

ORDINARY COUNCIL MEETING

ATTACHMENTS BOOKLET - Part Four Items 9.3, 9.4, 10.3 and 11.2

Under Separate Cover

Tuesday, 18 October 2022





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TRAFFIC COMMITTEE

29 September 2022

(VIA EMAIL)

MINUTES

Committee Members:

Cr Michael Megna Chair
Sergeant S Tohme NSW Police
Angelica Joie Abragan Transport for NSW

Mr J Sidoti Local Member of Parliament

Advisory Members:

Mr B MacGillicuddy
Ms M Carpenter
CCB Council
Mr L Huang
CCB Council
Mr S Lindsay
CCB Council
Mr S Pandey
CCB Council

Mr P Whitney State Transit Authority, Sydney Buses

TBA Access Committee

Mr G Ashton Bay Bug – Canada Bay Bicycle Users Group

Minute Taker: Mr B MacGillicuddy CCB Council



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1. Introduction

This planning proposal seeks to amend the *Canada Bay Local Environmental Plan (CBLEP) 2013* to permit a Recreation Facilities (Indoor), with consent, in the R1 General Residential zone.

Background

In recent years, several private gyms in Mortlake obtained Complying Development Certificates through Private Certifiers. This use is prohibited as the Mortlake area is zoned R1 General Residential pursuant to the *Canada Bay Local Environmental Plan 2013*. Council has initiated enforcement action and has issued Notice of Intentions to issue Orders to relevant businesses.

Concurrently, a Mayoral Minute was tabled at the Council meeting of 16 August 2022 to investigate the suitability of gyms within the R1 General Residential zone. The Mayoral Minute recognised that gyms and local fitness facilities are important local infrastructure that bring the community together for exercise, health, and wellbeing.

Council subsequently resolved to investigate the potential of the subject use to be included as permitted with consent in the R1 General Residential zone. This resolution does not foreshadow the outcomes of a Planning Proposal but rather it sets in train a community consultation process with local residents, businesses, landowners, and relevant stakeholders.

This Planning Proposal has been prepared to amend the *Canada Bay Local Environmental Plan 2013* (LEP) to permit Recreation Facilities (Indoor) with consent within the R1 General Residential zone.

Recreation facility (indoor)

A gym is a type of recreation facility (indoor) which is defined in the CBLEP as follows:

A building or place used predominantly for indoor recreation, whether or not operated for the purposes of gain, including a squash court, indoor swimming pool, gymnasium, table tennis centre, health studio, bowling alley, ice rink or any other building or place of a like character used for indoor recreation, but does not include an entertainment facility, a recreation facility (major) or a registered club.

Residential zone analysis

At present, Recreation Facilities (Indoor) are not permissible in the R1 General Residential zone pursuant to the CBLEP. This land use is however, permitted with consent in business zones (B1 Neighbourhood Centre, B3 Commercial Centre, B4 Mixed Use, B6 Enterprise Corridor, B7 Business Park, IN1 General Industrial), as well as recreation zones (RE1 Public Recreation and RE2 Private Recreation).

The R1 General Residential zone is different to other residential zones within CBLEP. The only area within the City of Canada Bay with the R1 zone is in the suburb of Mortlake, which has a history of industrial uses. As can be seen in the table below, there are a range of commercial/industrial types of uses that are permitted with consent within

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the R1 zone that are not permitted in an R2, R3, or R4 zone. These uses include boat building and repair facilities, boat launching ramps, commercial premises, hostels, information and education facilities, light industries, marinas, mooring pens, serviced apartments, vehicle repair stations.

Land use	R1	R2	R3	R4
Attached dwellings	Υ		Υ	
Bed and breakfast	Υ	Υ	Υ	
accommodation				
Boarding houses	Y		Υ	Υ
Boat building and repair	Υ			
facilities				
Boat launching ramps	Y			
Boat sheds	Y	Y	Υ	
Building identification signs	Y	Υ	Y	Υ
Business identification signs	Υ	Y	Υ	Υ
Centre-based child care facilities	Y	Y	Y	Y
Commercial premises	Υ			
Community facilities	Υ	Υ	Υ	Υ
Dual occupancies		Υ		
Dwelling houses	Υ	Υ		
Environmental facilities	Υ	Υ	Υ	Υ
Exhibition homes	Υ		Υ	Υ
Exhibition villages				Υ
Group homes	Υ	Υ	Υ	
Health consulting rooms		Υ		
Hostels	Υ			
Information and education	Υ			
facilities				
Jetties	Y	Υ	Υ	
Light industries	Υ			
Local distribution premises				Y
Marinas	Υ			
Mooring pens	Υ			
Multi dwelling housing	Υ		Υ	Υ
Neighbourhood shops	Υ		Υ	Υ
Oyster aquaculture	Υ	Υ	Υ	Υ
Places of public worship	Υ	Υ	Υ	Υ
Pond-based aquaculture	Υ	Υ		
Public administration buildings	Y		Υ	Y
Recreation areas	Υ	Y	Υ	

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Residential accommodation	Υ		Υ	
Residential flat buildings	Υ			Υ
Respite day care centres	Υ	Υ	Υ	Υ
Roads	Υ	Υ	Υ	Υ
Schools	Υ	Υ	Υ	
Semi-detached dwellings	Υ	Υ		
Seniors housing	Υ		Υ	Υ
Serviced apartments	Υ			
Shop top housing	Υ			Υ
Tank-based aquaculture	Υ	Υ	Υ	
Vehicle repair stations	Υ			
Water recycling facilities	Υ	Υ	Υ	Υ
Water supply systems				Υ

Summary

The R1 General Residential zone in Mortlake currently permits a range of land uses. These include residential flat buildings, commercial premises, light industries, vehicle repair stations, amongst others.

Recreation Facilities (Indoor) will support the increasing resident population in Mortlake and Breakfast Point and would complement the existing uses permitted in the R1 Zone.

2. PART 1 - Objectives and Intended Outcomes

The planning proposal seeks to amend the *Canada Bay Local Environmental Plan 2013* to permit a Recreation Facility (Indoor) land use with consent in an R1 General Residential zone.

Detailed objectives and the intended outcomes of the planning proposal are as follows:

Objectives

To provide land uses that meet the recreation needs of the community.

Intended Outcomes

 To permit Recreation Facilities (Indoor) with consent in the R1 General Residential zone.

3. PART 2 - Explanation of Provisions

To achieve the proposed objectives and intended outcomes, the Planning Proposal seeks to amend the land use table for the R1 General Residential zone to include Recreation Facilities (Indoor) in Item 3, as a use that is Permitted with consent as shown in red below:

Zone R1 General Residential

1. Objectives of zone

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- · To provide for the housing needs of the community.
- To provide for a variety of housing types and densities.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.

2. Permitted without consent

Environmental protection works; Home occupations

3. Permitted with consent

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Boat building and repair facilities; Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Centre-based child care facilities; Commercial premises; Community facilities; Dwelling houses; Environmental facilities; Exhibition homes; Group homes; Hostels; Information and education facilities; Jetties; Light industries; Marinas; Mooring pens; Multi dwelling housing; Neighbourhood shops; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Public administration buildings; Recreation areas; Recreation facilities (indoor); Residential accommodation; Residential flat buildings; Respite day care centres; Roads; Schools; Semi-detached dwellings; Seniors housing; Serviced apartments; Shop top housing; Tank-based aquaculture; Vehicle repair stations; Water recycling facilities

4. Prohibited

Hardware and building supplies; Landscaping material supplies; Plant nurseries; Rural supplies; Rural workers' dwellings; Specialised retail premises; Timber yards; Vehicle sales or hire premises; Any other development not specified in item 2 or 3

4. PART 3 - Justification

Section A - Need for a planning proposal

 Is the planning proposal a result of an endorsed LSPS, strategic study or report?

The planning proposal is the result of a resolution from Council to assess the appropriateness of the proposed land use and to obtain community feedback.

Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

The planning proposal is the only means to achieve the intended outcome as amendments to CBLEP2013 are required to enable the proposed use to be permitted.

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Section B - Relationship to strategic planning framework

3. Will the planning proposal give effect to the objectives and actions of the applicable regional or district plan (including any exhibited draft plans or strategies)?

The planning proposal has strategic merit and is consistent with the Greater Sydney Region Plan – A Metropolis of Three Cities:

Objective Number	Objective	Statement of Consistency
1	Infrastructure supports the three cities	Consistent
2	Infrastructure aligns with forecast growth – growth infrastructure compact	Consistent
3	Infrastructure adapts to meet future needs	Consistent
4	Infrastructure use is optimised	Consistent
5	Benefits of growth realised by collaboration of governments, community and business	Consistent
6	Services and infrastructure meet communities' changing needs	Consistent. The amendment will permit gyms (Recreation facility (indoor)) which service community needs within the R1 zone.
7	Communities are healthy, resilient and socially connected	Consistent. This use will permit gyms and assist the local community to be healthy, resilient and socially connected.
8	Greater Sydney's communities are culturally rich with diverse neighbourhoods	Consistent
9	Greater Sydney celebrates the arts and supports creative industries and innovation	Consistent
10	Greater housing supply	Not applicable
11	Housing is more diverse and affordable	Consistent
12	Great places that bring people together	Consistent
13	Environmental heritage is identified, conserved and enhanced	Consistent
14	A Metropolis of Three Cities – integrated land use and transport creates walkable and 30-minute cities	Consistent
15	The Eastern, GPOP and Western Economic Corridors are better connected and more competitive	Consistent

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16	Freight and logistics network is competitive and efficient	Not applicable
17	Regional connectivity is enhanced	Not applicable
18	Harbour CBD is stronger and more competitive	Not applicable
19	Greater Parramatta is stronger and better connected	Not applicable
20	Western Sydney Airport and Badgerys Creek Aerotropolis are economic catalysts for Western Parkland City	Not applicable
21	Internationally competitive health, education, research and innovation precincts	Not applicable
22	Investment and business activity in	Consistent.
	centres	Recreation facility businesses will be permitted to operate (with consent) within the Mortlake/Breakfast Point local centre.
23	Industrial and urban services land is planned, retained and managed	Consistent
24	Economic sectors are targeted for success	Consistent
25	The coast and waterways are protected and healthier	Not applicable
26	A cool and green parkland city in the South Creek corridor	Not applicable
27	Biodiversity is protected, urban bushland and remnant vegetation is enhanced	Not applicable
28	Scenic and cultural landscapes are protected	Not applicable
29	Environmental, social and economic values in rural areas are protected and enhanced	Not applicable
30	Urban tree canopy cover is increased	Consistent.
		The addition of a new land use to the CBLEP will not reduce canopy cover. Tree canopy may be considered for future development applications.
31	Public open space is accessible, protected and enhanced	Not applicable
32	The Green Grid links parks, open spaces, bushland and walking and cycling paths	Not applicable
33	A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change	Not applicable

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34	Energy and water flows are captured, used and re-used	Not applicable
35	More waste is re-used and recycled to support the development of a circular economy	Consistent. Conditions will be included on any future development consent requiring reductions to waste generated and recycling of waste.
36	People and places adapt to climate change and future shocks and stresses	Not applicable
37	Exposure to natural and urban hazards is reduced	Not applicable
38	Heatwaves and extreme heat are managed	Not applicable
39	A collaborative approach to city planning	Consistent
40	Plans refined by monitoring and reporting	Not applicable

The Planning Proposal is also consistent with the Our Greater Sydney 2056 - Eastern City District Plan:

Planning Priority Number	Planning Priority	Statement of Consistency
E1	Planning for a city supported by infrastructure	Consistent. Enables business approvals to support the community.
E2	Working through collaboration	Consistent
E3	Providing services and social infrastructure to meet people's changing needs	Consistent. Enables business approvals to support the community.
E4	Fostering healthy, creative, culturally rich and socially connected communities	Consistent. The land use will permit recreation activities, including gyms, which improve health and social interactions.
E5	Providing housing supply, choice and affordability with access to jobs, services and public transport	Consistent
E6	Creating and renewing great places and local centres, and respecting the District's heritage	Consistent. Enables the provision of services that are desired by the community.
E7	Growing a stronger and more competitive Harbour CBD	Not applicable
E8	Growing and investing in health and education precincts and the innovation corridor	Consistent. Facilities the provision of recreational services to assist in maintaining the health of the community.

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E9	Growing international trade gateways	Not applicable
E10	Delivering integrated land use and transport planning and a 30-minute city	Consistent. Provision of additional services to an area of the LGA with increased population densities to enable the needs of the local community to be serviced without the need for extended travel.
E11	Growing investment, business opportunities and jobs in strategic centres	Consistent. The planning proposal will enable new businesses to operate within the Mortlake/Breakfast Point locality.
E12	Retaining and managing industrial and urban services land	Consistent.
E13	Supporting growth of targeted industry sectors.	Consistent. Facilitates the approval of uses such as gyms.
E14	Protecting and improving the health and enjoyment of Sydney Harbour and the District's waterways	Not applicable
E15	Protecting and enhancing bushland and biodiversity	Not applicable
E16	Protecting and enhancing scenic and cultural landscapes	Not applicable
E17	Increasing urban tree canopy cover and delivering Green Grid connections	Consistent
E18	Delivering high quality open space	Not applicable
E19	Reducing carbon emissions and managing energy, water and waste efficiently	Consistent
E20	Adapting to the impacts of urban and natural hazards and climate change	Consistent
E21	Preparing local strategic planning statements informed by local strategic planning	Consistent
E22	Monitoring and reporting on the delivery of the Plan	Consistent

4. Is the planning proposal consistent with a council LSPS that has been endorsed by the Planning Secretary or GSC, or another endorsed local strategy or strategic plan?

The planning proposal is consistent with the City of Canada Bay Local Strategic Planning Statement.

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5. Is the planning proposal consistent with any other applicable State and regional studies or strategies?

There are no other state or regional studies or strategies that are directly relevant to this planning proposal.

