington Road is generally subject to 4 hour paid parking on the northern side of the road and 2 hour paid parking on the southern side of Darlington Road). All on-street parking around the site is managed by the City of Sydney. During our site visit on Friday 25 November 2016, car parking on the local streets was observed to be in moderate demand, although parking is reported to be in high demand during semester periods.

2.4 Sustainable Transport

2.4.1 Public Transport

The site is extremely well serviced by high-frequency public transport services, with City Road being a key bus corridor. A summary of key bus services available in the vicinity of the site is provided in Table 2.1 with further information relating to the bus network shown in Figure 2.7.

Table 2.1: Public Transport Provision

Service	Route #	Route Description	Location of Stop	Distance to Nearest Stop	Frequency On/Off Peak
Bus	352	Bondi Junction to Marrickville Metro via Oxford Street	City Road opposite Carillion Avenue	5m	20 minutes peak / 30 minutes off peak
	370	Leichardt Marketplace to Coogee			10 minutes peak / 20 minutes off peak
	422	City Martin place to Kogarah			5-10 minutes peak / 20 minutes off peak
	423	City Martin Place to Kingsgrove via central station and Newtown			Every 10 minutes
	426	City Martin Place to Dulwich Hill			10 minutes peak / 20 minutes off peak
	428	City Martin Place to Dulwich Hill			5-10 minutes peak / 15 minutes off peak
	M30	Sydenham to Mosman			10 minutes peak / 15 minutes off peak
	N10	City Town Hall to Sutherland	City Road near Butlin Avenue	200m	Hourly 1am – 5am
	N30	City Town Hall to Macarthur			Every Half Hour 1am-5am
	N40	City Town Hall to East Hills			Every Half Hour 12am-5am
	L23	City Martin Place to Kingsgrove			Every 15 minutes 4:30pm – 6:30pm
	L28	City Martin Place to Canterbury			Every 15 minutes 4:30pm – 6:30pm

Source: http://www.sydneybuses.info/routes/Region_guide_South-2015.pdf, accessed 15 November 2016

In addition to the bus services, it is noted that Redfern Railway Station is located 1.1km east of the site, with Macdonaldtown Railway Station approximately located 750m south of the site. These rail stations provide direct access to the majority of the Sydney Trains network.

2.4.2 Pedestrian Infrastructure

The pedestrian network surrounding the site is well established with pedestrian paths located on both sides of the majority of streets assessed in a site assessment.

Safe crossing points in vicinity of the site leading towards the University include the following pedestrian crossings:

- Pedestrian crossing on the western and northern legs of the intersection of City Road and Carillon Avenue noting:
 - The pedestrian island on the north-western leg of City Road and Carillon Avenue is estimated to be approximately 13m². This island is shown in Figure 2.8.
 - The pedestrian island accommodates a significant volume of pedestrians (i.e. 350+ pedestrians in peak periods, as outlined earlier) and is considered to be undersized.
- Pedestrian crossings on all legs of the City Road and Butlin Avenue/Fisher Avenue intersection 200m North of the site.

For reference, Figure 2.9 shows that nearly the whole University is within a reasonable walking catchment of the site, including other surrounding points of interest including Newtown and Broadway, as well as Redfern station. It is noted that this assessment has been determined using “Pedcatch”; a tool which can map a potential walking catchment for a given time and speed (Inputting a speed of 4.8km/h for a 15-minute walk in this instance).

Figure 2.8: Pedestrian Island on City Road



Figure 2.9: 15-Minute Walking Catchment



Source: www.pedcatch.com and extracted to Google Earth, accessed 15 November 2016

2.4.3 Cycle Infrastructure

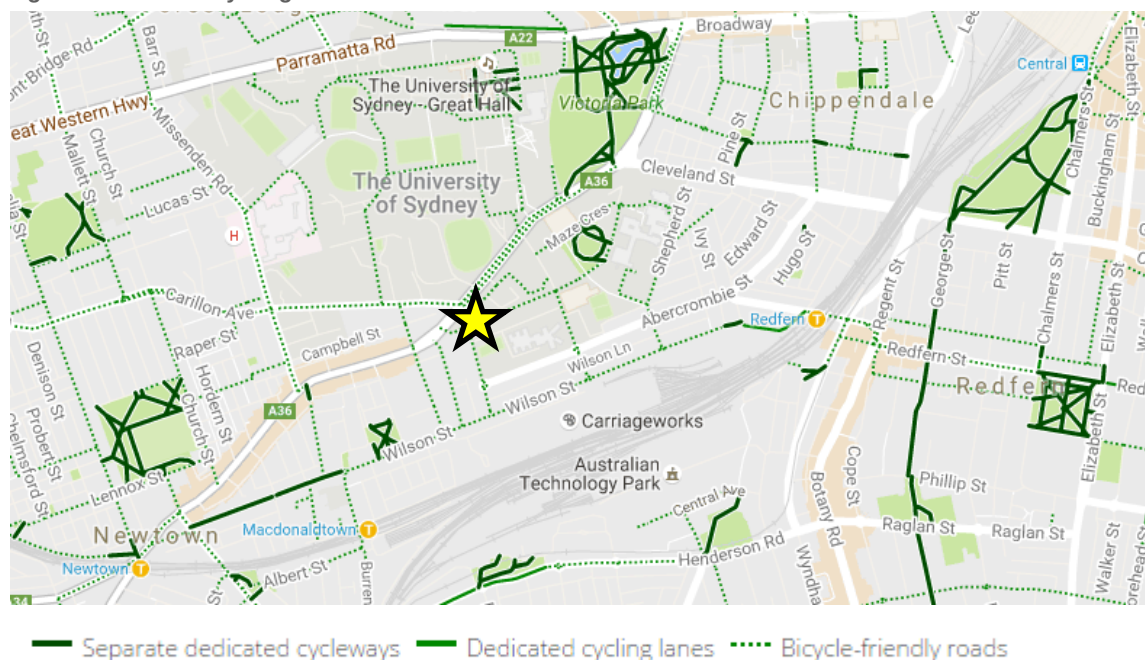
The site is located within close proximity to both on and off-road cycling facilities as indicated in an extract from the City of Sydney's cycle network map shown in Figure 2.10.

