2-4 Guess Avenue Wolli Creek

Planning Proposal Traffic Impact Assessment



Bayside Council

26 July 2019

Gold Coast

Suite 26, 58 Riverwalk Avenue Robina QLD 4226 P: (07) 5562 5377 Brisbane

Level 2, 428 Upper Edward Street Spring Hill QLD 4000 P: (07) 3831 4442 Studio 203, 3 Gladstone Street Newtown NSW 2042 P: (02) 9557 6202

W: www.bitziosconsulting.com.au

E: admin@bitziosconsulting.com.au

Copyright in the information and data in this document is the property of Bitzios Consulting. This document and its information and data is for the use of the authorised recipient and this document may not be used, copied or reproduced in whole or in part for any purpose other than for which it was supplied by Bitzios Consulting. Bitzios Consulting makes no representation, undertakes no duty and accepts no responsibility to any third party who may use or rely upon this document or its information and data.

Document Issue History

Report File Name	Prepared	Reviewed	Issued	Date	Issued to
P3976.001R 2_4 Guess Avenue Wolli Creek PP TIA	S. Seeney	L. Johnston	L. Johnston	12/07/2019	Anna Johnston File Planning and Development <u>anna.johnston@fileplanning.com</u>
P3976.002R 2_4 Guess Avenue Wolli Creek PP TIA	S. Seeney	L. Johnston	L. Johnston	26/07/2019	Anna Johnston File Planning and Development <u>anna.johnston@fileplanning.com</u>



CONTENTS

		Page
1.	INTRODUCTION	1
1.1	Background	1
1.2	Scope	1
2.	RELEVANT POLICIES AND GUIDELINES	3
2.1	Policies	3
2.1.1	Greater Sydney Region Plan	3
2.1.2	Eastern City District Plan	3
2.1.3	Bayside West Precincts 2036 Plan	3
2.2	Previous Wolli Creek Area Studies	3
2.2.1	Wolli Creek One-Way Circuit	4
3.	EXISTING CONDITIONS	6
4.	PROPOSED DEVELOPMENT	7
5.	PARKING ASSESSMENT	8
5.1	Car Parking Requirement	8
5.1.1	Car Share	8
5.2	Bicycle Parking Requirement	9
5.3	Parking Geometric Layout Assessment	10
6.	ACCESS AND SERVICING ASSESSMENT	13
6.1	Servicing and Refuse Collection	13
6.2	Access Assessment	13
6.2.1	Vehicular Access	13
6.2.2	Sight Distance	14
6.2.3	Internal Vehicle Queuing Assessment	14
7.	TRAFFIC ASSESSMENT	15
7.1	Trip Generation	15
7.2	Trip Distribution	15
7.3	Traffic Modelling	16
8.	ALTERNATE TRANSPORT MODES	18
8.1	Public Transport	18
8.2	Active Transport	18
9.	CONCLUSION	20

Tables

- Table 5.1:
 Car Parking Requirements
- Table 5.2: Bicycle Parking Requirement and Provision
- Table 5.3: Motorcycle Parking Requirement and Provision
- Table 5.4: Geometric Layout Assessment
- Table 6.1: Service Vehicle Requirement
- Table 6.2: Vehicular Access Assessment



- Table 7.1: Peak Hour Development Trip Generation
- Table 7.2: Development Traffic Splits

Figures

- Figure 1.1: Subject Site Location
- Figure 2.1: Land Reservation Acquisition Map
- Figure 2.2: Option 2 One-way Circuit
- Figure 4.1: Option 2 Northern Parcel Acquired for Open Space
- Figure 7.1: Paramics Modelling Results Maximum Queue
- Figure 8.1: Existing Pedestrian Facilities and Potential Desire Lines
- Figure 8.2: RMS Cycle Routes



1. INTRODUCTION

1.1 Background

Bitzios Consulting has been commissioned by Bayside Council (Council) to prepare a traffic impact assessment (TIA) for the proposed rezoning of 2-4 Guess Avenue Wolli Creek. The subject site location is shown in Figure 1.1.