6. Is the planning proposal consistent with the applicable state environmental planning policies?

The Planning Proposal is consistent with current state environmental planning policies:

SEPP Title	Consistency of Planning Proposal
Biodiversity and Conservation 2021	Not applicable
Building Sustainability Index: BASIX 2004	Not applicable
Exempt and Complying Development Codes 2008	Not applicable
Housing 2021	Not applicable
Industry and Employment 2021	Not applicable
65 - Design Quality of Residential Flat Development	Not applicable
Planning Systems 2021	Not applicable
Precincts – Central River City 2021	Not applicable
Precincts – Eastern Harbour City 2021	Not applicable
Precincts – Regional 2021	Not applicable
Precincts – Western Parkland City 2021	Not applicable
Primary Production 2021	Not applicable
Resilience and Hazards 2021	Consistent
Resources and Energy 2021	Not applicable
Sustainable Buildings 2022	Not applicable
Transport and Infrastructure 2021	Not applicable

7. Is the planning proposal consistent with applicable Ministerial Directions (section 9.1 Directions)?

The Planning Proposal is consistent with relevant Ministerial Directions:

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Direction Number	Direction	Statement of Consistency
1.1	Implementation of Regional Plans	Consistent
1.2	Development of Aboriginal Land Council land	Not applicable
1.3	Approval and Referral Requirements	Consistent
1.4	Site Specific Provisions	Consistent
1.5	Parramatta Road Corridor Urban Transformation Strategy	Not applicable
1.6	Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan	Not applicable
1.7	Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	Not applicable
1.8	Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	Not applicable
1.9	Implementation of Glenfield to Macarthur Urban Renewal Corridor	Not applicable
1.10	Implementation of the Western Sydney Aerotropolis Plan	Not applicable
1.11	Implementation of Bayside West Precincts 2036 Plan	Not applicable
1.12	Implementation of Planning Principles for the Cooks Cove Precinct	Not applicable
1.13	Implementation of St Leonards and Crows Nest 2036 Plan	Not applicable
1.14	Implementation of Greater Macarthur 2040	Not applicable
1.15	Implementation of the Pyrmont Peninsula Place Strategy	Not applicable
1.16	North West Rail Link Corridor Strategy	Not applicable
1.17	Implementation of the Bays West Place Strategy	Not applicable
3.1	Conservation Zones	Consistent
3.2	Heritage Conservation	Consistent
3.3	Sydney Drinking Water Catchments	Not applicable
3.4	Application of C2 and C3 Zones and Environmental Overlays in Far North Coast LEPs	Not applicable

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3.5	Recreation Vehicle Areas	Not applicable
3.6	Strategic Conservation Planning	Consistent
4.1	Flooding	Consistent
4.2	Coastal Management	Consistent
4.3	Planning for Bushfire Protection	Not applicable
4.4	Remediation of Contaminated Land	Consistent
4.5	Acid Sulfate Soils	Consistent
4.6	Mine Subsidence and Unstable Land	Not applicable
5.1	Integrating Land Use and Transport	Consistent. The additional land use will improve access to recreation facilities for the local community.
5.2	Reserving Land for Public Purposes	Not applicable
5.3	Development Near Regulated Airports and Defence Airfields	Not applicable
5.4	Shooting Ranges	Not applicable
6.1	Residential Zones	Consistent. Additional services can be provided in accordance with any relevant approvals which also seek to minimise the impact of such approvals on the surrounding land uses.
6.2	Caravan Parks and Manufactured Home Estates	Not applicable
7.1	Business and Industrial Zones	Consistent. Additional business and employment opportunities will be enabled to support the local centre and local community.
7.2	Reduction in non-hosted short-term rental accommodation period	Not applicable
7.3	Commercial and Retail Development along the Pacific Highway, North Coast	Not applicable
8.1	Mining, Petroleum Production and Extractive Industries	Not applicable
9.1	Rural Zones	Not applicable
9.2	Rural Lands	Not applicable
9.3	Oyster Aquaculture	Not applicable
9.4	Farmland of State and Regional Significance on the NSW Far North Coast	Not applicable

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Section C: Environmental, social and economic impact.

8. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

It is considered unlikely that the Planning Proposal will adversely affect critical habitat or threatened species, populations or ecological communities, or their habitats.

9. Are there any other likely environmental effects of the Planning Proposal and how are they proposed to be managed?

The planning proposal does not relate to a specific use on a specific land parcel. A range of uses/business types will become permissible with consent under the group term in the R1 zone, as a result of the planning proposal.

10. Has the planning proposal adequately addressed any social and economic effects?

The proposed changes are unlikely to result in any adverse social or economic effects.

Section D: Infrastructure (Local, State and Commonwealth)

11. Is there adequate public infrastructure for the planning proposal?

This proposal is unlikely to have any significant impacts on the demand for, or provision of infrastructure.

Section E: State and Commonwealth interests

12. What are the views of State and Federal public authorities and government agencies consulted in order to inform the Gateway determination?

No consultation has been carried out at this stage with any State and/ or Commonwealth Public Authorities or service providers. Consultation will be undertaken in accordance with the requirements of the Gateway Determination.

4. PART 4 - Mapping

The planning proposal does not require an amendment to, or the creation of, any LEP maps.

5. PART 5 - Community Consultation

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Community consultation will be undertaken in accordance with the requirements of the Gateway determination.

6. PART 6 - Project Timeline

Stage	Timeframe and/or Date
Consideration by Council	October 2022
Gateway determination	Anticipated before 30 November 2022
Pre-exhibition	December 2022 – January 2023
Commencement and completion dates of public exhibition period	February 2023
Consideration of submissions	March 2023
Council determination	April 2023
Submission to the Department for finalisation (where applicable) or liaison with Parliamentary Counsel	May 2023
Gazettal of LEP amendment	Anticipated June 2023

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Ref	Submitter	Issue	Comments	Council Response
1, 2, 3, 4, 5, 6, 10	Five Dock Residents	Traffic - generati on	Congestion produced by the large influx of new residents and vehicles would place a substantial additional strain on an already congested street and locality. The generation of "approximately 15 vehicles per hour" cannot be dismissed as "relatively minor" as stated in the council document. This assertion fails to account for the considerable traffic and congestion problems already being experienced by residents of Harrabrook Ave and Henley Marine Parade. The local road network is already beyond "capacity" and is expected to accommodate traffic movements far beyond its original design requirements. A number of residents have experienced a number of "close calls" as a result of hazardous traffic movement on Harrabrook Avenue, Ramsay Road, Henley Marine Drive and other nearby street. This is in part due to the rise in the number of motorise "rat-running", short-cutting and/or driving at excessive speed through our street. I am concerned that it will only be a matter of time until there is an accident	The traffic generating guide to development estimates that traffic generation would be less than that of the former use being a Motor Registry. Further assessment will need to be undertaken at the development assessment stage when the type and intensity of use will be finalised and it is possible to determine the extent to which traffic will be generated by the development including any cumulative impacts. The planning proposal provides indicative uses and possible built form of a development for the site to inform a change in planning controls in the LEP such as height and floor space ratio. Planning controls set the upper limit of development that may be acceptable. Detailed assessment and approval are undertaken when a development application is lodged. At this stage, the development plans and proposal will be assessed. If the proposed development creates unacceptable traffic impact, the maximum
			involving injury and/or loss of life in our locality and I worry that the proposed development will raise that risk. The assessment of traffic impact disregards the significant growth in traffic on local streets in the years since the closure of the Motor Registry and the construction of WestConnex. It also disregards the fact the Motor Registry only generated additional traffic movements during normal office hours and those movements were generally limited to the Motor Registry's street frontage on Henley Marine Drive.	yield may not be achieved.
1,	Five Dock	Traffic -	It does not appear to have given due consideration to the	The draft Development Control Plan (DCP) provides for a
2,	Residents	Baseme	implications of the proposed development locating a two way	preferred driveway location. Transport for NSW has expressed a
3,		nt	basement carpark access/driveway on Henley Marine Parade near	need to ensure that the proposed vehicular access on the local
4,		parking	a blind bend and a dangerous choke point on the road. It would	road is to be located far from Ramsay Road at the detailed design
5,		access	be safer for basement carpark access to be located further east	stage.



Ref	Submitter	Issue	Comments	Council Response
6, 10	Justine	13300	on Henley Marine Parade and it is in the best interests of the local community.	The preferred driveway location is located at the lowest point and furthest from Ramsay Road to minimise any potential impacts. The suitability of the location of driveway will be considered for assessment once detailed designs of the proposed development are finalised and submitted, as part of a development application. The driveway design would have to comply with Australian Standards relating to gradient may need to include safety management techniques.
1, 2, 3, 4, 5, 6, 10	Five Dock Residents	Right of Way	Increased commercial activity via the right of way on Harrabrook Avenue will only further impede street access issues for the residents of what is a narrow and frequently congested thoroughfare. There are safety risk and hazards associated with the inability of the Right of Way (ROW) to accommodate large service vehicles as shown by a number of photos impeding cyclists, pedestrians, disrupting traffic flow, unloading roadside on a narrow public street and trucks stopping and parking illegally. Business owners, service staff, shop-top tenants, customers and other visitors to the Ramsay Road commercial buildings often compete for parking space. Photos show cars obstructing pedestrian footpath, obstructing/impeding road cyclist forced to ride on the wrong side of the road, truck stopped in the middle of road, illegal parking in No Parking/No Stopping area, parking on verge and across driveways. It is highly likely that the proposed development would place a substantial additional burden on street parking in the area as more traffic is directed into Harrabrook Avenue. A safer alternative is for the proposal to direct all new traffic movement into the commercial tenancy from the eastern end of a much wider and uncluttered Henley Marine Drive (approximately 9.35 metres). This would assist in eliminating the fear of heightened risk of road traffic accidents and injury to Harrabrook Avenue residents and their families. The combined widths of Henley Marine Drive (9.35 meters) and the redundant	The Right of Way (ROW) has a width of 6.095m. This is wide enough to accommodate two way traffic provided there are no vehicles or items placed on the right of way. The photos show a combination of illegally parked vehicles in the ROW as well as rubbish and skip bins located in the right of way. The ROW creates a right of carriageway for properties 7 to 17 Ramsay Road to pass through the 6m wide portion of land. The Conveyancing Act 1919 stipulates that the responsibility to maintain access rests with the parties providing the benefit. This is not a compliance issue that Council is able to enforce and is a civil matter. Council is however the planning authority for development that may utilise the ROW, in this case, 7 Ramsay Road. The inability of the ROW to function properly does not impede a planning proposal, however the issue must be considered. It is noted that the ROW at present provides benefit to 7 Ramsay Road and this would not automatically apply to the rest of the development site. The planning proposal sets the built form that is appropriate for the site. The business premises which are the subject of the planning proposal, aside from 7 Ramsay Road are serviced via Ramsay Road and Henley Marine Drive. Future development on this site will need to resolve access issues and provide legal right for access over the ROW if required. Alternatively the servicing needs of the commercial premises for the subject site from the ROW should be reconsidered. The draft DCP has been amended to include a provision that business



Ref	Submitter	Issue	Comments	Council Response
			RTA parking bays (5.5 meters) would provide a significantly safer large vehicle manoeuvring area of approximately 14.85 meters than that of the currently proposed and limited width of Harrabrook Avenue (8 metres).	premise servicing needs are to be accommodated on site and access arrangements be finalised and demonstrates that there will be no adverse impacts for the surrounding area.
			Vehicles access to the commercial tenancy proposed by the proposal would be better placed off Henley Marine Drive as it would have "less impact on the amenity of surrounding properties". This responds positively to the alternative and unsafe option for traffic intensification and congestion around the right of way on Harrabrook Avenue and the ensuing community fear of "heightened risk of road accidents for residents and their families". Another alternative is if 7 Ramsay Road is to be amalgamated with 1 Ramsay Road, then access to the ROW for 7 Ramsay Road should be forfeited.	
7	Five Dock Resident	Traffic – Harrabr ook Avenue	We are rather concerned about the plans for the back entrance for the proposed shops on Harrabrook Avenue. Over the years this intersection has had increased car accidents as this road is extremely narrow. Drivers continue to turn right despite the no right turn sign and the amount of traffic running through Harrabrook seems to be increasing. The only solution would be to turn Harrabrook Avenue into a one way street entry from Ramsay Road this will have a flow through effect and allow trucks to fit in.	Whilst one-way restrictions would prevent conflict between vehicles travelling in opposing directions, there are a number of factors to consider including potential increase in vehicle speeds and hence a reduction in safety due to not needing to give way to vehicles coming in the opposing direction and the need for consensus as to the direction the one-way restrictions should apply if they are supported at all given the added inconvenience.
8	Five Dock Resident	Traffic	Harrabrook Avenue has become overly congested in recent years, with both sides of the street lined with parked cars, every single night and day. My own home has no garage or driveway and I am often forced to park many meters from my home and walk a long distance carrying shopping bags. Some months ago, I received a questionnaire from Council about this issue, which indicated Council's intention to address the problem. It would be highly ironic if Council were to approve this development with the addition of 37 dwellings which will further exacerbate the problem. Furthermore, there has been no action or update on this matter.	The questionnaire related to Council's investigation of a parking permit scheme in area. It concluded that Harrabrook Avenue would not be included at this time, however it may be further investigated in the future. The draft DCP will require all parking to be provided on site. The draft DCP will also require provision of onsite residential visitor on site.