The majority of the University grounds are safe to ride on, and the City of Sydney is currently further progressing the development of the Wilson Street cycleway which will provide a largely separated cycling route into the Sydney CBD.

A high number of cyclists were observed in the vicinity of the site during the site inspection.

Correspondence provided to GTA indicates that at present, 12 bicycle loops are present in the vicinity of the site which can provide parking for up to 24 bicycles.

Figure 2.10: Local Cycling Network

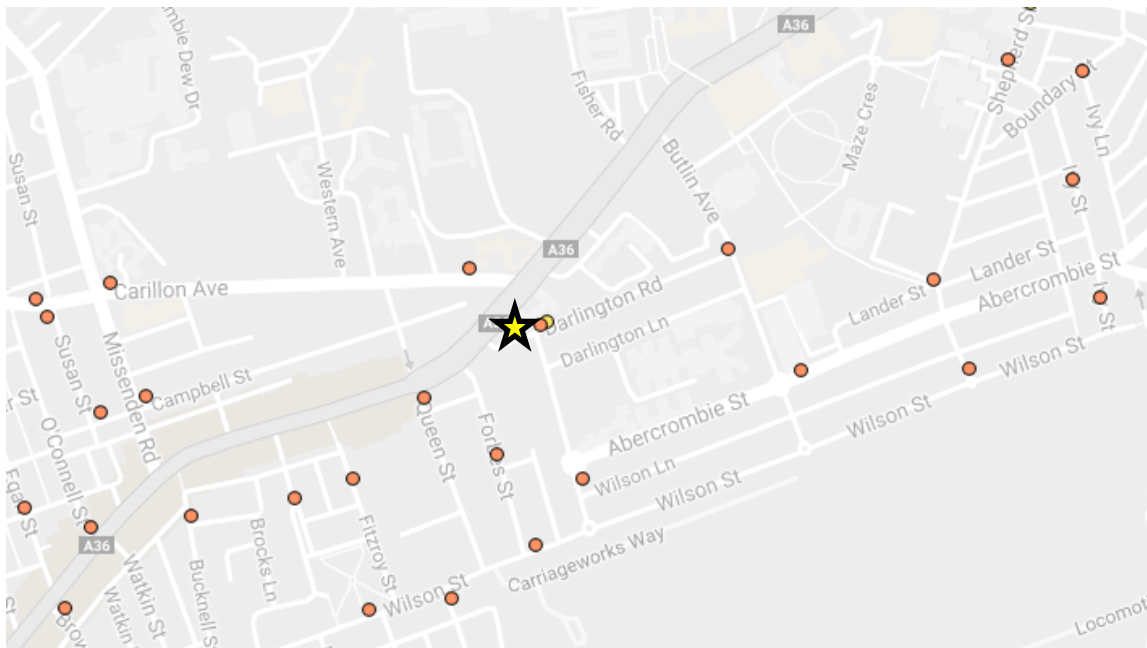


Source: <http://www.sydneycycleways.net/map/>, accessed 15 November 2016

2.4.4 Local Car Sharing Initiatives

Car share operators have a high density of vehicles immediately surrounding the site. These car share services have been shown to significantly reduce private vehicle ownership. The car share pods surrounding the site are shown in Figure 2.11. Two are located immediately adjacent to the site on Darlington Road, with other surrounding pods on Butlin Avenue, Carillon Avenue and Queen Street.

Figure 2.11: Local Car Share Pods



Source: <http://www.cityofsydney.nsw.gov.au/live/residents/car-sharing>, accessed 15 November 2016

3. Development Proposal

3.1 Land Uses

The proposal seeks to replace the existing Regiment building with 658 student rooms and associated ancillary facilities, with additional University learning space (of approximately 550m² of floor space) also to be constructed on the site.