Source: Nearmap Figure 1.1: Subject Site Location

1.2 Scope

The scope of this assessment consists of the following:

- Review key policy documents relevant to the proposal including the Greater Sydney Region Plan, Eastern City District Plan, the Bayside West Precincts 2036 Plan, and any relevant local strategies
- Review the existing and future planned local and regional traffic and transport context for all modes of transport
- Identify any proposed transport infrastructure upgrades in the wider areas.
- Identify how the site's trip generation and traffic impact on all modes of transport, will change as a result of the proposal
- Consider the capacity of the existing and planned transport network to accommodate growth proposed within the site



- Identify suitable car parking rates to apply to the site for all modes of transport including resident and employee vehicles, car share vehicles, and bicycles
- Identify any access requirements to the site, including for servicing vehicles, personal vehicles, pedestrians and cyclists.



2. RELEVANT POLICIES AND GUIDELINES

2.1 Policies

A review of the key policy documents relevant to the proposal has been undertaken in relation to traffic and transport considerations for the Wolli Creek area. A summary of each document is as follows:

2.1.1 Greater Sydney Region Plan

The Greater Sydney Region Plan set a 40-year vision to inform district and local plans in relation to economic, social and environment matters. This provides the planning framework for the five districts which make up the region and has been prepared concurrently with Future Transport 2056 and State Infrastructure Strategy 2018 – 2038.

The key transport priorities set in this plan include having a city that is supported by infrastructure especially during times of growth. Based on housing and employment growth, the plan can assess the nature, level and timing of infrastructure that is required. Emphasis on growth and its correlation to infrastructure demands guides the direction and actions for the district and local plans.

2.1.2 Eastern City District Plan

The Eastern City District covers the Bayside, Burwood, City of Canada Bay, City of Sydney, Inner West, Randwick, Strathfield, Waverley and Woollahra local government areas and aims to manage economic, social and environment matters relating to growth in the area. This plan works in conjunction with the 40-year vision for the Greater Sydney Region Plan and provides planning priorities and actions at a district level.

The major transport investments are managed under this plan with the aim of creating a liveable area that is accessible, productive and sustainable. This plan endorses and guides the direction of local government plans and actions.

2.1.3 Bayside West Precincts 2036 Plan

The Bayside West Precincts 2036 Plan includes Arncliffe, Banksia and Cooks Cove which are located within the western part of the Bayside local government area. This plan set out the strategic land use and infrastructure planning to guide the future transformation of these precincts including changes to planning controls. Enabling amendments to the Rockdale Local Environmental Plan (LEP) 2011, rezoning of the Arncliffe and Banksia Precincts has been implemented.

With the aim of intensifying commercial and residential development around the transport hubs of Arncliffe and Banksia, transit-oriented development will be achieved. As part of the plan, current projects include the upgrade to the Banksia and Arncliffe train stations. Additionally, increased capacity and services to the rail infrastructure will support the land use intensification of the area.

2.2 Previous Wolli Creek Area Studies

A search of previous transport studies undertaken in the Wolli Creek area has been undertaken in relation to the proposal. Concurrent to the preparation of the planning proposal, Council is also preparing an amended open space strategy for the Wolli Creek area, with aims of transforming the precinct from predominately industrial into a high-quality urban environment.

Additionally, the Rockdale LEP identifies that land reservations for the purposes of future road widening exist on either side of Arncliffe Street fronting the subject site. Figure 2.1 details the land reservations in proximity to the site.





Source: Rockdale LEP 2011

Figure 2.1: Land Reservation Acquisition Map

2.2.1 Wolli Creek One-Way Circuit

To improve traffic flow Council has proposed the implementation of a one-way system to reduce vehicles bypassing the Princes Highway and using Arncliffe Street and Magdalene Terrace as a shortcut. Two (2) options were recommended and include converting sections of Arncliffe Street, Guess Avenue and Mount Olympus Boulevard to one-way traffic or alternatively including Magdalene Terrace as well. The designs will also improve the ability for pedestrians and cyclist to use the Guess Avenue rail underpass when travelling between the Bonar Street Precinct and Wolli Creek.

The timing of the proposed upgrades is yet to be confirmed however Council have adopted Option 2 as of March 2019 where sections of Arncliffe Street, Guess Avenue, Mount Olympus Boulevard and Magdalene Terrace will be one-way. Figure 2.2 details the concept design of the one-way circuit surrounding the subject site.