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Ref	Submitter	Issue	Comments	Council Response
1	Five Dock Resident	Parking - retail	The developers use of on-street parking to accommodate retail parking needs is an inadequate response and fails to consider the detrimental impact to local resident and existing commercial parking needs. Currently business owners and their staff, customers, shop-top tenants and other visits to the existing commercial buildings often utilise parking space in front of the site along Henley Marine Drive and along Harrabrook Avenue. Scarcity of parking spaces in the immediate vicinity results in illegal parking of cars. I believe it would be safer for basement carpark access to be made available for future resident and retail/commercial parking needs. A reduction in height to 3 storeys and 2 storeys would enable more basement carparking spaces for residential flat building owners/tenants and more basement parking made available for retail owners, staff customers and service delivery partners.	Parking for the retail tenancy should be contained within the development site at rates set out in the Canada Bay Development Control Plan and should not rely on on-street parking. At the development assessment stage if carparking cannot be accommodated on site, the maximum density for residential may not be achieved.
1, 2, 3, 4, 5, 6, 9, 10	Five Dock Residents	Height	A development of 14m does not respond to the scale of the existing low-density residences on Harrabrook Avenue. A four storey development such as the proposed development is completely unresponsive to the immediate locality which almost entirely comprises single and double storey detached homes. The substation building is a unique and antiquated piece of infrastructure. It is not a residential building and as such ought not provide a height reference for a new residential building. The planning proposal seeks extraordinary increases to allow for 3 storey (10m) and 4 storey (14m) residential flat buildings. The planning panel's recommended building height when compared to the current LEP maximum of 8.5m and the typical building heights of 8.5m or 11m are extraordinarily favourable to the developer. The increase is not justifiable nor blends in with the surrounding residential housing estate (Cromer Estate). If granted, it would have a detrimental impact on the amenity to surrounding properties and significantly erode the low-density character residential setting of the immediate neighbourhood.	The proposed maximum height of building of 14m is considered acceptable given the location of the land within a neighbourhood centre, near Five Dock Town Centre and future metro station. It is acknowledged that the character of the area surrounding the neighbourhood centre, comprises low density residences. The height of the development has been considered by the independent experts of the Planning Panel. The Panel supported a maximum height of 10m and 14m to respond to the character of the area, with a transition in height from the proposed development to the low-density residences to the west. The proposal has also been supported by an independent urban design review engaged by Council. The site is a suitable location for increase in development scale particularly given the commitment of the state government to building a new Metro station within 800m of this site, provided that potential impacts of the development can be addressed. Larger sites create opportunities to address interface issues more successfully and the planning controls for larger sites can be of a slightly higher

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Ref	Submitter	Issue	Comments	Council Response
			A reduction in the scale of the proposed development to a more modest 3 storey and 2 storey buildings on the site can equally achieve the developer aspiration being a visual gateway to the Canada Bay LGA. Alternatively, the precedents set on Henley Marine Drive towards Parramatta Road would suggest a maximum of 12m building height is more appropriate, which was originally recommended by Council's independent urban design report. We accept the concessions made with regards to omitting the proposed townhouses on Harrabrook Ave, but the 14m building height will extend well above the surrounding buildings and will be a visual intrusion in the existing landscape. I understand that Council's DCP requires a 15.5m height limit to accommodate a minimum floor to ceiling level. I am uncertain if this proposal meets that requirement.	scale. The scale of the development on the periphery of a neighbourhood centre is not considered to erode the low-density character residential setting. There are no proposed changes to allow greater density in the immediate residential setting. Even though the substation building on Ramsay Road is not a residential building, it is a building that sets the scale of development in the neighbourhood centre. The portion of the site with a maximum 14m height would front Ramsay Road and be considered as part of the neighbourhood centre. It is important to note that the proposed DCP provisions require a three storey street frontage height (approx. 10.6m) on Ramsay Road with the fourth level set back. Visually, the building will read as a three storey building to Ramsay Road. The draft DCP specifies minimum floor to floor height, with a commercial floor to have minimum 4.4m and residential floors 3.1m. The site does slope slightly to the west. Figure G3.68 of the draft DCP shows how this is possible. Any proposed development would need to comply with the maximum height limit and guided by the DCP.
8	Five Dock Resident	Height /Charact er	The proposal to change zoning and height limit in order to allow this extremely high rise development to proceed, will have larger consequences for the area beyond this particular development. One of the many attractions for those of us who have chosen to live here, are its low density, character homes - the proposed zoning and height changes will open the door for further developments of this nature that will ultimately change the face of the area unfavourably for those of us who own and live there.	The site is located within a row of shops on Ramsay Road and includes the former RTA site and workshop on the corner with Henley Marine Drive. The Planning Proposal would allow an additional permitted use being a residential flat building. Despite being surrounded by predominantly low-density residential development, the scale of the mixed use development on this site would not be unreasonable given the neighbourhood centre character of the buildings on busy Ramsay Road. The Planning Proposal is contained to the site incorporating 1-7 Ramsay Road and 5 and 7 Harrabrook Avenue. It does not change the planning controls for any other site in the vicinity. The Planning Proposal minimises amenity impacts by requiring landscaping and building setbacks and reducing height and FSR.



Ref	Submitter	Issue	Comments	Council Response
9	Five Dock Resident	Charact er - Commer cial zone	We purchased our family home in relatively quiet residential street and do not want to end up residing in a commercial zone.	The planning proposal does not expand the extent of the commercial zone.
1, 2, 3, 4, 5, 6, 10	Five Dock Residents	Loss of privacy	I am concerned that local residents will suffer loss of privacy and amenity as a result of the proposed development overlooking their properties, generating increase ambient light and other issues associated with the high density of individual titles contained with the development.	It is acknowledged that a 3 storey scale of building fronting Henley Marine Drive is taller than the single storey dwellings fronting Henley Marine Drive. The building envelope has been established to reduce amenity impacts for existing dwelling houses to the north and west of the site. To address potential privacy and amenity issues, the proposed DCP requires deep soil areas and landscaping to be provided along the boundary of existing residential properties. The building is required to be set back a minimum 9m from the northern boundary, consistent with the Apartment Design Guide.
1, 2, 3, 4, 5, 6, 10	Five Dock Residents	Loss of amenity – noise and odours	I am concerned that neighbouring residents on Harrabrook Avenue will endure additional noise disruption from commercial activity and odours emanating from garbage and/or grease traps associated with commercial activity. Currently, business activity of this nature occurs beyond approved business hours (early hours of the morning) and is evidenced through the photos attached. The current location of the Henley Marine Drive basement carpark access and garbage collection zone will interfere with neighbouring residents' quiet enjoyment of their properties and the local area's amenity. There will be significant noise, disruption and odours generated by traffic movement and garbage collection. We are concerned that local residents will suffer a loss of amenity as a result of the proposed development overlooking their properties, generating increase ambient light and heat and other issues associated with the high density of individual titles contained with the development.	As the location of the development will be located within a neighbourhood centre, it is not unreasonable for business uses to occur, provided it does not adversely affect the amenity of the surrounding residents to operate. Each use of the proposed business floor space will need to be approved through a development assessment process. Specific noise and other amenity impacts will need to be addressed depending on the nature of the proposed use. The proposed DCP provides for a preferred driveway location adjacent to 1F Henley Marine Drive. It is expected that an area of deep soil planting and landscape is provided to that boundary, as well as to the northern boundary, to help minimise any adverse impacts. The site is already currently serviced by garbage collection trucks. The noise and disruption currently exist, and it is not unreasonable for any land to be serviced in such a way. The proposed DCP addresses potential overlooking and light impact with building setbacks and landscaping requirements.



Ref	Submitter	Issue	Comments	Council Response
10	Five Dock Resident	Heat island effect	We are concerned the proposed development features dark-coloured roofing material, which has been identified as likely to contribute to a "heat island" effect for the surrounding area, with adverse implications for neighbouring properties.	The draft DCP will require a minimum of 20% of the site to be landscaped area. Detailed materials and colours to be used on a proposed development will be assessed as part of a development application. A provision has been included in the DCP to ensure that future development consider roof colours and materials that minimises the heat island effect.
8	Five Dock Resident	Not in the public interest - density	This proposed development requires a rezoning of the land for a different use which can be reasonably developed under existing zoning and the assumption that the existing zoning would not be in the public interest seem contrary to why Council would support a large development of this nature. I believe Council should favour low density rather than the high-density housing that is being submitted. I cannot believe that the change in zoning is in the local rate payers' best interest and preserve the natural streetscape of the area.	The Planning Proposal has been submitted to increase development on the site. The Planning Proposal sets the built form for the site, being on the periphery of a neighbourhood centre. An increase in residential density as a buffer between low density residences and neighbourhood shops are considered acceptable.
1, 8, 9	Five Dock Resident	Public interest - Residen tial amenity	I have real concerns that Council may be elevating the needs of the developer to the detriment of the immediate neighbourhood and residents living around the site. The Planning Panel recommendations detailed in this planning proposal together with Council allowing "prohibited" business uses to continue to operate at/on/from this development site, gives me no confidence that Council and/or the developer are concerned about the protection of residential amenity. This development application will have no benefit for the current	This planning proposal has been initiated by the owner of the land. Council must assess any planning proposals in accordance with the Environmental Planning and Assessment Act 1979 and State Government Guidelines on its strategic and site specific merit and to seek approval from the Department of Planning and Environment to proceed. The proposal provides for orderly development to revitalise the former Motor Registry site and will be required to address amenity issues and make contributions to affordable housing.
			owners and occupiers of Harrabrook Avenue and neighbouring streets and only serves the financial gain of the developer who has made this proposal.	The planning proposal process does not allow prohibited uses to continue to operate. It sets out planning controls on the type of development that is considered reasonable.



Ref	Submitter	Issue	Comments	Council Response
8	Five Dock Resident	Transpa rency	What assurance can be provided to the residents and owners of Five Dock that there are no conflicts of interest and no benefits accepted with respect to this particular development. Could Council also please advise what is Mayor Tsirekas' and any other councillors interests are, pecuniary or non-pecuniary, with the development or the developer.	Councillors and Council officers must abide by the code of conduct and are to declare all actual and perceived conflicts of interest relating to matters when working in an official capacity.
1	Five Dock Resident	Subdivis	The planning proposal states "the proposed minimum lot size of 360sqm is consistent with surrounding lots with the majority of lots in the surrounding area being less than 450sqm". While some lot sizes may be less than 450m there are no lot sizes less than 400m². A reduction in land size as proposed is inconsistent with the pattern of land sizes of properties immediately surrounding the proposed development site. I currently share one boundary with the proposed development site. Should there be an amalgamation of portions of land at 5 and 7 Harrabrook Avenue with 1 Ramsay Road I would be subjected to sharing two boundaries. It will result in my having to share two boundaries with the development site and this will result in a significant devaluation of my adjoining property.	The lots on the southern side of Harrabrook Avenue are not part of a notable subdivision pattern. There are a number already subdivided properties creating additional lots fronting Henley Marine Drive. This includes subdivision of 33 and 35 Harrabrook Ave to create 1E Henley Marine Drive, subdivision of 9 Harrabrook Avenue to create 1F Henley Marine Drive, and subdivision of 1, 3 and 5 Harrabrook to create 1 Ramsay Road. The proposed minimum lot size is to enable development of a dwelling and landscaping. There are a number of lot sizes in the street below 400m² that demonstrates this is possible they include: 1 Harrabrook Ave (373.1m²), 2 Harrabrook Ave (approximately 292m²); 4 Harrabrook Ave (approximately 293m²); 14 Harrabrook (approximately 342m²), 16 Harrabrook Ave (approximately 276m²); 22 Harrabrook Ave (approximately 358m²); 22A Harrabrook Avenue (326m²). It is noted that the subdivision of 5 and 7 Harrabrook Ave would create 2 sharing of boundaries for some lots, however a devaluation of adjoining property is not a planning matter for consideration.



Ref	Submitter	Issue	Comments	Council Response
Ref 1, 2, 3, 4, 5, 6, 10	Residents	Questio ns for Council	1) What steps will be undertaken to protect and enhance the privacy and local amenity currently enjoyed by neighbouring residents? 2) What steps will Council undertake to ensure local residents are allowed input into any Planning agreement determined between Council and the Proposed Developer for improvements to the surrounding public domain? 3) What safeguards will be put in place to ensure neighbouring residents are not impacted by additional noise and other disruption caused by the increased commercial activity generated by the proposed development? 4) What steps will be undertaken to alleviate traffic congestion in the vicinity of the proposed development? 5) How many traffic incidents have occurred within a half kilometre radius of the proposed development within the last five years and what was the nature and cause of those incidents?	1) The DCP sets building envelopes that include privacy measures such as the requirement for building setback to other residences nearby and landscaping. 2) There is no planning agreement associated with this planning proposal. Planning agreements are generally exhibited concurrently with planning proposals or applications. 3) The proposal provides for commercial floor space. The nature of the commercial use will be assessed as a development application which would include noise and other impacts. 4) The proposal is not expected to significantly increase traffic in the area. An assessment will be made at the development application stage to determine the extent of the traffic impact. Traffic congestion will continue to be monitored and investigated. 5) There are no reported road crash history on either Harrabrook Avenue between Great North Road & Ramsay Road and on Henley Marine Drive between Parramatta Road and Ramsay Road. Reported road crashes have occurred on Ramsay Road, Great North Road and Parramatta Road, which all fall under the
			6) What steps will be undertaken to ameliorate the incidence of dangerous driving and excessive speed occurring on Harrabrook Avenue, Ramsay Street and Henley Marine Parade?	care and control of TfNSW as they are all State Roads. Reported road crashes are occurring east of Ramsay Street on Henley Marine Drive, Connecticut Avenue and Minnesota Avenue. However, it is noted that these are low in numbers with no crash trend (type or location) evident. 6) Given that there is no reported crash history on Harrabrook Avenue and Henley Marine Drive near 1 Ramsay Road, the matter would be for NSW Police to conduct enforcement to ameliorate the incidence of dangerous driving and excessive speed. A speed radar display (SRD) has previously been installed towards Livvii's Place on Henley Marine Drive. Council rotates the temporary SRD's throughout the course of the year. Henley Marine Drive near Livvii's Place continues to be on the rotation list amongst various other locations across the LGA. Currently NSW Police patrol Ramsay Street regularly and would have an active presence throughout the area.



Ref	Submitter	Issue	Comments	Council Response
			7) What steps will be undertaken to alleviate parking congestion in the vicinity of the proposed development?	7) The proposal is expected to provide all required parking on site and will not significantly increase the parking demand in the vicinity, noting that there may be a number of under-utilised parking spaces on Henley Marine Drive.
			8) What steps will Council take to ensure the existing Harrabrook Avenue traffic congestion and conflicts; and other safety risks and hazards; identified in the Annexure to the submission will not be exacerbated by the proposed development intended intensification of traffic flow in and around the right of way? 9) Where are the location (street addresses) of B1 zoned neighbourhood centres in the Canada Bay Local Government Area (LGA) and what, where applicable, are the minimum and maximum building heights for each?	8) The proposed development will not exacerbate the traffic congestion and conflicts on Harrabrook Ave caused by illegal parking and unloading of goods for the existing shops. The draft DCP will require all parking to be provided on site and any access from the right of way is to be consistent with the terms of any easement or right of carriage way including access and maintenance. 9) There are many lots zoned B1 Neighbourhood Centres within the Canada Bay LGA. They are primarily located in traditional centres and usually comprise a small number of interwar terrace shops. The location of B1 zoned land can be found by viewing the land use map at: https://www.planningportal.nsw.gov.au/publications/environme ntal-planning-instruments/canada-bay-local-environmental-plan-2013.
				The majority of the B1 zones have a maximum building height of 8.5 (2 storeys) and 11m (3 storeys). There are some lots zoned B1 that have a maximum height of 12m and 16m. Proposed height controls should relate to site context. The subject site is unique as it formed part of a former motor registry on the periphery of a neighbourhood centre. The large site provides an opportunity for additional height and to address interface issues more successfully.