It is estimated the site has a theoretical capacity of 863 people which has been derived from the assumptions below:

- i 656 dormitory-style accommodation rooms at 1 person per room, and two 2 bedroom apartments at 2 persons per room (660 residents),
- ii 6 full time staff and 15 casual staff² (14 full time equivalent staff), and
- iii leaning space with capacity for 189 students³

3.2 Vehicle Access

Under the proposed concept, existing vehicle access arrangements to/from the broader subject site are to be retained. This includes the existing egress point adjacent to the City Road and Carillon Avenue intersection.

3.3 Car Parking

No car parking is to be provided for the proposal, with a small number of existing car parking spaces to be removed as part of the development. This is estimated to result in the loss of approximately 15 parking spaces.

3.4 Bicycle Facilities

Design plans provided to GTA indicates that a total of 175 secure bicycle racks are proposed, including 165 residential spaces, 5 staff spaces and 5 secure visitor spaces.

It is also understood that one (1) shower and changeroom, and five (5) lockers will be provided for staff. The bicycle parking is to be located underground and accessible by a graded ramp from Darlington Road.

Further, a total of 24 additional bicycle loops (accommodating 48 bicycles) are to be provided at-grade for short term bicycle parking as part of the development.

3.5 Loading Areas

The development proposes a garbage room and loading zone towards the south-western aspect of the site. The garbage room has easy access to a lift which will provide direct access to Darlington Road. A loading zone is proposed on the northern aspect of Darlington Road to the east of a line of Golden Grove Road.

² Correspondence provided to GTA

³ Correspondence provided to GTA

4. Car Parking and Loading

4.1 Car Parking Provision

The City of Sydney designates districts with one of three categories (A, B or C), which is consistent with the level of transport provided to an area, as well as the broader transport and land use objectives.

Under the City of Sydney's 2012 Local Environment Plan, the site is located within land designated Category B. Under such a provision, car parking provision is outlined as a maximum rate; resulting in no minimum car parking requirement. In this instance, no on-site car parking is proposed and therefore the proposal is consistent with the LEP requirements.

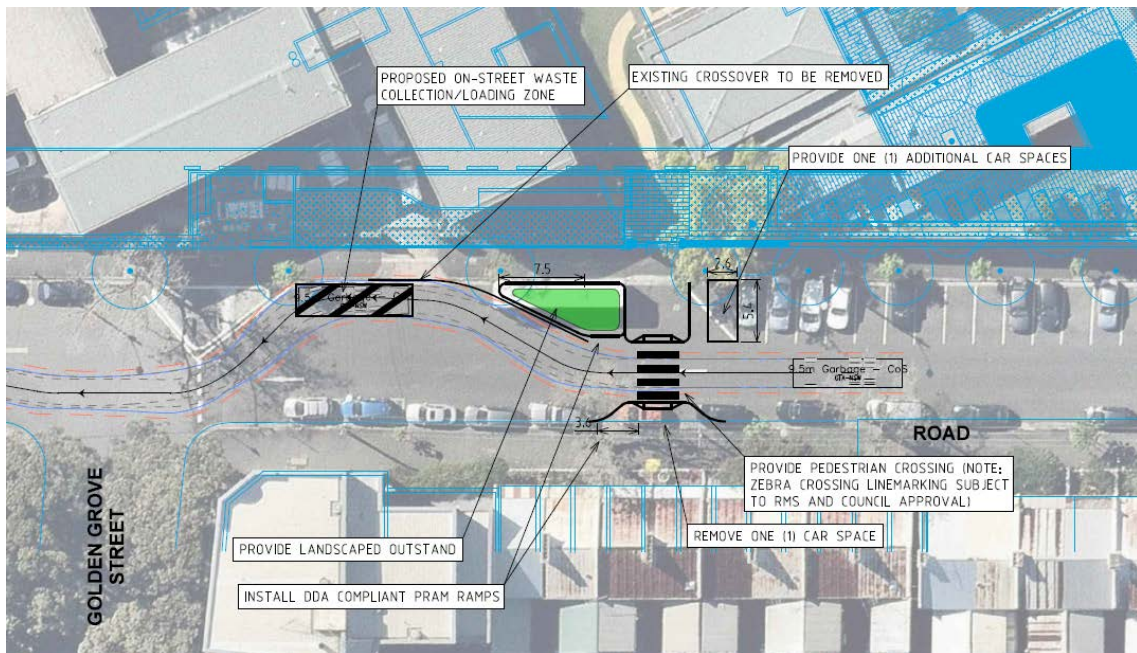
It is further noted that Schedule 7 of the City of Sydney DCP outlines motorcycle parking is to be provided at a rate of 1 space for every 12 car spaces. As zero car parking is proposed, motorcycle parking is not required.

4.2 Loading & Waste Collection Arrangements

As outlined earlier, a loading zone is to be provided on Darlington Road on the northern aspect of Darlington Road to the east of a line of Golden Grove Road.

This area has been designed to accommodate the swept path requirements of a City of Sydney 9.25m garbage truck, as shown below in Figure 4.1. This figure also illustrates that an improved pedestrian and landscaping treatment could be provided to the immediate east of this loading bay. This treatment would provide an enhanced pedestrian connection to, from and through the site and relocate pedestrian movements across Darlington Street to where they can be more safely accommodated. The associated loss of one car space on the southern side of the road could also be offset through one additional 90-degree car space on the northern side of the road.