Source: Bayside Council

Figure 2.2: Option 2 – One-way Circuit



3. EXISTING CONDITIONS

Lot 101 (DP808944) is currently occupied by light industrial land use and has access from Arncliffe Street and Guess Avenue. Lot 102 (DP808944) is currently vacant with access provided from Guess Avenue.

There is on-street parking available along the site frontage on Guess Avenue as well as the southern sides of Arncliffe Street and Mt Olympus Boulevard. However, sign-posted no parking zones are located adjacent to these provisions on the northern side of Arncliffe Street, the western side of Guess Avenue and the northern side of Mt Olympus Boulevard.



4. PROPOSED DEVELOPMENT

It is understood that Council reached a decision in December 2017 that it no longer requires the subject site for the purpose of public recreation. As such, Council is seeking to submit a Planning Proposal to amend the Rockdale LEP to rezone part of the subject site, from RE1 – Public Recreation to B4 – Mixed Use and to remove the site from the Land Reservation Acquisition Map.

During the preliminary planning stages there were four (4) development options outlined in the Urban Design Study: Preliminary Option Summary prepared by SJB Architects dated 18 July 2019. Based on the options analysis, Option 2 is being progressed and includes 144 residential units and a café consisting of 115m² GFA.



Source: SJB Architects

Figure 4.1: Option 2 – Northern Parcel Acquired for Open Space



5. PARKING ASSESSMENT

5.1 Car Parking Requirement

In accordance with the New South Wales Department of Planning and Environment Apartment Design Guideline (ADG) Section 3 the lesser of the car parking requirements set out by either the RMS *Guide to Traffic Generating Developments* (2002) or Rockdale City (Bayside) Council's *Development Control Plan* (DCP) *Part 4 – General Principals for Development* (2011) will be taken as the site is within 800m of a railway station.

While it is noted that previous developments adopted the metropolitan sub-regional centre rate from the RMS guide, the CBD rate is considered more appropriate for the proposed development, due to its proximity to public transport. The car parking requirements are detailed in Table 5.1.

Land Use	Туре	Quantity	Source	Car Parking Rate	Parking Required
	1-bedroom unit	58	RMS	0.4 spaces per unit	23
Residential Units	2-bedroom unit	58	RMS	0.7 spaces per unit	40
	3-bedroom unit	28	RMS	1.2 spaces per unit	35
	Visitor	144	RMS	1 space per 7 units	21
Café	Customer	115m ² GFA DCP 1 space per 40m ² GFA		3	
Total Resident Car Parks Total Visitor / Customer Car Parks					98 24

Table 5.1: Car Parking Requirements

The proposed development is required to provide 98 residential car parking spaces and 24 visitor / customer car parks. In accordance with Council's DCP, one (1) visitor car space is required to be equipped with car wash facilities.

In accordance with Council's DCP Section 4.6 Car Parking, Access and Movement, a 20% reduction can be applied to the café customer car parking spaces, as it is located within the Wolli Creek Town Centre. As such, it is considered appropriate to reduce the café car parking provision by one (1) space on the basis that the café land use is considered ancillary and to attract walk-up only trade (i.e. is expected to be accessed primarily by residents and their visitors).

5.1.1 Car Share

As a measure to address the objectives of Section 4.6 of Council's DCP, the provision of off-street and/or on-street car share parking spaces should be considered. Council's DCP encourages the implementation of design initiatives (e.g. dedicated communal or shared car spaces) which promote the up-take of sustainable transport. However, rates and controls for the provision of communal/shared car spaces are not provided within the DCP.

In-lieu of rates and controls within Council's DCP, the Comprehensive DCP (2013) *Part B – General Controls Section B7 Transport, Traffic, parking and access* of the neighbouring Randwick City Council was reviewed. While the Randwick DCP not specify car share rates, it does however specify controls which are to be complied with. Relevant controls which should be adopted include:



- Car share spaces are to be provided in residential and/or commercial development where public transport accessibility is high
- Locate the car share space/s in a convenient, accessible, secure area
- Ensure good visibility, 24-hour access and proximity to the street. If in a basement it must be near exit/entry areas and not difficult to find or be out of sight
- Identify (sign and road/pavement markings) the car share space for use only by car share vehicles in accordance with RMS standards
- The establishment and operation of a car share scheme must occur soon after completion or occupation of the development
- Parking spaces for car share schemes located on private property are to be retained as common property by the Owners Corporation of the site.