Ref	Submitter	Issue	Comments	Council Response
6	Five Dock Resident	Questio ns for Council - addition al	10) As the proposed development directly adjoins the Inner West council boundary, is the Inner West Council aware of the impact of the proposed development on the existing infrastructure within this vicinity? For example, the proposed development will result in an increase to the existing traffic congestion along Ramsay Road at Five Dock / Haberfield? 11) Why was only a preliminary traffic assessment report completed considering the proximity and impact of the surrounding major road infrastructure ie. WestConnex, City West Link and Parramatta Road - to the proposed development; and the adjoining Croker Residential Estate?	10) The views of the Inner West Council has been sought as part of the public exhibition of the planning proposal, however no response has been received. 11) A preliminary traffic assessment report was completed to accompany the planning proposal. The planning proposal is to change the planning controls that govern development on the site. Any plans are indicative at this stage to inform the broader development concept. It is not until a development application is sought and detailed design confirmed, that the extent of the traffic impacts will be fully assessed. A preliminary traffic assessment report is considered satisfactory to determine the impact of the Planning Proposal.
10	Five Dock Resident	Questions for Council—additionalquestions	12) What guarantees can council provide to residents adjoining the proposed development that garbage will not be stored and/or collected on land immediately adjoining their properties? 13) What guarantees can council provide residents and rate payers that plans for the proposed development will not be further amended and altered, contributing to further loss of amenity for neighbouring properties?	12) The proposed DCP requires bin storage not to be located within deep soil zones. There is a 3m wide deep soil zone adjoining the western boundary. 13) There will be further detailed plans submitted to Council for the redevelopment of the site. The development application will contain detailed plans for assessment including impacts on neighbouring properties. Neighbours will be notified about any future development applications.



Ref	Submitter	Issue	Comments	Council Response
11	Transport for NSW	Traffic and Transpo rt	TfNSW has reviewed the relevant documentation and raises no objection to the proposed amendments to the CBLEP 2013. However, Council needs to ensure that the proposed vehicular arrangement on the local road would be located far from the classified road at detailed design stage.	Noted.
12	Heritage Coordinator	Heritage	Suggest the following DCP provisions be included in relation to 7 Ramsay Road: - Building elements such as stone, tiles, bricks, windows, doors, window hoods, balustrades, lights, fireplaces, timber weatherboards, joinery and decorative architectural elements, located in buildings to be demolished must be salvaged, catalogued, labelled, and transferred to an established second building material dealer for reuse. A plan showing the location of the building elements proposed to be salvaged and a list of the elements must be submitted with a development application, together with the names of second hand building material dealers proposed to be offered the elements. - A digital photographic record of the building proposed to be demolished must be submitted with the development application. The record must include a comprehensive set of internal and external photographs of the existing building.	The existing shops along Ramsay Road are not heritage listed or within a heritage conservation area. Although encouraged, it is considered not necessary to include suggested provisions into the site specific DCP.





Planning Proposal

1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock



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Executive summary

This Planning Proposal has been prepared by Architectus Australia Pty Ltd on behalf of Croftstar Pty Ltd.

The Planning Proposal seeks Council's support to progress an amendment to the Canada Bay Local Environmental Plan 2013 (CBLEP 2013) to facilitate the renewal of neighbourhood retail services in a current B1 zone, and to provide opportunities for increased housing in close proximity to transport, services and public open space. This site is at one of the main entry points to the Canada Bay Local Government Area (LGA), providing an opportunity for the site to be a visual gateway response into the LGA.

The site is strategically located within 650m of the future Sydney Metro West station at Five Dock and is less than a 10-minute walk to the Five Dock local centre. Additionally, this Proposal presents an opportunity to contribute to boost the local economy and generate employment amidst the COVID-19 pandemic, as well, provide the opportunity for other public benefits.

The proposed amendments to the CBLEP 2013 are:

- Land zoning Amending the Land Use Zoning Map to rezone the rear portion of 5 and 7 Harrabrook Avenue from R2 Low Density Residential to B1 Neighbourhood Centre;
- Height of buildings Amending the Height of Buildings Map from 8.5m to 10m and 14m:
- Floor space ratio Amending the Floor Space Ratio Map from a maximum Floor Space Ratio (FSR) of 0.5:1 and 1:1 to a maximum FSR of 0.5:1 and 1.71:1;
- Lot size Amending the Minimum Lot Size Map for 5 and 7 Harrabrook Avenue from 450sqm to 360sqm;
- Active street frontage Amending the Active Street Frontage Map to introduce an active street frontage on land with frontage to Ramsay Road and extending 20. metres along Henley Marine Drive;
- Affordable housing Amending Clause 6.12 of the CBLEP 2013 and the Affordable Housing Contribution Scheme Map to introduce an affordable housing contribution of 5% affordable housing for the site; and
- Additional permitted uses Amending Schedule 1 'Additional Permitted Uses' to allow residential flat buildings on part of the site.

The site

The Planning Proposal relates to land at 1 and 7 Ramsay Road and 5 and 7 Harrabrook Avenue. Five Dock.

The site is bounded by Harrabrook Avenue to the north, Ramsay Road to the east, Henley Marine Drive and Iron Cove Creek to the south and low density residential housing to the west.

The site comprises four allotments, providing a total site area of approximately 3,300m².

The site currently accommodates the former Roads and Maritime Services (RMS) building and car park on the corner of Ramsay Road and Henley Marine Drive, retail premises at 7 Ramsay Road, and two single storey residential dwellings at 5 and 7 Harrabrook Avenue.

The site is identified in Figures 1 and 2.

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus





Figure 1 Subject site
Site outlined in red
Source: Near Maps with Architectus edits (2021)



Figure 2 Subject site
Site outlined in red
Source: Near Maps with Architectus edits (2021)

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



Planning context

The CBLEP 2013 is the primary environmental planning instrument applying to the site.

Land at 1 and 7 Ramsay Road is currently zoned B1 Neighbourhood Centre and land at 5 and 7 Harrabrook Avenue is zoned R2 Low Density Residential. The maximum building height currently applying to the B1 zone and R2 zone is 8.5 metres. The maximum FSR control for land zoned B1 is 1:1 and land zoned R2 is 0.5:1.

Refer to Figure 13 – 17 for CBLEP 2013 maps.

This Planning Proposal seeks to amend the CBLEP 2013 to introduce new planning controls for the subject site.

This Planning Proposal has been drafted in accordance with Section 3.33 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and "A Guide to Preparing Planning Proposals", prepared by the NSW Department of Planning and Environment (2018). In line with these documents, this Planning Proposal explains the intended effect of the proposed instrument and sets out the justification for making of the proposed instrument.

Strategic merit

This Planning Proposal has strategic merit and should be supported for the following reasons:

- It is in accordance with the Greater Sydney Region Plan: A Metropolis of Three Cities and the Eastern Harbour City District Plan. Renewing centres and creating great places is a key driver of the NSW Government. The site is within a 10-minute walk of the future Five Dock Metro Station, an easy walk of bus services on Parramatta Road, providing services to Sydney and Parramatta CBDs, and is adjacent to significant open space and recreation areas along Iron Cove Creek. Providing more retail, local services and housing in such an accessible location is a priority of the NSW Government and should be encouraged. The Proposal provides housing supply and a renewal of the local neighbourhood centre, that will not compete with the existing Five Dock town centre. The Planning Proposal's consistency with the Greater Sydney Region Plan and the Central City District Plan is further outlined in Section 7 of this document.
- It is in accordance with the Canada Bay Local Strategic Planning Statement. Provide housing supply, choice and affordability in key locations. The Proposal is crucial to assist the estimated population growth, of 32,000 residents by 2036. The site will support the increase in supply and housing choice to a diverse and changing community, providing services and transport through the proposed Five Dock Metro, the recently completed WestConnex and the local Five Dock town centre. The Planning Proposal's consistency with The Canada Bay Local Strategic Planning Statement is further outlined in Priority 4, Foster safe, healthy, creative, culturally rich and socially connected communities. The site is located adjacent to the Iron Cove Creek and provides a connection to the Inner West, Bay Run. The Proposal will assist in improving access to recreational and open spaces for residents.
- N.B: The Canada Bay Local Strategic Planning Statement was published before
 the announcement of the Five Dock Metro Station. Hence, local planning should
 be revisited by Council to provide more housing supply within the local area. It
 is also important to note, that the NSW Infrastructure Strategy 2018-2038 calls
 for an integration of land use and infrastructure planning.
- It is in accordance with the Canada Bay Housing Strategy. Local centres are
 planned to provide opportunities for alternative low and moderate scale
 housing, within walking distance. The Proposal provides a 4 storey residential
 development within walking distance to shops, services and facilities within the
 Five Dock Town Centre.

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus

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- Additionally, the site is 650m from the proposed Five Dock Metro, connecting the site to the Sydney CBD and Greater Sydney area within 30 minutes. In addition, the Proposal is consistent with a key housing priority in the Housing Priority whereby 'housing diversity and choice to be further addressed by infill development around centres in the form of low rise medium density, to provide a wider range of housing forms whilst being respectful of neighbourhood character'. The Planning Proposal will deliver private residential dwellings within an already established suburb. The architectural and landscape design enhances the surrounding streetscape and domain and links the bulk and scale of the local town centre to fit with the local context.
- The proposal will deliver more housing in the right location. The site is located on the doorstep of the future Five Dock Metro Station and Parramatta Road corridor. Located less than 700m from the future metro station and an undulating walk to transport options on Parramatta Road, the renewal of this site supports the NSW Government objective to promote renewal and increased housing in areas supported by infrastructure.
- The proposal supports the Greater Sydney Commission's vision of a 30-minute city. Renewing existing sites to deliver more shops and homes in an established neighbourhood is key to achieving this vision.
- The renewal of the site will deliver public benefits, including improved public domain outcomes, improved local shops and the renewal of an existing neighbourhood centre that will benefit the whole community.
- The Planning Proposal will renew an existing neighbourhood centre. A large portion of the site comprises the former RMS office and car park an unused and vacant site in need of renewal. The proposal will provide a renewal of the visual gateway for the LGA, and broadly transform Five Dock into an attractive and vibrant place with new shops and public domain improvements, supported by high-quality apartments that will bring new life and activity to the centre.

Accordingly, the proposal is well justified on strategic planning grounds, and will provide for the redevelopment of the site to deliver a high-quality, attractive and revitalised local neighbourhood centre.

Site specific merit test

In preparing the Planning Proposal, significant consideration has been given to the constraints of the site, the relationship with adjoining properties, traffic, and environmental impacts.

Given the site's highly accessible location, the need to renew a local centre and the ability for all on-site impacts to be appropriately managed, this Planning Proposal is considered to demonstrate site-specific merit.

The Proposal is appropriate for its context and it demonstrates site specific merit for the following reasons:

- The Indicative Concept Design supporting the Proposal, demonstrates that the proposed planning controls and building envelopes will deliver excellent design outcomes and high amenity apartments and communal spaces, consistent with the requirements of the Apartment Design Guideline (ADG).
- The site is within a highly walkable, accessible and well-serviced neighbourhood and has acceptable traffic impacts.
- The proposed design and built form minimises visual, privacy and overshadowing impacts for neighbouring properties. The proposal will not result in any overshadowing to open space, and maintains excellent levels of solar access to neighbouring properties.
- The proposal will facilitate the redevelopment of a vacant, largely unused site to deliver new shops and homes, which will provide significant benefits for the local community.

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



- The proposal provides an opportunity to renew a tired and run down
 precinct, which will upgrade the arrival experience into Five Dock, through an
 appropriately scaled 'gateway' architectural design that will provide housing,
 jobs, natural amenity and improved connectivity in a strategic location with
 Sydney's Inner West.
- The proposal will activate local streets with well-designed retail and ground floor apartments, that reconnect the site with the neighbourhood and improve safety, amenity and liveability outcomes.
- The Proposal is seen to be consistent with the established local character, provides an appropriate interface to adjoining properties and does not result in any significant visual impacts from nearby public spaces.
- The Proposal provides an opportunity to transplant highly significant trees. As recommended in the Arboricultural Impact Assessment, five (5) high retention value trees (Trees 2, 3, 4 and 5) are recommended to be transplanted either on site or in nearby reserve, and could occur under development proposed in response to the CBLEP 2013 amendment.
- The Proposal provides the opportunity to provide improvements to the public domain and adjacent open space, to satisfy the needs of residents and for the enjoyment of the wider neighbourhood. Such improvements may include:
- Extending the Sydney Water Preliminary Concept Design for Iron Cove Creek, to include the portion of the creek to the west of Ramsay Road;
- Install a council desired zebra crossing to enhance access to the development and to the Bay Run;
- Collaborate with council to implement a shared bike path outside the development;
- Providing 'blisters' within road reservations to accommodate street tree planting;
 - Provide new parking bays with blisters for street tree planting;
 - Provide active recreation opportunities, such as an outdoor gym station; and
 - Provide a children's playground in the open space corridor.

Urban design testing further demonstrates that the proposed amendments to the CBLEP 2013 would result in a desirable urban design outcome for the site. Refer to the Urban Design Study at **Attachment A.**

The Planning Proposal seeks to provide high quality neighbourhood centre and housing that meets the requirements of existing and future residents, Council and the community, in such a way that manages all foreseeable on and off-site impacts. It is therefore considered to have site-specific merit.

The Planning Proposal is consistent with the Greater Sydney Region Plan, Eastern City District Plan, City of Canada Bay Local Strategic Planning Statement and Canada Bay Housing Strategy, which all identify the need to deliver 'more housing in the right location'. The Planning Proposal's strategic merit is further demonstrated in **Section 8** 'Justification' of this report.

Assessment

A number of assessments have been undertaken to accompany the Planning Proposal and investigate potential impacts associated with the proposed amendments, including:

- Urban Design Report, including the Indicative Concept Design prepared by Squilace and Architectus.
- Site Survey, prepared by Veris Australia Pty Ltd
- Traffic and Transport Assessment, prepared by Varga Traffic Planning Pty
- Arboricultural Impact Assessment, prepared by New Leaf Arboriculture Pty Ltd

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



- Supplementary Arboricultural Assessment, prepared by New Leaf Arboriculture Pty Ltd
- Economic Report, prepared by Hill PDA Consulting
- Detailed Site Investigation Report, prepared by Aargus Pty Ltd
- Independent Justification for Tree Removal Letter, prepared by Active Green Services (on behalf of Council)

These assessments demonstrate that the site is suitable for the proposed controls and the proposed amendments would therefore have acceptable impacts.