Figure 4.1: Service Vehicle Access



It is noted that Darlington Road is designated as prohibiting the movement of heavy vehicles as can be seen from a sign at the intersection of Codrington Street and Darlington Road, as shown in Figure 4.2. With regards to this sign, Roads and Maritime Services outline that no truck (greater than 4.5 tonnes) is permitted to drive past the sign unless the driver's destination lies beyond the sign and it is the only route. In this respect, a heavy vehicle would be able to lawfully pass the sign as Darlington Road provides the only access to the proposed loading zone.

Figure 4.2: Trucks Prohibited on Darlington Road



5. Cycle and Pedestrian Access

5.1 Bicycle Parking Provision

The minimum provision of bicycle parking is to be consistent with the City of Sydney 2012 LEP Section 3 – General Provisions⁴.

Section 3.11.3 of the LEP outlines that such parking should be provided at the rate of 1 space per 10 students and 1 space per 10 staff. Under these provisions, a total of 87 class 1 bike lockers would be required for students and staff. The proposed provision of 175 class 1 lockers therefore exceeds the DCP requirements, and end-of-trip facility provision for non-residential uses are considered to be appropriate.

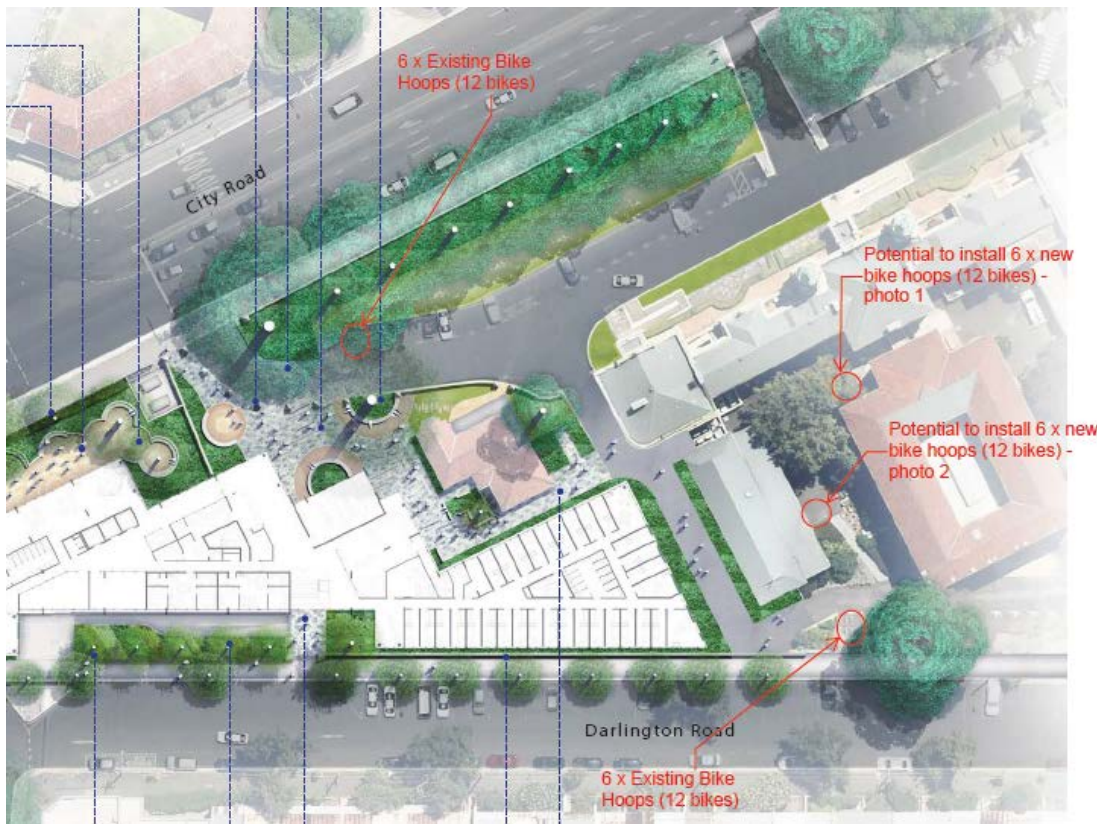
To accommodate for short term parking demand, the provision of an additional 24 bicycle loops are proposed at-grade (Figure 5.1). These spaces should be placed undercover and in close proximity to building entry points. These are tentatively identified to be located at the eastern extent of the proposed development. Given that bicycle loops are double sided, this provides an additional 48 short term bicycle parking spaces.

Combining the secure and loop bicycle parking, a total of 223 bicycle parking spaces are to be provided as part of the development. Based on the theoretical maximum capacity of the site of 863 individuals, the site provides one bicycle parking space per 3.9 people.

Overall, the provision of bicycle parking exceeds DCP requirements, and is considered appropriate for the proposed development.