The provision of car share spaces to allow for a relaxation in resident car spaces should be considered as part of any future development application/s over the subject site. Determining an appropriate number of proposed car share spaces and the corresponding relaxation applied to resident car parking provisions should consider the following at such a time:

- Existing provisions of off-street and on-street car share spaces surrounding the subject site
- Current guidelines, strategies and policies (e.g. Council's DCP, RMS Guidelines for on-street fixed space car share parking).

5.2 Bicycle Parking Requirement

Council's DCP *Part 4 – General Principals for Development* (2011) was used to source the bicycle and motorcycle parking rates for the proposed development. The bicycle and motorcycle parking requirements are detailed in Table 5.2 and Table 5.3.

Land Use	Туре	Quantity	Car Parking Rate	Parking Required
Residential Units	Residential	144 units	1 space per 10 dwellings	15
Café	Customer	115m ² GFA	1 space per 200m ² GFA	1
	15 1			

Table 5.2:	Bicycle	Parking	Requirement	and	Provision
------------	---------	---------	-------------	-----	-----------

Table 5.2 shows the development is required to provide 15 residential bicycle parks and one (1) customer bicycle spaces.

Table 5.3: Motorcycle Parking Requirement and Provision

Land Use	Туре	Quantity	Car Parking Rate	Parking Required
Residential Units	Residential	144 units	1 space per 15 dwellings	10
Café	Customer	115m ² GFA	1 space per 20 car spaces	1
	10 1			

Table 5.3 shows the development is required to provide 10 residential motorcycle parks and one (1) customer motorcycle space.



5.3 Parking Geometric Layout Assessment

The on-site car parking layout is required to comply with Council's DCP and Australian Standards AS2890.1. The assessment requirements are documented in Table 5.4.



Table 5.4: Geometric Layout Assessmen

Design Element	Required
Residential car parking space (User Class 1A)	2.4m wide by 5.4m long
Residential visitor car parking space (User Class 2)	2.5m wide by 5.4m long
Retail staff car parking space (User Class 1A)	2.4m wide by 5.4m long
Retail visitor car parking space (User Class 3A)	2.6m wide by 5.4m long
Persons with disability space	2.4m wide by 5.4m long
Adjacent shared area	2.4m wide by 5.4m long
Motorcycle space	1.2m wide by 2.5m long
Service vehicle bay (SRV)	3.5m wide by 6.4m long
Service vehicle bay (MRV)	3.5m wide by 8.8m long
Clearance adjacent to vertical obstructions	0.3m (i.e. walls, fences)
Column intrusions	As per Figure 5.2 of AS2890.1
Car parking aisle width	Minimum 5.8m (6.6m for User Class 3A)
Blind Aisle Extension	1m extension for the full width of the parking aisle
One-way basement ramp width	3.6m wide wall-to-wall (including 0.3m wide kerbing per side)
Two-way basement ramp width	6.1m wide wall-to-wall (including 0.3m wide kerbing per side)
Grades (driveway)	Maximum 1:20 for the first 6m into the site
Grades (car parking modules)	1:20 measured parallel to the angle of the space or maximum 1:16 measured in any other direction
Gradient (car ramps - private car park)	Max. 1:4 (with transitions)
Gradient (car ramps – private car park)	Maximum 1:4 with transitions
Gradient (car ramp transitions)	Maximum 1:8 (summit) and 1:6:7 (sag) at 2m length each
Gradient (MRV)	Max. 1:6.5 (roadway/ramp) and max. 1:16 in 7m of travel (rate of change of grade)
Height clearance (car parking)	Minimum 2.2 clearance to overhead structures and services
Height clearance (MRV)	Min. 4.5m clearance to overhead structure and services
Internal roadways (one-way)	Min. 3m wide plus 0.3m clearance per side bounded by a wall
Internal roadways (two-way)	Min. 5.5m wide plus 0.3m clearance per side bounded by a wall
Bicycle parking (horizontal)	0.5m wide by 1.8m long with an aisle width of 1.5m
Bicycle parking (vertical hanging)	0.5m wide (staggered handlebars) by 1.2m long with an aisle width of 1.5m. Min. vertical clearance 2.15m

Note: The specified height and grade for SRVs are only relevant to sections the SRV services.