Recommendation

The Planning Proposal demonstrates strategic and site-specific merit and is well justified. It is therefore recommended for support to proceed to a Gateway assessment and determination.



Introduction

1.1 Preliminary

This Planning Proposal has been prepared by Architectus Australia Pty Ltd on behalf of Croftstar Pty Ltd.

The Planning Proposal seeks Council support to progress and amendment to the planning controls applicable to the site under the CBLEP 2013.

The Planning Proposal seeks an amendment to the CBLEP 2013 to facilitate redevelopment of the site for new retail space and housing development.

To facilitate development of the site an amendment to the current planning controls is required. The proposed amendments to the CBLEP 2013 are outlined below.

- Rezone part of the site from R2 Low Density Residential to B1 Neighbourhood Centre;
- Increase the maximum building height on part of the site from 8.5m to 10m and 14m.
- Increase the floor space ratio (FSR) on part of the site from 0.5:1 and 1.0:1 to 1.71:1:
- Reduce the minimum lot size map for 5 and 7 Harrabrook Ave from 450m² to 360m²:
- Amend the Active Street Frontage Map to introduce an Active Street frontage on land with frontage to Ramsay Road and extending 20.0 metres along Henley Marine Drive:
- Amend Clause 6.12 of the CBLEP and the Affordable Housing Contribution Scheme Map to introduce an affordable housing contribution of 5% affordable housing for the site; and
- Amend Schedule 1 Additional Permitted uses to allow residential flat buildings on part of the site zoned B1 Neighbourhood Centre.

1.2 Indicative Concept Design

An Indicative Concept Design has also been prepared by Squillace to support the Planning Proposal. The Indicative Concept Design demonstrates that a high-quality built form outcome will be achieved under the proposed planning controls. Whilst this Indicative Concept Design indicates the preferred design outcome, flexibility remains to update the final design to accommodate Council's comments. The Indicative Concept Design demonstrates that the proposed amendment to the CBLEP 2013 would provide under a subsequent Development Application:

- Approximately 37 high-amenity apartments that will increase housing supply within walking distance of transport, services and open space;
- Around 580m² of ground floor retail space to activate Ramsay Road and reinvigorate the neighbourhood centre;
- Buildings up to 4 storeys, with rooftop communal spaces and gardens, designed to integrate with surrounding development;
- Potential improvements to the public domain and open space adjacent Iron Cove Creek: and
- A built form outcome that provides a visual gateway response, when arriving to this part of Five Dock.

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



A comprehensive overview of the indicative concept design and design approach is provided in the Urban Design Study at **Attachment A.**

1.3 Structure of this report

This report is prepared in accordance with the NSW Government's 'A Guide to Preparing Planning Proposals', and is set out as follows:

- Section 2: The site and context provides and overview of the site to which the Planning Proposal is intended to apply.
- Section 3: The planning proposal history provides an overview of the history of the planning proposal.
- Section 4: The proposal outlines the vision for the site and development of the reference scheme that has informed the proposed planning controls.
- Section 5: Objectives or intended outcomes provides a concise statement of the proposal objectives and intended outcomes.
- Section 6: Explanation of provisions outlines the proposed amendments to the planning provisions within the CBLEP 2013.
- Section 7: Assessment provides an assessment of potential impacts associated with the proposal.
- Section 8: Justification: provides the urban planning justification to support the proposal.
- Section 9: Mapping proposed LEP maps.
- Section 10: Consultation- outlines consultation with Council to date, and the consultation program that should be undertaken in respect of the proposal.
- Section 11: Project Timeline outlines expectations for timeframe of the progression of the proposal.
- Section 12: Conclusion concludes the report with a summary of findings and recommendations.

1.4 Authorship

The report has been written by Paris Wojcik, Associate Urban Planner and Amy Wilkins, Student Urban Planner. Quality Assurance has been provided by Michael Harrison, Strategic Advisor.

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus

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2. Site context

2.1 Site context

The site is located at 1 and 7 Ramsay Road and 5 and 7 Harrabrook Avenue, Five Dock. The site is bounded by Harrabrook Avenue to the north, Ramsay Road to the east, Henley Marine Drive and Iron Cove Creek to the south and low density residential housing to the west.

The subject site is centrally located within the suburb of Five Dock, in the City of Canada Bay Local Government Area (LGA). The site is a significant entry point to the suburb, and is identified on urban design grounds as a gateway site to this part of Five Dock an the broader Canada Bay LGA.

The site is in close proximity to Five Dock Town Centre, providing a range of services, amenities, community facilities and public transport services, as discussed further below.

The proposed Five Dock metro station is within a 700m catchment from the site. This will provide the site with direct trips to the Sydney CBD and other health, education and employment centres like Strathfield, Sydney Olympic Park, Burwood, Parramatta and Westmead. The metro station will assist the Proposal in providing the opportunity to locate housing and jobs within close proximity to transport infrastructure.

Additionally, the site is 300m from the Westconnex, enabling faster vehicular connections from the site along Parramatta Road and providing motorists with a light motorway network across Sydney.

The site is within easy walking distance to significant open space and recreation areas, including the Bay Run and recreational paths along Iron Cove Creek, Croker Park, Wadim (Bill) Jegorow Reserve and Timbrell Reserve.

Refer to Figures 3 - 12 for site context.



Figure 3 Local context plan
Site is indicated with red dot.
Source: Nearmaps with Architectus edits (2020)

2.2 Site details

Site dimensions

When all seven (7) lots are amalgamated, the subject site will be approximately 3,300m2. It has a frontage of approximately 25m to Ramsay Road and 86m to Henley Marine Drive.

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Legal description

The subject site consists of seven (7) lots, legally described as Lot D and Lot 5 DP 415618, Lot A DP 415618 and Lot B DP 415618, Lot 1 DP 241337, and Lots 1 and 2 DP 310522.

Please refer to Site Survey at Attachment B.

Land ownership

The Applicant is the land owner of the following properties proposed for rezoning:

- A. 7 Harrabrook Avenue (Lot 1 DP 310552)
- B. 5 Harrabrook Avenue (Lot 2 DP 310552)
- C. 7 Ramsay Road (Lot 1 DP 241337)
- D. 1 Ramsay Road (Lot 5 DP 310522)
- E. 1 Ramsay Road (Lot D DP 415618)
- F. 1 Ramsay Road (Lot A DP 415618)
- G. 1 Ramsay Road (Lot B, DP415618)

Please refer to Figure 4 below for lot description.



Figure 4 Local context plan
Site is indicated with red outline
Source: Nearmaps with Architectus edits (2020)

Note. Throughout the past 3 years, the Applicant has had discussions with landowners of properties. 9 – 17 Ramsay Road and 1 and 3 Harrabrook Avenue regarding potential acquisition, but to date has been unsuccessful. This Planning Proposal therefore seeks to rezone land owned by the Applicant only.

2.3 Surrounding local context

Existing land uses

The 3,300 sqm site, currently accommodates the former Roads and Maritime Services building on the corner of Ramsay Road and Henley Marine Drive and two residential detached dwellings along Harrabrook Avenue.

The site is bound by Harrabrook Avenue to the north, Ramsay Road to the east, Henley Marine Drive and Iron Cove Creek to the south and residential development to the west.

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



The site lies on the boundary of Canada Bay LGA, and as noted earlier, acts as a potential gateway site to the entry of the LGA at this location.

To the north of the site, land use contains low density residential housing comprising of 1-2 storey detached homes.

Further north, Five Dock local town centre is located 500m walking distance of the site. Five Dock town centre is a hub of commercial, civic and community life of the Canada Bay LGA. Five Dock town centre is accessible via bus services and the future metro station, connecting the suburb to Sydney CBD and delivering a 30 minute city.

To the east, Ramsay Road, a four lane carriage way, runs along the boundary of the site. Ramsay Road is currently unattractive and does not contribute to the local character of Five Dock, due to the lack of street planting and lighting, pedestrian priority, walkability and active street frontages.

To the south, Henley Marine Drive runs along the boundary of the site. Further south, Iron Cove Creek, also known as Dobroyd Canal, runs east to west. Sydney Water have prepared a final concept plan for public domain improvements and repairs on Iron Cove Creek.

To the west of the site, low density residential buildings, ranging from 1-2 storeys are located along Henley Marine Drive. Additionally, Croker Park is also located 350m from the site. Croker Park includes a children's playground and 2 tennis courts.

Please refer to Figure 5 – Figure 12 below on existing and surrounding land uses.





Figure 5 View looking south down Ramsay

The subject site is located to the right. The site and surrounding context has low pedestrian amenity and is need of renewal. Source: Architectus (2018)



Figure 6 View looking east down Henley Marine Drive, with Iron Cove Creek on the

Iron Cove Creek provides amenity and open space for future residents. Source: Architectus (2018)



Figure 7 View from the intersection of 1 and 7 Ramsay Road and Henley Marine Drive. Photograph identifies the previous Roads and Maritime Services building currently occupying

1 Ramsay Road. Source: Architectus (2018)



Figure 8 View of 5 and 7 Harrarbrook Avenue, Five Dock

These two lots currently consist of single storey residential detached dwellings. Both lots are zoned R2 Low Density Residential. Source: Architectus (2018)



Figure 9 View of 1 and 7 Ramsay Road The subject site has a prominent frontage which has the potential to provide an active ground floor to revitalise the neighbourhood centre character.

Source: Architectus (2018)



Figure 10 View of Iron Cove Creek This open space provides a green buffer that allows the site to support additional residential capacity without impacting neighbours to the

Source: Architectus (2018)

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus

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Figure 11 View of Electircity Sub-Station located north east of 1 Ramsay Road.

The height of the electricity substation matches the height outcome of the control.

Source: Architectus (2018)



Figure 12 Photograph of 1 Ramsay Road from the south east corner.

The site is a natural gateway to Five Dock, however the existing form does not contribute to this

Source: Architectus (2018)



2.4 Current planning controls

Local environmental plan

The Canada Bay Local Environmental Plan 2013 (CBLEP 2013) applies to the site.

Zoning

The subject site is partially zoned B1 Neighbourhood Centre and R2 Low Density Residential. Refer to **Figure 13**.

Land surrounding the site is zoned B1 Neighbourhood Centre immediately to the north and east, RE1 Public Recreation to the south and then R2 Low Density Residential surrounding.

R2 Low Density Residential, RE1 Public Recreation to the south and B1 Neighourhood Centre immediately to the north and east.





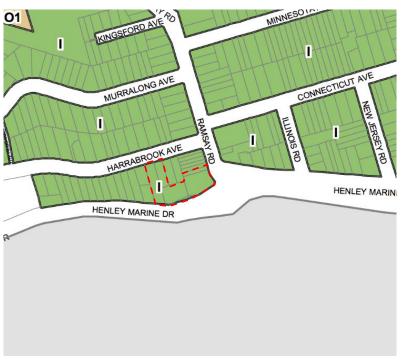
Figure 13 Land Zoning Map Site is indicated with red dashed outline. Source: CBLEP 2013

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



Height of Buildings

The maximum building height for the subject site is 8.5m. Land surrounding the site also has a maximum building height of 8.5m. Refer to **Figure 14**.



Height of Buildings Map Sheet HOB_005

Figure 14 Height of Buildings Map Site is indicated with red dashed outline. Source: CBLEP 2013

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



Floor Space Ratio

The site has currently two Floor Space Ratio controls. The north of the site, the land zoned R2 Low Density Residential has a Floor Space Ratio of 0.5:1. This section of the site is pursuant to Clause 4.4 of the CBLEP 2013, which identifies the site as 'Area 1'. This clause identifies the maximum floor space ratio for a dwelling house of semi-detached dwelling on 'Area 1' land. After the amalgamation of the site, the site will be 3,300 sqm.

To the south of the site, land zoned B1 Neighbourhood Centre has a Floor Space Ratio of 1:1. Refer to **Figure 15**.

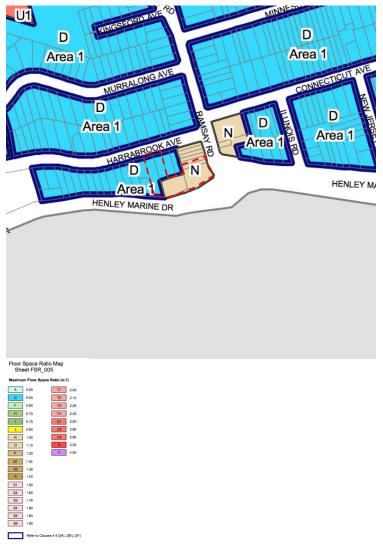


Figure 15 Floor Space Ratio Map Site is indicated with red dashed outline. Source: CBLEP 2013

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



<u>Heritage</u>

There are no heritage items located within or surrounding the subject site. Refer to **Figure 16**.



Heritage Map Sheet HER_005

Heritage

Conservation Area

Figure 16 Heritage Map
Site is indicated with red dashed outline.
Source: CBLEP 2013



Item 9.4 - Attachment 2

Acid Sulfate Soils

The site contains Class 5 Acid Sulfate Soils. Areas classified as 'Class 5' Acid Sulfate Soils are located within 500 metres on adjacent class 1,2,3 or 4 land.

South of the site, along Henley Marine Drive and Iron Cove Creek, contains Class 2 Acid Sulfate Soils. Refer to Figure 17.

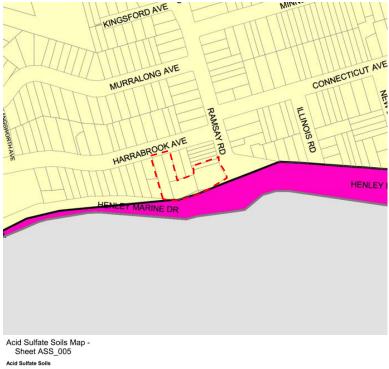


Figure 17 Acid Sulfate Soils Map Site is indicated with red dashed outline. Source: CBLEP 2013

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Active Street Frontages

The site and its surrounding area are not currently identified as an active street frontage. Refer to **Figure 18**.