⁴ http://www.cityofsydney.nsw.gov.au/_data/assets/pdf_file/0020/128018/4_Section3_DCP2012_060516.pdf, accessed 16 November 2016

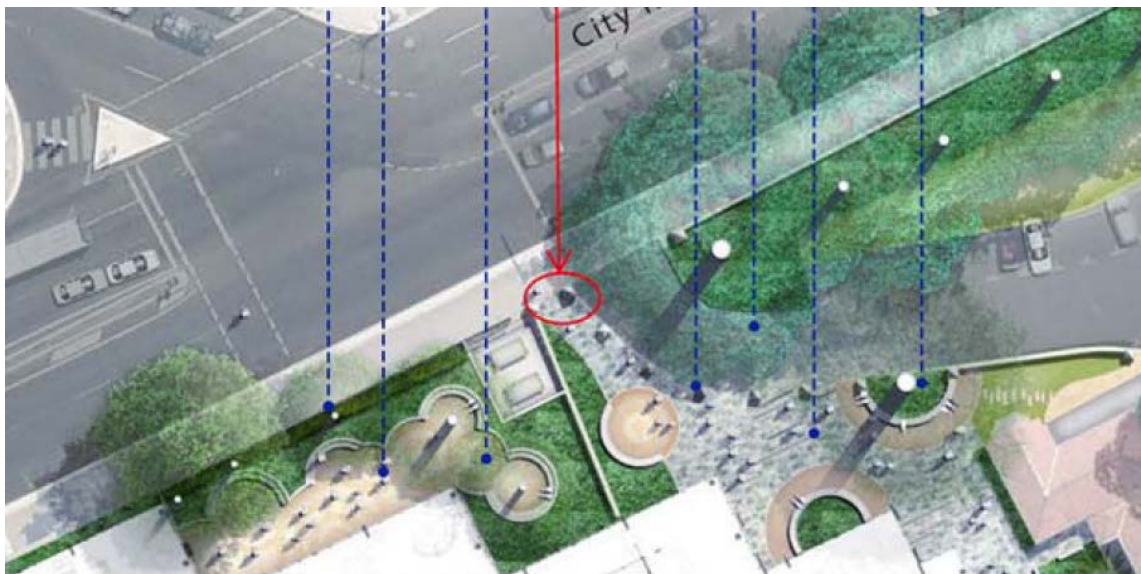
Figure 5.1: Short term bicycle parking



5.2 Pedestrian Access to/from the Site

A new pedestrian access point to the site is proposed to City Road to the west of the existing vehicular egress point onto City Road. The proposed access point is indicatively shown in Figure 5.2.

Figure 5.2: Proposed pedestrian access

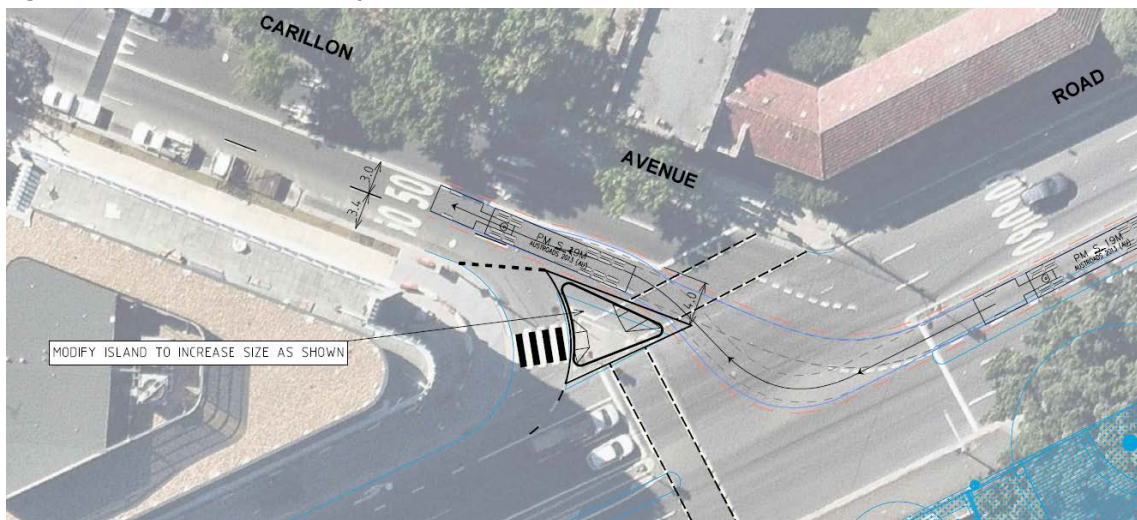


Source: Oculus Landscape Masterplan

As was illustrated in Figure 4.1, it is also proposed that a pedestrian crossing be installed on Darlington Road, approximately 35 metres from the eastern leg of Golden Grove Street and Darlington Road intersection. This crossing concept was shown and detailed within Section 4.2.