All intersections within the on-site car parking layout should allow for a B99 design vehicle to pass a B85 design vehicle without conflicting with one another or any adjacent vertical obstructions greater than 100mm in height.



6. ACCESS AND SERVICING ASSESSMENT

6.1 Servicing and Refuse Collection

The required servicing bays are shown in Table 6.1 in accordance with Rockdale City (Bayside) Council's Technical Specification for *Traffic, Parking and Access* (2011).

Table 6.1: Service Vehicle Requirement

Land Line	Servicing Bays Required				
Lanu Use	VAN	SRV	MRV	LRV	
144 Residential Units (100-149)		2	1	N/A	
115m² GFA Café (0-199)	1			N/A	
Total Required	1	2	1	N/A	

It is anticipated that the development will only require a maximum one (1) servicing bay for each design vehicle. It is recommended that refuse collection occur on-site and where possible bulk bins are used. If achievable, the design should accommodate for a refuse collection vehicle (RCV) to enter and exit in a forward gear. As a minimum, it is recommended that provision (including operational height clearances) is made for an RCV to store wholly within the site while undertaking refuse collection.

6.2 Access Assessment

6.2.1 Vehicular Access

It is noted Council's DCP *Part 7.1 – General Principals for Development* (2011) *Figure 7.1.5* illustrates that vehicle access to/from the subject site via Guess Avenue and sections of Arncliffe Street is denied. Option 2 proposes a single vehicular access on Arncliffe Street, at a location which is supported by the DCP. However, it is recommended that the vehicular access is provided on the lower order road (i.e. Guess Avenue) to reduce vehicle conflicts when entering and exiting the site.

Furthermore, upon introduction of the one-way circuit, the vehicular access will be restricted to rightin / right-out movements only. Given the arrangement of the one-way circuit, the location of the vehicular access on Guess Avenue would allow for more direct access (i.e. less re-routing) than that of a vehicular access on Arncliffe Street.

The details of the proposed access are summarised in Table 6.2.

Table 6.2: Vehicular Access Assessment

Design Element	Details
Access Facility Category	Type 2 as per AS2890.1
Crossover Form	Shall be designed in accordance with IPWEA Standard Drawing RS- 051 – Type B2 (6-9m at the property boundary with splays at 1.5m wide by 1.8m long) as per Council's Driveway Code.
Pedestrian Sight Line Triangles	A pedestrian sight line triangle shall be provided on the egress side of the driveway at 2m along the property boundary and 2.5m into the site as per Figure 3.3 in AS2890.1. The area within the triangle is clear of all vertical obstructions to visibility and should be notated on the development plans.



6.2.2 Sight Distance

As per AS2890.1 a minimum stopping sight distance of 45m for a frontage road speed of 50km/h is required.

In the case the vehicular access is provided on Guess Avenue, it is anticipated that vehicles entering the street from Arncliffe Street will be travelling a maximum 40km/h, as they are required to reduce speed upon performing turn manoeuvres. As such, AS2890.1 requires any vehicular access on Guess Avenue to be located a minimum 35m separation from Arncliffe Street.

6.2.3 Internal Vehicle Queuing Assessment

AS2890.1 requires on-site queuing to ensure vehicle queues do not extend beyond the property boundary. As per Table 3.3 in AS2890.1, the required internal queue length for the proposed development is 18m for the required 122 car parking spaces.



7. TRAFFIC ASSESSMENT

7.1 Trip Generation

The traffic generation rates for the following land uses have been sourced from Roads and Maritime Services (RMS) *Guide to Traffic Generating Developments (2002)*:

café (assessed as a "restaurant").

It has been conservatively assumed that the restaurant PM peak rate can be adopted for the AM peak. The residential apartments traffic generation rate has been sourced from RMS's *Guide to Traffic Generating Developments Technical Direction* (2013) and assessed as 'high density residential flat dwellings'. Due to the site's proximity to public transport the Sydney averages have been adopted for the 'high density residential flat dwellings'. The resultant traffic generation is provided in Table 7.1.