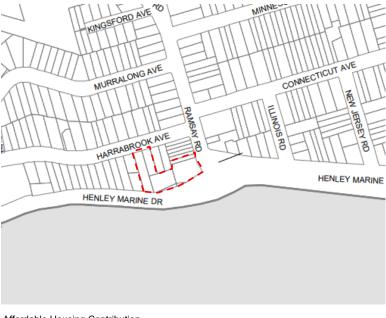
Figure 18 Active Street Frontages Map Site is indicated with orange dashed outline. Source: CBLEP 2013

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



Affordable Housing Contribution Scheme

The site and its surrounding area are not currently identified as an area dedicated for affordable housing. Refer to **Figure 19**.



Affordable Housing Contribution Scheme Map Sheet AHCS_005

Affordable Housing Contribution Area

Affordable Housing Contribution Area

Figure 19 Affordable Housing Contribution Scheme Map Site is indicated with red dashed outline. Source: CBLEP 2013



Planning Proposal History

Since 2018, the Applicant has engaged with the City of Canada Bay Council on a number of occasions. A summary of formal engagement is set out in **Section 10** of this report.

Council has recognised that the existing development on 1 Ramsay Road contributes little to the quality of the neighbourhood centre and to activity along Ramsay Road. A change in development controls and a modest increase in the maximum height and FSR could be supported, as a way to strengthen the neighbourhood centre that is well serviced by surrounding amenities and public transport.

Information below provides an overview of how the Indicative Concept Design (as a basis for this Planning Proposal) has evolved overtime.

Indicative Concept Design - May 2018

In May 2018, the Applicant met with Council to present and seek feedback on an early design concept for the site. Key features of the 2018 concept design included:

- A mix of terrace housing along Harrabrook Avenue and mix of maisonette townhouses and apartments along Henley Marine and Ramsay Road;
- An indicative dwelling yield of 45 dwellings including 10 terraces, 8 maisonette townhouses and 27 apartments;
- Approximate residential GFA of 6,134 square metres;
- Approximate retail GFA of 493 square metres; and
- Heights ranging between 2.5 and 5 storeys (equivalent to 10m and 17m).

Refer to Figure 20 below showing previous proposed site plan.



Figure 20 Site plan of indicative concept design (May 2018) Source: Architectus 2018

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



Indicative Concept Design - May 2019

In May 2019, the Applicant met with Council to present and seek feedback on an updated architectural design concept for the site. Key features of the 2019 concept design included:

- A mix of terrace housing along Harrabrook Avenue and apartments along Henley Marine and Ramsay Road;
- An indicative dwelling yield of 39 apartments and 13 terraces;
- Approximate residential GFA of 5,810 square metres (equivalent to a FSR of 2:1); and
- Heights ranging between 2 and 5 storeys (equivalent to 10m and 17m).

Refer to Figures 21 and 22 below showing previous proposed site plan and photomontage.



Figure 21 Site plan of indicative concept design (May 2019) Source: Squillace 2019



Figure 22 Photomontage of indicative concept design (May 2019) Source: Squillace Architects, 2019

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



Indicative Concept Design - March 2020

In March 2020, the Applicant met with Council to present and seek feedback on a further updated architectural design concept. Key design changes of the 2020 concept design included:

- An indicative dwelling yield of 43 apartments;
- Approximate residential GFA of 4, 870 square metres (equivalent to a FSR of 1.73:1);
- A 5-storey development, equivalent to a 17m height limit;
- Additional 4th storey set back to reduce visual prominence along the streetscape;
- Reduced bulk and scale due to the removal of dormer windows; and
- Materiality change to increase building articulation.

As noted earlier in this report, the Applicant is the owner of No.5 and 7 Harrabrook Avenue, and No.1 and No.7 Ramsay Road. Over the past three years, the Applicant has had discussions with landowners of properties 1 and 3 Harrabrook Avenue regarding potential acquisition, but to date has been unsuccessful and therefore led to the removal of proposed terraces along Harrabrook Avenue and instead seeks to retain the existing low density residential housing along Harrarbrook Avenue.

The Applicant however was able to acquire No.7 Ramsay Road, which has allowed for improved vehicular access to retail development via the existing service laneway along Harrabrook Avenue.

Refer to Figures 23 and 24 below showing previous proposed site plan and photomontage.



Figure 23 Proposed site plan of indicative concept design (March 2020) Source: Squillace, 2020

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Figure 24 Photomontage of indicative concept design (March 2020) Source: Squillace Architects, 2020

Lodgement of the Planning Proposal (December 2020)

On 18 December 2020, Architectus on behalf of the Applicant lodged a Planning Proposal to Canada Bay Council which sought to:

- Rezone part of the site from R2 Low Density Residential to B1 Neighbourhood Centre;
- Increase the maximum building height on part of the site from 8.5m to 15.5m;
- Increase the floor space ratio (FSR) on part of the site from 0.5:1 and 1.0:1 to 1.73:1;
- Reduce the minimum lot size map for 5 and 7 Harrabrook Ave from 450m2 to 360m2; and
- Amend Schedule 1 Additional Permitted uses to allow residential flat buildings on part of the site zoned B1 Neighbourhood Centre.

On 11 February 2021, the Applicant met with Council to discuss some of Council's concerns raised in the report prepared for the Local Planning Panel (LPP) including the following items:

- 10m height plane proposed to the west of the right of way;
- Setback to Unit 301 and visual impact to neighbouring residential properties;
- 14m height plane proposed to the east of the right of way;
- Affordable housing provision; and
- Retention & Protection of Tree 1 (Lilly Pilly).

On 18 February 2021, the Planning Proposal was reviewed by the LPP. The LPP agreed with assessment undertaken by staff and noted that whilst the centre is small, it is well located to accommodate an increase in density that is compatible with the character of the surrounding area. The following advice was provided:

- The Proposal is considered to have merit subject to the following amendments:
 - a) Provide a maximum building height fronting Ramsay Road to 14.0m and a maximum building height to the west of the right of way of 10.0m;
 - Ensure the retention and protection of tree identified as Tree 1, Lilly Pilly Syzgium sp in the Aboricultural Impact Assessment prepared by NewLeaf Aboriculture;

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- Introduce an Active Street frontage on the land with a frontage to Ramsay Road and extending around the corner along Henley Marine Drive; and
- d) Include a Detailed Contaminated Site Investigation.
- Council update the draft Canada Bay Affordable Housing contribution Scheme to apply to the subject site and map the land on the Affordable Housing Contribution Scheme Map under the Canada Bay Local Environmental Plan 2013;
- Negotiation with the applicant on the terms of a Planning Agreement prior to submission of the Planning Proposal for a Gateway Determination;
- A draft Development Control Plan be prepared by Council to guide the future development of the site that includes but is not limited to, the following controls:
 - a) Building envelope;
 - b) Ground level setbacks;
 - c) Upper level setbacks; and
 - d) Tree retention and landscaping requirements expressed as a percentage;
- The Planning proposal could be submitted to the Department of Planning Industry and Environment for a Gateway Determination, once the above matters have been addressed.

On 16 March 2021 Council resolved that the Planning Proposal be submitted to the Department of Planning, Industry and Environment (DPIE) for a Gateway Determination and provided the following recommendations:

- THAT the advice of the Local Planning Panel in relation to the Planning Proposal is noted.
- THAT prior to the planning proposal being submitted to the Department of Planning, Industry and Environment for a Gateway Determination, the applicant be invited to negotiate a planning agreement with Council.
- 3. THAT the Planning Proposal be submitted to the Department of Planning, Industry and Environment for a Gateway Determination.
- THAT prior to the Planning Proposal being submitted to the Department of Planning, Industry and Environment, the Planning Proposal be updated to:
 - a) provide a maximum building height fronting Ramsay Road of 14.0m and a maximum building height to the west of the right of way of 10.0m.
 - revise the maximum floor space ratio to reflect the reduction in building height specified in (a) above.
 - ensure, subject to further investigation, the retention and protection of the tree identified as Tree 1, Lilly Pilly - Syzgium sp in the Aboricultural Impact Assessment prepared by NewLeaf Aboriculture.
 - introduce an Active Street frontage on the land with a frontage to Ramsay Road and extending 20.0 metres along Henley Marine Drive.
 - e) include a Detailed Environmental Site Investigation.
- THAT draft amendments be prepared to the Canada Bay Affordable Housing Contribution Scheme and Canada Bay LEP 2013 to require an affordable housing contribution with a target of 5% affordable housing, subject to feasibility.
- THAT the draft amendments to the Canada Bay Development Control Plan be prepared by Council to guide the future development of the site that includes, but not be limited to:
 - a) building envelope;

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- b) ground and upper level setbacks;
- c) tree and landscaping controls.
- THAT, should a Gateway Determination be received, the Planning Proposal, draft Development Control Plan and draft Affordable Housing Contribution Scheme be placed on public exhibition.
- 8. THAT delegation be requested from the Department of Planning, Industry and Environment to manage the plan making process.
- THAT authority be delegated to the General Manager to make any minor modifications to the Planning Proposal following receipt a Gateway Determination.
- 10. THAT Council note should the Planning Proposal proceed to exhibition, following consideration of any submissions, the Planning Proposal will be reported back to Council.

On 31 May, Council wrote to the applicant to request additional information to enable the Planning Proposal to be progressed for a Gateway Determination.

Table 1 below provides a response to the additional information requested by Council.

Table 1 Response to Council's Additional Information Request

Council comment	Applicant response
The submitted planning proposal needs to be updated to: a) identify a maximum building height fronting Ramsay Road of 14.0m and a maximum building height to the west of the right of way of 10.0m;	The Planning Proposal has been updated in accordance with Council's recommendation in relation to building height. Refer to Section 6 and Section 9 of this report.
b) revise the maximum floor space ratio to reflect the reduction in building height specified in a) above;	The Planning Proposal seeks to reduce the FSR to 1.71:1 by relocating floor space from the top of the building to accommodate larger unit areas, resulting in more 3 bedroom units than what was previously proposed. Refer to GFA and FSR calculation in the Urban Design Study at Attachment A.
c) introduce an Active Street frontage on land with frontage to Ramsay Road and extending 20.0 metres along Henley Marine Drive;	The Planning Proposal has been updated in accordance with Council's recommendations in relation to active street frontages. Refer to Section 6 and Section 9 of this report.
d) include a Detailed Environmental Site Investigation to address potential contamination;	The Planning Proposal has been updated to include a Detailed Site Investigation, which has been prepared by Aargus Pty Ltd, provided at Attachment G . A summary of the assessment is provided at Section 7.7. of this report.
e) amend clause 6.12 of the Canada Bay LEP 2013 to require an affordable housing contribution of 5% affordable housing and include an update to the Affordable Housing Contribution Scheme Map to identify the subject site;	The Planning Proposal has been updated in accordance with Council's recommendations in relation to affordable housing. Refer to Section 6 and Section 9 of this report. It should be noted that it is the Applicant's preference for a monetary contribution to be made to Council in lieu of the on-site dedication of completed dwellings. This is in accordance with Section 2.3 of Council's Affordable Housing Contribution Scheme.
f) reference the 8 lots affected by the Proposal, as per the survey plan submitted;	There are seven (7) lots affected by the Planning Proposal which include: Lot 1 DP 241337 (7 Ramsay Rd)

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Lot D DP 415618 (1 Ramsay Rd)
Lot A DP 415618 (1 Ramsay Rd)
Lot B, DP415618 (1 Ramsay Rd)
Lot B, DP415618 (1 Ramsay Rd)
Lot 5 DP 310552 (1 Ramsay Rd)
Lot 1 DP 310552 (7 Harrabrook Ave)
Lot 2 DP 310552 (5 Harrabrook Ave)
These lots are reflected on the updated Survey Plan, prepared by Veris Australia Pty
Ltd.

g) address all Ministerial Directions in particular 2.6 in relation to Contaminated land;
The Planning Proposal has been updated to include a Detailed Site Investigation, which has been prepared by Aargus Pty Ltd, provided at Attachment G.
A response to Ministerial Direction 2.6 has been summary of the assessment is provided at Section 8.2. of this report.

Following the advice of the LPP and Council's recommendations, as outlined in the table above, the Applicant and Project Team has amended the Planning Proposal and prepared an updated Indicative Concept Design and Urban Design Study that forms the basis of this refined Planning Proposal. Refer to **Attachment A.**

Primarily, the amendments include:

- Rezone part of the site from R2 Low Density Residential to B1 Neighbourhood Centre:
- Increase the maximum building height on part of the site from 8.5m to 10m and 14m;
- Increase the floor space ratio (FSR) on part of the site from 0.5:1 and 1.0:1 to 1.71:1.
- Reduce the minimum lot size for 5 and 7 Harrabrook Ave from 450m² to 360m²;
- Introduce an active street frontage on land with frontage to Ramsay Road and extending 20 metres along Henley Marine Drive;
- Introduce an affordable housing contribution of 5% affordable housing for the site; and
- Introduce an additional permitted use for the site to allow residential flat buildings on part of the site zoned B1 Neighbourhood Centre.

These amendments are reflected in the updated reference design as detailed in **Section 4** of this report and in the Urban Design Study at **Attachment A.**



4. The Proposal

4.1 Vision

There is a real opportunity for the site to support both renewal of the current local neighbourhood centre, whilst also providing a visual gateway point when arriving into this part of Five Dock.

The Proposal will support to improve the appearance of the neighbourhood centre by encouraging new mixed use built form with ground level retail. In addition, it will upgrade the arrival experience into Five Dock, through an appropriately scaled gateway architectural design that will provide housing and jobs in a strategic location with Sydney's Inner West.

Additionally, the site provides strong connections to the regionally important Iron Cove Creek and its associated parkland.

The vision for the development at Ramsay Road is to provide:

Gateway building

 Provide a high quality architectural statement on the corner of Ramsay Road and Henley Marine Drive and will renew the existing dilapidated neighbourhood centre. The Gateway Building will upgrade the arrival experience into this part of Five Dock.

Natural Amenity

 Capitalises on the amenity of the adjacent open space corridor, and enhance existing connections along Iron Cove to the Bay Run as well as nearby open space, including Croker Park, Wadim (Bill) Jegrow Reseve and Timbrell Park.