As outlined earlier, signalised pedestrian crossings are provided on two legs of the intersection of Carillon Avenue and City Road. The pedestrian island on the north-west corner of the intersection is utilised by 350 pedestrians per peak hour as shown by the traffic surveys undertaken (Appendix A). It is noted that an opportunity exists to enhance the safety of pedestrians crossing City Road at this location (which will include both existing non-development generated pedestrians and development generated pedestrians) by increasing the size of this island. Figure 5.3 illustrates a potential design of the pedestrian island (noting that this figure also illustrates the swept path of a semi-trailer which limits the extent to which the size of the island can be increased). It is recommended that this opportunity be further discussed with RMS and Council following the development of the site as proposed.

Figure 5.3: Pedestrian Island Expansion



6. Traffic Impact Assessment

6.1 Traffic Generation

As the proposal is providing zero parking spaces, and having regard to the proximity to the Campus and surrounding public transport services, it is anticipated that the overall traffic generation for the site will be negligible (and generally limited to a small number of service vehicle movements, as well as occasional visitor traffic).

In this regard, for the purposes of guiding a Green Travel Plan (GTP) for the proposed development in the event that one is sought as a Consent condition, the following mode shares have been estimated as being achievable:

- 70% walk
- 15% public transport
- 10% bike
- 5% other (including drive and car share)

6.2 Traffic Impact

Against existing traffic volumes in the vicinity of the site, any additional traffic generated by the proposal would be negligible and would not be expected to compromise the safety or function of the surrounding road network.

6.3 Construction Traffic Impact

A construction traffic management plan should be prepared prior to works commencing on-site. It is expected that this plan would mandate the use of roads other than City Road for loading and unloading of construction vehicles, unless otherwise approved by RMS.

7. Review of SEARS Requirements

The following SEARs comments have been provided to GTA with regards to traffic and transport implications of the development. These are reproduced below with the response in the adjacent column.

Table 7.1: Addressing SEARs Comments

SEARs comment	GTA Response
Details of 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.	The existing site creates a negligible number of traffic movements, with the future development anticipated to create a negligible number of traffic movements.
Detailed intersection analysis in consultation with Council and Roads and Maritime Services, where University roads connect with local or State roads, including intersection capacity (including University vehicle access points) and requirements for future road and intersection upgrading works.	The proposal retains existing vehicle access arrangements and therefore no consultation has been had with RMS at this time. It is also noted that site inspections indicate that the nearby intersection is operating satisfactorily. The operation of this intersection is not expected to be affected by the proposal.
The cumulative traffic and parking impacts.	A proposed pedestrian crossing on Darlington Road will result in no net loss of parking. The development will result in the loss of approximately 15 existing on-site private parking spaces but these car spaces are associated with the existing use of the site. The proposal in contrast is not expected to generate a car parking demand. Negligible traffic and parking impacts are anticipated because of the development.
Proposed mode share targets and appropriate measures to ensure that they are satisfactorily achieved.	Refer to discussion within this report regarding mode splits.
The status of the closure of existing at-grade car parking areas (where relevant).	Not relevant
To ensure that active transport modes are satisfactorily supported and promoted on campus, all future development applications for new built form shall satisfactorily detail that pedestrian and cyclist facilities have been incorporated into the respective proposed development and how integration into broader campus strategies will be made.	Bicycle parking is provided is greater than the City of Sydney DCP requirements. A graded access ramp to an underground bicycle parking facility will provided enhanced access for cyclists. GTA notes that the size of the pedestrian island on the north-west leg of City Road and Carillon Avenue could be increased. Such a modification can be made without impacting the existing function of the road network and should be discussed with RMS and Council. A pedestrian crossing is proposed on the eastern leg of Darlington Road and Golden Grove Street. A new pedestrian access point is proposed onto City Road from the site.
All bicycle and motorcycle parking and associated end-of-trip facilities shall be provided in accordance with Council's relevant policies and controls.	175 bicycle parking spaces are to be provided which is greater than the City of Sydney DCP for 'tertiary education institution'. 48 additional short-term at-grade bicycle parking spaces are also to be provided. Motorcycle parking provision is zero and this is consistent with the DCP requirements.
Future development applications for new built form shall include a sustainable travel plan and accompany the first application within the respective CIP precinct.	A Green Travel Plan (GTP) should be completed prior to the Occupation Certificate being issued.

8. Conclusions

Based on the analysis and discussions presented within this report, the following conclusions are made:

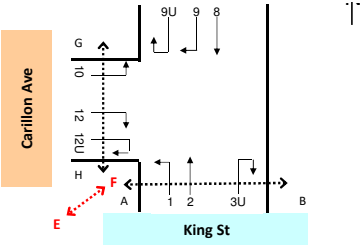
- i The proposed supply of zero (0) spaces is consistent with statutory requirement and is considered to be satisfactory.
- ii A loading zone is proposed on Darlington Road which can accommodate a 9.25m City of Sydney garbage truck.
- iii The proposed provision of 175 secure bicycle parking spaces and capacity for 48 short term bicycle spaces is in excess of City of Sydney requirements and considered to be appropriate for the site. End-of-trip facilities are considered to be appropriate for non-residential uses.
- iv A pedestrian crossing is proposed on the eastern leg of the intersection of Darlington Road and Golden Grove Street. An opportunity also exists to increase the size of the pedestrian island on the north-western leg of City Road and Carillon Avenue. This island can be modified without impacting the existing road network function and should be discussed with RMS and Council.
- v In line with zero parking provision for the development, traffic generation associated with the student accommodation is expected to be negligible.
- vi There is adequate capacity in the surrounding road network to cater for the negligible traffic generated by the proposed development.
- vii It is expected that a Green Travel Plan will be prepared, and indicative target mode shares have been outlined in this report.
- viii It is expected that a Construction Management Plan should be prepared for the development prior to commencement of work.