Land Use	Quantity	AM Peak Trip Generation Rate	PM Peak Trip Generation Rate	AM Peak Trips (vph)	PM Peak Trips (vph)
Residential Units	258 bedrooms	0.09 trips per bedroom	0.07 trips per bedroom	23	18
Restaurant	115m ² GFA	5 trips per 100m ² GFA	5 trips per 100m ² GFA	6	6
Total Development Traffic					24

 Table 7.1: Peak Hour Development Trip Generation

As per Table 7.1 the development is expected to generate in the order of 29 and 24 additional trips in the AM and PM peak periods respectively.

7.2 Trip Distribution

Typical IN:OUT splits for traffic directionality were applied for all land uses analysed (i.e. both existing and proposed). An IN:OUT split of 20%:80% in the AM peak, and 70%:30% in the PM peak has been applied for all residential components, which is consistent with a typical residential time-of-day trip profile. An IN:OUT split of 50%:50% in the AM peak and PM peak has been applied for the café, which is consistent with the short-stay nature of retail traffic. Table 7.2 summarises the development traffic directionality splits for the proposed development based on the net increase in peak hour trips determined in Table 7.1.

Table 7.2: Development Traffic Split	Table 7.2:	Development	Traffic	Splits
--------------------------------------	------------	-------------	---------	--------

Land Use	AM Trip Split		PM Trip Split		AM Trips (vph)		PM Trips (vph)	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Residential Units	20%	80%	70%	30%	5	19	13	6
Restaurant	50%	50%	50%	50%	3	3	3	3
Total Development Traffic					8	22	16	9

As per Table 7.2, the development is expected to generate 8 inbound and 22 outbound trips in the AM peak, and 16 inbound and 9 outbound trips in the PM peak.



7.3 Traffic Modelling

Significant traffic modelling has been undertaken within Wolli Creek to ascertain the performance of the road network in 2031 and determine the effectiveness of potential upgrade options to the local road network. A microsimulation model of Wolli Creek, Turrella and Arncliffe was undertaken in 2012 on behalf of Council using Paramics v6.9.0. The Paramics model included in detail the section of the local road network around the subject site. To determine the impacts of the development on the local road network, the 2031 future year Paramics Model was used to determine 'base' and 'with development' traffic conditions.

Bayside Council have recently undertaken community consultation for Option 2 of the proposed oneway circuit within Wolli Creek which involves converting sections of Arncliffe Street, Guess Avenue, Mount Olympus Drive and Magdalene Terrace to one-way traffic. This option was derived from the original Paramics modelling undertaken by Bitzios Consulting on behalf of Council in 2012. This model scenario was altered to ensure that the modelled road network reflected the Wolli Creek Option 2 One-Way Circuit Conceptual Road Works Drawing (Drawing No. SKC26).

Under the original Paramics model, the area bounded by Guess Avenue, Arncliffe Street and Magdalene Terrace was considered a single zone. For the purposes of this assessment, this Zone was divided into the constructed eastern area and the subject site (western area). Access driveways and zone connectors were modelled at existing and proposed crossover locations. Traffic was inputted into the 'with development' model through use of the abovementioned trip generation and trip distribution (Table 7.1 and Table 7.2).

The modelled impacts of the proposed development on the intersections of Princes Highway / Brodie Spark Drive, Magdalene Terrace / Arncliffe Street and Guess Avenue / Mount Olympus Boulevard in the year 2031 under the one way circuit scenario is provided in Figure 7.1 overleaf. The Paramics modelling indicates that the proposed development has a negligible impact on the performance of the road network.





Figure 7.1: Paramics Modelling Results – Maximum Queue

8. ALTERNATE TRANSPORT MODES

8.1 Public Transport

The Wolli Creek area is well serviced by public transport with trains and buses connecting the Sydney airport, Sydney city and surrounding suburbs. The proposed development is located between two (2) train stations including the Wolli Creek station to the north (approximately 350m walking distance) and the Arncliffe station to the south (approximately 1km walking distance).