Diverse housing typology

 Creates a mix of high quality, well designed dwelling types for emerging lifestyles with excellent access to public amenity and transport infrastructure.
 The Proposal includes a number of 3 and 4 bedroom units, encouraging owner occupiers rather than potential investors.

A new mixed use neighbourhood and bespoke lifestyle

 Supports renewal of the neighbourhood centre and contributes to the local population by serving a boutique retail offer in a way that does not compete with the retail offering in the adjacent Five Dock Town Centre and provides a positive interface with the public domain.

The overview of the proposed LEP amendments is summarised below at Table 2.

Table 2 Proposed LEP Controls

Land Use Zoning	Zone B1 - Neighbourhood Centre
	Zone R2 - Low Density Residential
Maximum Height of Buildings	Part 10 and part 14m / Part 3 and part 4 storeys
Floor Space Ratio	1.71:1
Active Street Frontage	Introduce an active street frontage on land with frontage to Ramsay Road and extending 20.0 metres along Henley Marine Drive
Affordable Housing	5% affordable housing contribution
Schedule 1 Amendment	Introduce 'residential flat buildings' as an additional permitted use under the Zone B1 – Neighbourhood Centre.

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These proposed controls are discussed further under Section 5 and 6 of this report, and have been developed by the Indicative Concept Design and Urban Design Study, as outlined in detailed below.

4.2 Indicative Concept Design

An indicative concept design presented in the Urban Design Study at **Attachment A** has been prepared by Squilace to support the Planning Proposal. This indicative concept design has evolved over several years as outlined earlier in **Section 3** of this report. The indicative concept design set demonstrates how the site is intended to be developed under the proposed planning controls.

The Indicative Concept Design responds to the site's strategic location, which is seen as a Gateway to this part of Five Dock and within walking distance to the planned Five Dock Metro Station (located less than 700m from the site). The design takes advantage of the natural amenity provided by its location along Iron Cove Creek, which forms part of Sydney's Greater Green Grid corridor and ultimately seeks to give 'new life' an existing, B1 neighbourhood centre that is run-down and in need of renewal.

4.3 Built Form outcome under the Indicative Concept Design

Built form

The Indicative Concept Design illustrates that under the proposed controls there would be a built form outcome that wraps around Ramsay Road and Henley Marine Drive frontages, with a nil setback to Ramsay Road which is consistent with the prevailing set back of the adjoining shops. A varied setback would be applied to Henley Marine Drive, to activate the corner of the site and allow for outdoor dining opportunities. The setback would then be reduced to zero, further west along Henley Marine Drive, where ground floor residential uses are proposed, activated with front courtyards and gardens.

A 3-storey street wall height would be achieved under the proposed controls, which has been established by the existing datum line of the heritage substation building, located opposite on the eastern side of Ramsay Road. The resulting street wall height can be seen in the CGI prepared by Architectus in the supporting Urban Design Study at **Attachment A** and **Figure 25** below.



Figure 25 Resulting street wall height looking north facing from Ramsay Road Source: Squillace 2021

A 4-storey component (with maximum building height of 14m) is proposed along the Ramsay Road street frontage that wraps around the corner to part of Henley Marine Drive. It is noted that the fourth storey is also proposed to be set back by 3m above the

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3-storey street wall height, to reduce visual prominence and to ensure the built form outcome is read as a predominate 3-storey building from the street level.

The building then steps down further along Henley Marine to ensure future development is limited to 3-storeys (with a maximum building height of 10m), west of the right of way.

Minimum setbacks of 9m to the west and northern boundaries of the site are compliant with the Canada Bay DCP 2020 and ensure an appropriate transition is provided to adjacent residential dwellings along Harrabrook Avenue and Henley Marine Drive to the west.

Residential vehicle access to the site would be via Henley Marine Drive, with basement access at the western end of the site.

Landscaping and public domain improvements would be on the southern side of Henley Marine Drive, along Iron Cove Creek. These improvements may include:

- Landscaping and embellishment to existing green space;
- Street tree planting between existing 90-degree parking; and
- Opportunities for outdoor fitness, play equipment.

The proposed ground level floor plan and perspectives of the proposed Indicative Concept Design is provided below in **Figures 26 – 28**.



Figure 26 Floor Plan Ground Level Source: Squillace 2021

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Figure 27 Proposed Built form outcome – looking north west form Ramsay Road Source: Squillace 2021



Figure 28 Proposed Built Form Outcome - looking north from Henley Marine Drive Source: Squillace 2021

Land use

The Planning Proposal seeks to retain the B1 neighbourhood zoning for No. 1 and No.7 Ramsay Road, which will allow a range of permissible uses including shop top housing and neighbourhood shops.

It is anticipated that under the proposed controls, around 37 residential dwellings and up to 580 square metres of retail floor space could be achieved. With respect to retail, a café or food and beverage space could be located to the corner of Ramsay Road and Henley Marine Drive, which would service needs of the local community and take advantage of the sites natural amenities located along the Iron Cove Creek Bay Run.

The B1 neighbourhood zone is proposed to continue along the southern edge of the site to maintain a consistent land use zoning and provide an active street frontage. However, as the Indicative Concept Design proposes residential uses at ground level along Henley Marine Drive, this will require an Additional Permitted Use under Schedule 1, to allow residential flat buildings along this frontage.

The residential density on the site and provision of a ground floor neighbourhood shop would have the effect of activating the neighbourhood centre and give 'new life' to the local community.

The key numerical details of the Indicative Concept Design set are summarised in **Table 3** below.

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Table 3 Key numerical details of Proposal			
Land use activity	Residential accommodation (residential flat apartments, shop top housing)		
	Neighbourhood shops		
Height	Part 10 and part 14m / Part 3 and part 4 storeys		
FSR	1.71:1		
Indicative apartment	37 apartments including a mix of bedroom types:		
yield	1 bedroom = 8 apartments (22%)		
	2 bedroom = 15 apartments (41%)		
	3 bedroom = 14 apartments (38%)		
	The apartment mix applies with Clause 6.11 of CBLEP 2013.		
Car parking	54 car parking spaces:		
	1 bedroom = 4 spaces		
	2 bedroom = 15 spaces		
	3 bedroom = 28 spaces		
	Visitor = 7 spaces		
	Car parking provision exceeds minimum ADG / RMS car parking rates.		

4.4 Public benefits

This planning proposal provides the opportunity to deliver a number of public benefit items, which include:

- A five (5) percent affordable housing contribution delivered to Council in the form of an equivalent monetary contribution, in accordance with Clause 6.12 of the CB LEP 2013 and Section 2.3 of Council's Affordable Housing Contribution Scheme;
- Opportunity to upgrade the immediate surrounding context through public domain improvements, including:
- Extending the Sydney Water Preliminary Concept Design for Iron Cove Creek to include the portion of the creek to the west of Ramsay Road;
- Install a council desired zebra crossing to enhance access to the development and to the Bay Run;
- Collaborate with council to implement a shared bike path outside the development;
- Providing blisters to accommodate street tree planting;
- Provide new parking bays with blisters for street tree planting;
- Provide active recreation opportunities, such as outdoor gym stations; and
- Provide a children's playground in the open space corridor.
- Improve the existing run down character of the immediate context;
- Retail at the ground floor will encourage and support retailers within the area; and
- Monetary contribution in accordance with Council's Section 7.11 Contributions Plan.

Following a Gateway Determination, further discussions will be held with the City of Canada Bay Council to determine the right level of public domain improvements and their delivery arrangements (for example, via a Voluntary Planning Agreement).

Please refer to **Figure 29-33** below for public benefit infrastructure that will be implemented throughout the proposal.

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Figure 29 Public Domain Improvements Opportunity to support rehabilitation of Iron Cove Creek Source: Architectus (2020)



Figure 30 Public Domain Improvements
Opportunity to work with council to upgrade the footpath on the northern side of Henley Marine Drive and include street trees.
Source: Architectus (2020)



Figure 31 Public Domain Improvements Opportuntiy to tetain and upgrade the perpendicular parking and associated landscaping on the south side of Henley Marine Drive



Figure 32 Public Domain Improvements Opportunity to provide for a landscaped gateway on the eastern side of Ramsay Road Source: Architectus (2020)

Source: Architectus (2020)



Figure 33 Public Domain Improvements Opportunity to provide active fitness opportunities for the community Source: Architectus (2020)

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4.5 Urban Design Study

An Urban Design Study has been prepared by Squillace and Architectus, to support and to be read in conjunction with the Planning Proposal. Please refer to **Attachment A** for further detail.

The Urban Design Study provides a detailed urban design analysis and a justification of the proposal, in particular context, adequate building separation, and assessment of solar and visual impacts.

The report focuses on a renewal of the 'gateway site' to improve the arrival experience to the LGA through an appropriate scaled and well considered gateway building. This design will revive the tired and run down neighbourhood centre and provide residential housing and employment in a key strategic area of Sydney's inner west.

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Objectives and intended outcomes

5.1 Objectives

The objectives of this Planning Proposal are:

- To introduce new planning controls for the site under the CBLEP 2013;
- To deliver increased housing, shops and services in a highly accessible location that maximise the NSW Government's investment in infrastructure;
- To deliver a high-quality, mixed-use development with a range of housing and retail uses, that will renew the existing neighbourhood centre and contribute to local character:
- To facilitate development that responds to its context, including appropriate scale and achieves a high level of amenity to neighbouring properties and open space; and
- To deliver streetscape and public domain improvements that will reconnect the site to the neighbourhood and celebrate the site's location adjacent to significant open space and recreation areas.

The proposed amendments to the CBLEP 2013 will facilitate the renewal of an existing centre in a manner that integrates well with the character of the surrounding area, whilst responding to the strategic location of the site; as demonstrated by the supporting Indicative concept design in **Attachment A**.

5.2 Intended Outcomes

The Planning Proposal is a response to the need to renew the site by delivering a new mixed-use development that will revitalise the Ramsay Road neighbourhood centre, as well as provide a built form scale that supports its gateway location to the suburb of Five Dock.

The intended outcome facilitates the redevelopment of the site to provide increased housing, shops and services, in a highly accessible and well-serviced location, consistent with the aims of the *Greater Sydney Region Plan* and *Eastern Harbour City District Plan*. Additionally, the intended outcomes, as demonstrated in the Indicative Concept Design at **Attachment A** and the provisions are intended to work in a coherent and coordinated fashion.

The Planning Proposal seeks to amend the CBLEP 2013 to:

- Rezone part of the site from R2 Low Density Residential to B1 Neighbourhood Centre;
- Increase the maximum building height on part of the site from 8.5m to 10m and 14m.
- Increase the floor space ratio (FSR) on part of the site from 0.5:1 and 1.0:1 to 1.71:1;
- Reduce the minimum lot size for 5 and 7 Harrabrook Ave from 450m² to 360m²;
- Introduce an active street frontage on land with frontage to Ramsay Road and extending 20 metres along Henley Marine Drive;
- Introduce an affordable housing contribution of 5% affordable housing for the site; and

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Introduce an additional permitted use for the site to allow residential flat buildings on part of the site zoned B1 Neighbourhood Centre.

The requested amendments are outlined in further detail in Section 6 of the report.

The proposed extension of the B1 Neighbourhood Centre zone will allow for a full redevelopment of the site. The proposed redevelopment of the site is a design led approach that will deliver a high-quality mixed-use development, and provide opportunity for significant public domain improvements that will improve the amenity, walkability and liveability of the local area. Additionally, due to COVID-19, the redevelopment of the site will generate employment and support the local economy.

Expanding the B1 zone will protect and enhance employment land – providing for more jobs and services within walking distance of people's homes. The B1 zoning will also provide flexibility for a range of non-residential uses to support future residents on site, and in broader neighbourhood.

The proposed FSR and height controls provide a building envelope, of a bulk and scale that is responsive to its context, including its gateway location, as well deliver excellent amenity, and ensures no impacts on surrounding properties.



6. Explanation of provisions

6.1 Outline of proposed amendments

This Planning Proposal seeks the following amendments to CBLEP 2013:

- Amendment to Land Zoning Map;
- Amendment to the Height of Buildings Map;
- Amendment to the Floor Space Ratio Map;
- Amendment to the Minimum Lot Size Map;
- Amendment to the Active Street Frontage Map;
- Amendment to Clause 6.12 and the Affordable Housing Contribution Scheme Map;
- Amendment to Schedule 1 'Additional Permitted Uses'.

An overview of the proposed amendments is provided below and also further in **Section 9** of this report.

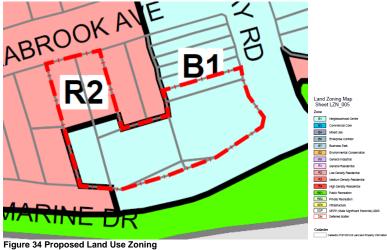
Land Zoning

The Planning Proposal seeks to amend the CBLEP 2013 Land Zoning Map to extend the B1 Neighbourhood Centre zone to include a portion of 5 and 7 Harrabrook Avenue. It is proposed to retain the R2 Low Density Residential zone for the remaining portion of 5 and 7 Harrabrook Avenue. Refer to the proposed zoning in **Figure 34**.

If supported, it is proposed to consolidate all land zoned B1 Neighbourhood Centre into one lot.

The current zoning of the site is B1 Neighbourhood Centre and R2 Low Density Residential under the CBLEP 2013, as shown in **Figure 35.**

The proposed extension of the B1 zone to a portion of 5 and 7 Harrabrook Avenue will allow for a coordinated master planned outcome for the site, consolidation of the B1 zone, and a design led approach for the renewal of the site, as demonstrated by the Indicative Concept Design at **Attachment A** and discussed under **Section 4** earlier.



Site is indicated with red dashed outline. Source: Architectus and CBLEP 2013

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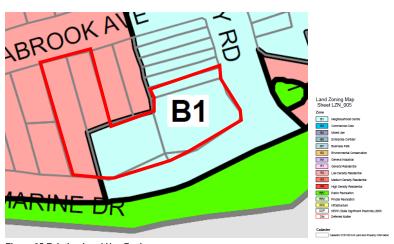


Figure 35 Existing Land Use Zoning Source: Architectus and CBELP 2013

Maximum Floor Space Ratio

The Planning Proposal seeks to amend the CBLEP 2013 Floor Space Ratio Map to increase the maximum FSR from 0.5:1 and 1:1 to 0.5:1 and 1.71:1 across the site. The maximum FSR of 1.71:1 is proposed for land in the B1 zone. The maximum FSR control of 0.5:1 is proposed to be retained for land zoned R2 Low Density Residential. Refer to the proposed maximum floor space ratio in **Figure 36.**

The current maximum floor space ratio is shown in Figure 37.