Appendix A

Traffic Surveys

Job No. : N2869
Client : GTA
Suburb : Darlington
Location : 1. City Rd / King St / Carillon Ave

Day/Date : Tuesday, 29th November 2016
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary

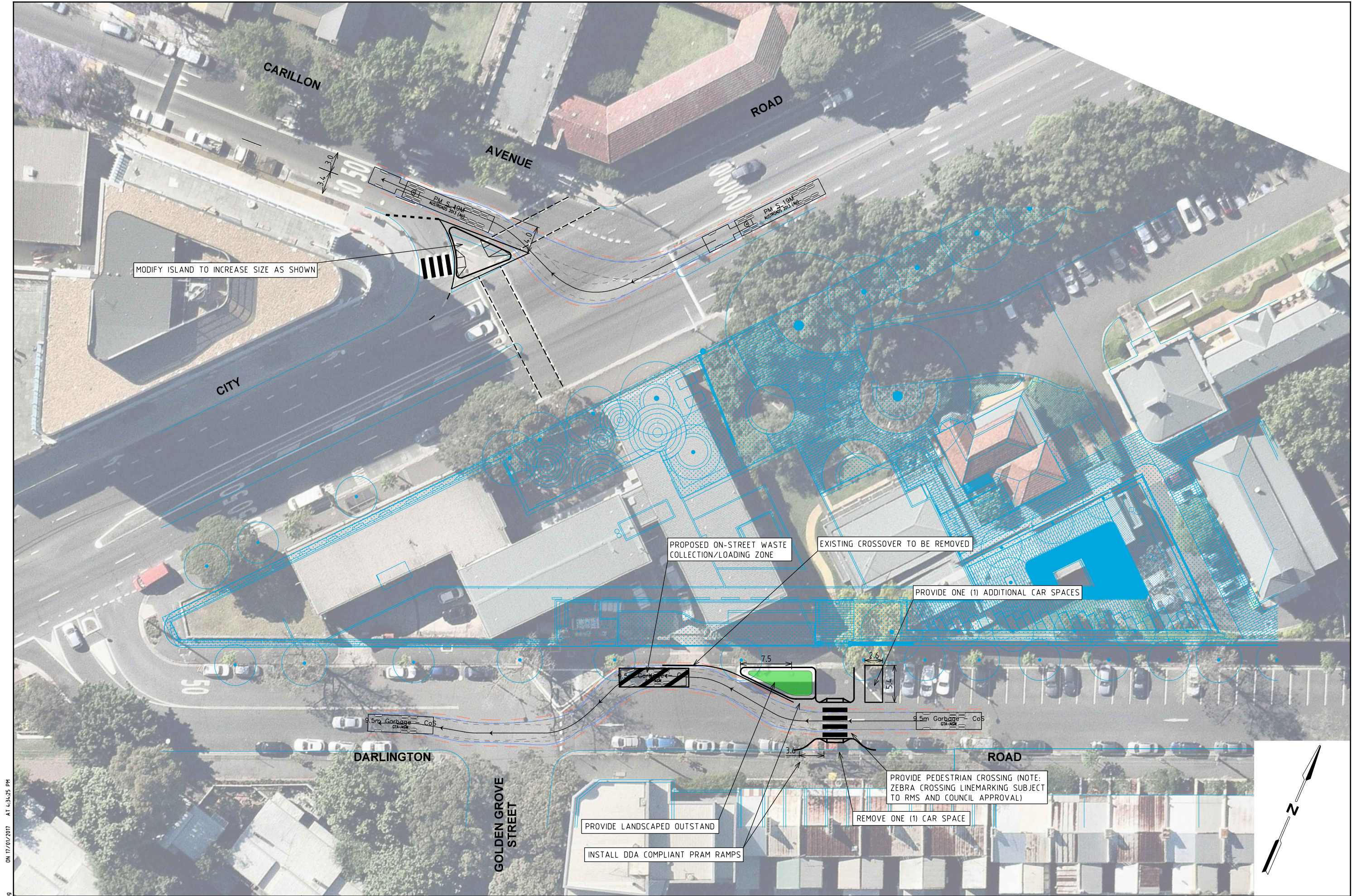


Approach	King St									
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3U (U Turn)			
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
7:00 to 8:00	49	5	54	1,249	95	1,344	0	0	0	
7:15 to 8:15	47	4	51	1,276	102	1,378	0	0	0	
7:30 to 8:30	53	4	57	1,266	111	1,377	0	0	0	
7:45 to 8:45	54	3	57	1,150	117	1,267	0	0	0	
8:00 to 9:00	74	2	76	1,098	107	1,205	0	0	0	
AM Totals	123	7	130	2,347	202	2,549	0	0	0	
16:00 to 17:00	66	0	66	622	56	678	0	0	0	
16:15 to 17:15	68	1	69	658	57	715	0	0	0	
16:30 to 17:30	65	1	66	648	49	697	0	0	0	
16:45 to 17:45	71	1	72	664	37	701	0	0	0	
17:00 to 18:00	76	2	78	663	36	699	0	0	0	
PM Totals	142	2	144	1,285	92	1,377	0	0	0	