The T4 train line runs adjacent to the proposed development and services the Wolli Creek station at a peak frequency of 3 minutes and the Arncliffe station every 10 minutes. The train connects Cronulla to Bondi Junction and is the key north – south line through the Wolli Creek area. The T8 train line services the Wolli Creek Station at a peak frequency of 6 minutes and connects Macarthur to the City via the Airport or Sydenham. This service is the key east – west line through the Wolli Creek Area.

Additionally, there are two (2) bus stops located on Princes Highway to the east of the proposed development within approximately 450m walking distance. Bus routes 422 (Kogarah to Central Pitt Street), N10 (Sutherland to City Town Hall) and N11 (Cronulla to City Town Hall) service these stops at a peak frequency of 30 minutes.

8.2 Active Transport

Existing pedestrian footpaths are present surrounding the site along Guess Avenue, Arncliffe Street, and Mount Olympus Boulevard. This provides connections to the greater Wolli Creek area including Brodie Spark Drive, Princes Highway and Forest Road. With the proposed development, other pedestrian desire lines have been identified where pedestrians would want to walk through the development to reach Arncliffe and continue on to Magdalene Terrace and surrounding streets. The existing pedestrian facilities and the potential desire lines are shown in Figure 8.1.

Figure 8.1: Existing Pedestrian Facilities and Potential Desire Lines

There are currently no dedicated cycle facilities present along the immediate road network surrounding the development however Guess Avenue and Arncliffe Street are identified as a cycle route by RMS. There is currently way-finding signage located at the Guess Avenue / Arncliffe Street intersection and connects to Bonar Street and Thompson Street to the east. This route is identified as having a moderately difficult on road environment for cyclists. Figure 8.2 details the cycle route in proximity to the subject site however it is noted that the cycle routes are currently under review by RMS and may not be accurate.

Source: SJB Architects

Figure 8.2: RMS Cycle Routes

With the future planned one-way circuit surrounding the subject site, an on-road cycle way will be implemented as part of the upgrade and will include Arncliffe Street, Guess Avenue, Mount Olympus Boulevard and Magdalene Terrace. This will provide greater accessibility to active transport users and the one-way arrangement will create a safer environment for cyclists and vehicles to interact.

9. CONCLUSION

The key findings of the traffic impact assessment for the proposed planning proposal located at 2–4 Guess Avenue, Wolli Creek are as follows:

- It is understood the proposed development is a planning proposal to amend the Rockdale LEP to rezone part of the subject site from Public Recreation to Mixed Use
- The proposed development consists of 144 residential units and a 115m² shop intended for a café
- The proposed development is required to provide 90 residential and 23 visitor car parking spaces
- The proposed development is required to provide 15 residential and 1 visitor bicycle parking spaces
- The proposed development is required to provide 10 residential and 1 visitor motorcycle parking spaces
- The proposed development should consider dedicated car share parking spaces in accordance with Randwick City Council's DCP (2013) Part B – General Controls Section B7 Transport, Traffic, parking and access
- The geometric car parking layout is required to comply with the requirements outlined in Council's DCP and the Australian Standards AS2890.1
- The proposed development is required to have a maximum one (1) servicing bay for an SRV, MRV and a van
- It is recommended that refuse collection occur on-site and where possible bulk bins are used. An RCV should store wholly within the site while undertaking refuse collection
- It is recommended that the proposed development provide vehicular access via Guess Avenue and with the introduction of the one-way circuit, the vehicular access will be restricted to right-in / right-out movements only
- The proposed development is required to have a minimum stopping sight distance of 45m for a frontage road speed of 50km/h
- Any vehicular access on Guess Avenue required to be a minimum 35m away from the Arncliffe Street / Guess Avenue intersection to achieve a minimum stopping sight distance
- The proposed development is required to have approximately 18m of queuing space for 122 car parking spaces
- The proposed development is expected to generate 29 trips in the AM peak hour and 24 trips in the PM peak hour
- The proposed development is well connected to public transport services including bus and train stations in close proximity
- The surrounding area has existing pedestrian footpaths that will connect to the subject site
- There are currently no dedicated on-road cycle facilities however with the implementation of the one-way circuit, on-road cycle lanes will be provided.

The site should be suitably designed to ensure that it can comply with Council's relevant codes and standards under the proposed re-zoning. Furthermore, the impact assessment identified no issues of significant that would preclude its approval.