Approach	City Rd									Carillon Ave									Crossing Pedestrians							
Direction	Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 12 (Right Turn)			Direction 12U (U Turn)										
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	A	B		E	F	G	H	Total
7:00 to 8:00	400	51	451	267	3	270	0	0	0	491	9	500	45	3	48	0	0	0	33	19		44	33	18	18	165
7:15 to 8:15	436	58	494	303	9	312	0	0	0	518	9	527	47	2	49	0	0	0	35	23		48	40	22	22	190
7:30 to 8:30	435	56	491	339	11	350	0	0	0	518	10	528	54	4	58	0	0	0	30	28		45	45	21	24	193
7:45 to 8:45	437	54	491	361	14	375	0	0	0	519	16	535	58	4	62	0	0	0	32	39		47	63	30	23	234
8:00 to 9:00	451	63	514	366	14	380	0	0	0	515	16	531	65	5	70	0	0	0	40	34		51	65	31	16	237
AM Totals	851	114	965	633	17	650	0	0	0	1,006	25	1,031	110	8	118	0	0	0	73	53		95	98	49	34	402
16:00 to 17:00	958	63	1,021	379	9	388	0	0	0	423	12	435	95	0	95	0	0	0	39	31		75	48	28	36	257
16:15 to 17:15	959	58	1,017	426	12	438	0	0	0	468	12	480	99	0	99	0	0	0	46	35		78	47	28	35	269
16:30 to 17:30	998	62	1,060	456	8	464	0	0	0	498	9	507	117	0	117	0	0	0	33	32		82	50	31	50	278
16:45 to 17:45	1,012	60	1,072	469	8	477	1	0	1	498	6	504	115	0	115	0	0	0	46	29		104	49	27	56	311
17:00 to 18:00	1,007	58	1,065	496	8	504	1	0	1	524	4	528	106	0	106	0	0	0	53	25		124	56	32	63	353
PM Totals	1,965	121	2,086	875	17	892	1	0	1	947	16	963	201	0	201	0	0	0	92	56		199	104	60	99	610

Appendix B

Swept Paths



ON 17/01/2017 AT 4:34:25 PM
PLOTTED BY : wendy.zheng



Melbourne 03 9851 9600
Sydney 02 8446 1800
Brisbane 07 3113 5000
Canberra 02 6243 9400
Adelaide 08 8334 3600
Gold Coast 07 5510 4814
Townsville 07 4722 2765
Perth 08 6169 1000



PRELIMINARY PLAN
FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

DESIGNED
C.YOU

APPROVED BY
T.DE YOUNG

DESIGN CHECK
K.WILLIAMS

DATE ISSUED
17 JANUARY 2017

SCALE
A3
0 5 10
1:500

CAD FILE NO.
N112710-01-P2.dgn

SYDNEY UNIVERSITY REGIMENT HOUSING
DARLINGTON ROAD AND CITY ROAD, SYDNEY

CONCEPT DESIGN
DRAWING NO. N112710-01-01

SHEET 01 OF 01

ISSUE P2

Melbourne A Level 25, 55 Collins Street PO Box 24055 MELBOURNE VIC 3000 P +613 9851 9600 E melbourne@gta.com.au	Brisbane A Level 4, 283 Elizabeth Street BRISBANE QLD 4000 GPO Box 115 BRISBANE QLD 4001 P +617 3113 5000 E brisbane@gta.com.au	Adelaide A Suite 4, Level 1, 136 The Parade PO Box 3421 NORWOOD SA 5067 P +618 8334 3600 E adelaide@gta.com.au	Townsville A Level 1, 25 Sturt Street PO Box 1064 TOWNSVILLE QLD 4810 P +617 4722 2765 E townsville@gta.com.au
Sydney A Level 6, 15 Help Street CHATSWOOD NSW 2067 PO Box 5254 WEST CHATSWOOD NSW 1515 P +612 8448 1800 E sydney@gta.com.au	Canberra A Tower A, Level 5, 7 London Circuit Canberra ACT 2600 P +612 6243 4826 E canberra@gta.com.au	Gold Coast A Level 9, Corporate Centre 2 Box 37, 1 Corporate Court BUNDALL QLD 4217 P +617 5510 4800 F +617 5510 4814 E goldcoast@gta.com.au	Perth A Level 2, 5 Mill Street PERTH WA 6000 PO Box 7025, Cloisters Square PERTH WA 6850 P +618 6169 1000 E perth@gta.com.au