The proposed FSR of 1.71:1 for the B1 Neighbourhood Centre zone will allow for an appropriate development density is achieved, as demonstrated by the Indicative Concept Design.

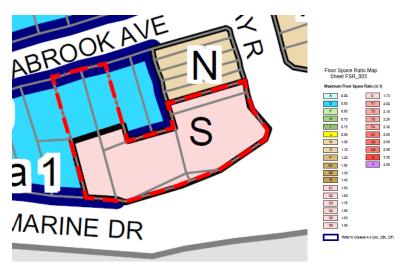


Figure 36 Proposed Floor Space Ratio Site is indicated with red dashed outline. Source: Architectus and CBLEP 2013

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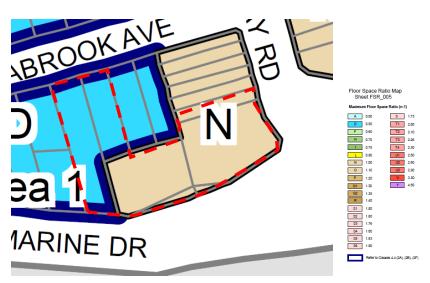


Figure 37 Existing Floor Space Ratio Site is indicated with red dashed outline. Source: Architectus and CBLEP 2013

Maximum Height of Buildings

The Planning Proposal seeks to amend the CBLEP 2013 Height of Buildings Map to increase the maximum building height fronting Ramsay Road to 14.0m and a maximum building height to the west of the right of way of 10.0m. Refer to the proposed Maximum Height of Buildings map at **Figure 38**.

The proposed building heights will provide for a site responsive built form outcome that is also sensitive to the scale of surrounding development. The height controls will also provide an appropriate transition to adjacent properties and open space.

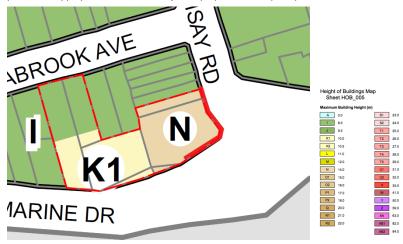


Figure 38 Proposed Height of Buildings Site is indicated with red dashed outline. Source: Architectus edits and CBLEP 2013

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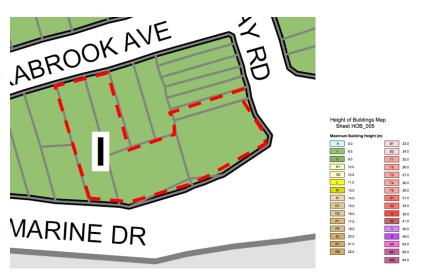


Figure 39 Existing Height of Buildings Site is indicated with red dashed outline. Source: Architectus edits and CBLEP 2013

Minimum Lot Size

The Planning Proposal seeks to amend the CBLEP 2013 Minimum Lot Size Map to reduce the minimum lot size for properties at 5 and 7 Harrabrook from 450sqm to 360sqm.

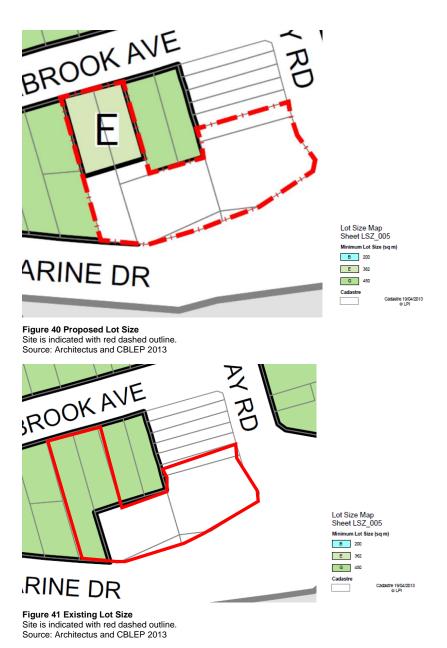
This would permit for the future subdivision of the R2 zoned land at 5 and 7 Harrabrook Avenue and the development of the remainder of the site, as demonstrated by the Indicative Concept Design at **Attachment A**. If supported, the R2 Low Density Residential land at 5 and 7 Harrabrook Avenue would be subdivided from the portion of land zoned B1 Neighbourhood Centre to create two lots with a minimum lot size of 360sqm. Any future subdivision would be subject to a separate development application at a later stage.

The proposed minimum lot size of 360sqm is consistent with surrounding lots, with the majority of lots in the surrounding area being less than 450sqm. The minimum lot size is of sufficient size to accommodate future dwellings on the site that would be capable of complying with the provisions in the Canada Bay Development Control Plan (DCP).

The proposed reduction in the minimum lot size is considered minor, is consistent and will have no impact on the established subdivision pattern or character of Harrabrook Avenue.

As demonstrated by **Figure 42** below, around 53% of the residential lots within 200m catchment are under 450sqm, accordingly the reduction would be consistent with this established subdivision character of the locality.





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Figure 42 Existing Lot Sizes Site is indicated with red dashed outline. Source: Architectus and CBLEP 2013

Active Street Frontage

The Planning Proposal seeks to amend the Active Street Frontage Map to introduce a new active street frontage along on land with frontage to Ramsay Road and extending 20 metres along Henley Marine Drive.

This would encourage uses that promote pedestrian street traffic along the street frontages of Ramsay Road and part of Henley Marine Drive. Refer to proposed Active Street Frontage map at **Figure 43**.

It should be noted that whilst the site is not currently, nor proposed to be zoned as B4 Mixed Use, the Planning Proposal is consistent with the objectives and provisions as outlined in Clause 6.5 of the CB LEP 2013.

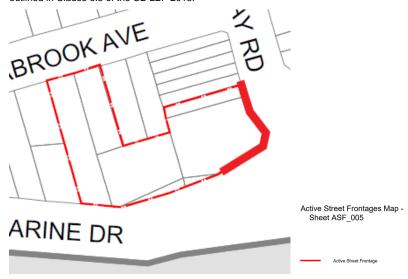


Figure 43 Proposed Active Street Frontage
Site is indicated with red dashed outline and active frontage indicated in bold line.
Source: Architectus and CBLEP 2013

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



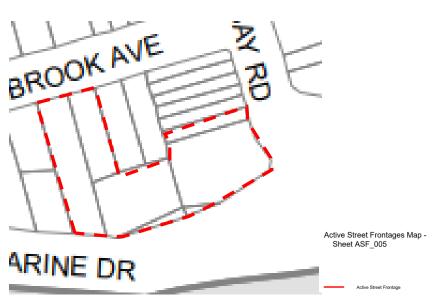


Figure 44 Existing Active Street Frontage Site is indicated with ran orange dashed outline. Source: Architectus and CBLEP 2013

Affordable Housing

The Planning Proposal seeks to amend Clause 6.12 of the CB LEP 2013 to provide a five (5) percent affordable housing contribution for the site. Amendments to the CB LEP 2013 would include:

- Introduce a new 'affordable housing contribution area' to identify the site on the Affordable Housing Contribution Scheme map; and
- An amendment to Clause 6.12(6) and 6.12(10) to identify the site as an 'affordable housing contribution area'

It should be noted that it is the Applicant's preference for a monetary contribution to be made to Council in lieu of the on-site dedication of completed dwellings. This is in accordance with Section 2.3 of Council's Affordable Housing Contribution Scheme. Refer to the proposed Affordable Housing Contribution Scheme map at **Figure 45.**



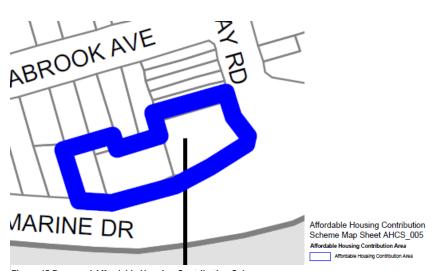


Figure 45 Proposed Affordable Housing Contribution Scheme Source: Architectus and CBLEP 2013



Figure 46 Existing Affordable Housing Contribution Scheme Site is indicated with red dashed outline. Source: Architectus and CBLEP 2013

Affordable Housing Contribution Scheme Map Sheet AHCS_005 Affordable Housing Contribution Area

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6.2 Schedule 1 Additional Permitted Use

The B1 Neighbourhood Centre zone does not permit residential flat buildings. The B1 zone allows shop top housing, with retail uses on the ground level.

The Planning Proposal seeks to introduce 'residential flat buildings' as an additional permitted use under Schedule 1 'Additional Permitted Uses' of the CBLEP 2013 on that part of the land zoned B1. Refer to **Figure 47** for a map of the land.

Draft provisions for inclusion in Schedule 1 of the CBLEP 2013 are outlined below:

21 Use of land at 1 and 7 Ramsay Road and 5 and 7 Harrabrook Avenue

- This clause applies to land zoned B1 Neighbourhood Centre at 1 and 7 Ramsay Road,5 and 7 Harrabrook Avenue, Five Dock, being Lot A, B and D in DP 415618, Lot 1 in DP 241337 and Lot 1, 2 and 5 in DP 310522.
- Development for the purpose of residential flat buildings is permitted with consent but is limited to development adjacent to Henley Marine Drive.

The proposed amendment to Schedule 1, will enable development as demonstrated by the Concept Plan, which provides for residential ground floor apartments along Henley Marine Avenue. The approach is to focus retail activation on Ramsay Road, with ground floor retail and streetscape improvements that will renew the centre and build on the established high street on Ramsay Road. Providing ground floor retail uses on the full length of both Ramsay Road and Henley Marine Drive is considered not conducive to that outcome.

The design approach for Henley Marine Drive prioritises activation through well-designed ground floor apartments, front entrances and gardens and public domain improvements that will promote social interaction and improve the interface to the adjacent open space.

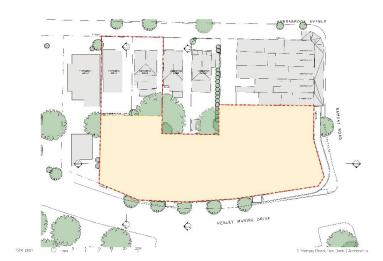


Figure 47 Area that is subject of proposed provision for inclusion in Schedule 1 Site is indicated with red dashed outline and the site that is subject of proposed clause 21 in Schedule CBLEP 2013 is shaded (note, this is the extent of the proposed B1 zone). Source: Architectus and CBLEP 2013

There will not be an Additional Permitted Use map in the LEP as the proposed wording of Clause 21 in Schedule 1 clearly identifies the land that is subject of the additional permitted use.

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7. Assessment

7.1 Overview

The section below provides an assessment of the key issues relevant to the Planning Proposal.

A number of technical assessments have been undertaken to support the Planning Proposal. The Planning Proposal should therefore also be read in conjunction with the supporting technical documentation at **Attachments A** to **H**.

The assessments support the objective of this Planning Proposal, which is to redevelop the site with appropriate scale form and uses. It confirms the suitability of the site for redevelopment, and demonstrates that all environmental constraints can be adequately addressed.

7.2 Built Form

The built form outcome under the Proposal (as illustrated by the Indicative Concept Design) was assessed against criteria in the Apartment Design Guide (ADG), including building separation, cross ventilation, solar access, communal open space and deep soil.

Detailed testing demonstrates that the proposed controls can provide for building envelopes and apartments that achieve compliance with the requirements of the ADG including, internal amenity, privacy and outlook.

A summary of ADG compliance is provided in **Table 4** below. A detailed assessment of the Indicative Concept Design and ADG compliance is provided in the Urban Design Study at **Attachment A.**

Table 4 Summary of ADG Compliance

ADG testing	Indicative Concept Design	Requirement	Compliant
Building separation	Resulting building envelopes can meet the minimum building separation requirements in the ADG.	- Up to 4 storeys: 6-12m	✓
Cross ventilation	67% (25 out of the 37 apartments) can be naturally cross-ventilated.	At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building	✓
Solar access to apartments	73% (27 out of the 37 apartments) can receive at least 2 hours of sunlight between 9am and 3pm midwinter. 15% (5 out of the 37 apartments) receive no direct sunlight between 9am and 3pm mid-winter.	At least 70% of apartments receive 2 hours direct sunlight between 9am and 3pm in mid-winter A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm mid-winter	✓
Communal open space	25% (equivalent to 645m²) of the site area can be communal open space	Communal open space has a minimum area equal to 25% of the site	√
Solar access to communal open space	More than 50% of communal open space can receive direct sunlight for 2 hours in mid-winter sunlight.	50% direct sunlight to the principle usable part of communal open space for a minimum of 2 hours between 9am and 3pm mid-winter	√
Deep soil	7% (equivalent to 181m²) deep soil can be achieved on the site.	Minimum 7% deep soil	√

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Apartment Mix

Clause 6.11 of the CBLEP 2013 aims to ensure a mix of dwelling types within new shop top housing developments, providing a range of housing tenure for different lifestyles.

Clause 6.11 of the CBLEP 2013 states;

- (1) The objectives of this clause are as follows -
 - (a) To ensure the provision of a mix of dwelling types in residential flat buildings and provide housing choice for different demographics, living needs and household budgets,
 - (b) To promote development that accommodates a range of household sizes.
- (2) This clause applies to development for the following purposes that results in at least 10 dwellings –
 - (a) Residential flat buildings,
 - (b) Mixed use development that includes shop top housing.
- (3) Development consent must not be granted to development to which the clause applies unless
 - (a) At least 20% of the dwellings, to the nearest whole number of dwellings, in the development will be studio or 1 bedroom dwellings, and
 - (b) At least 20% of the dwellings, to the nearest whole number of dwellings, in the development will have at least 3 bedrooms.

The proposed apartment mix complies Clause 6.11 of CBLEP 2013 through providing a range of apartment types and sizes including 22% of 1 bedroom apartments and 38% of 3 bedroom apartments. The proposed apartment mix is as follows:

- 37 apartments including a mix of bedroom types:
- 1 bedroom = 8 apartments (22%)
- 2 bedroom = 15 apartments (41%)
- 3 bedroom = 14 apartments (38%)
- Total = 37 apartments

The proposed development schedule is provided in the Appendix of the Urban Design Study at ${\bf Attachment}\;{\bf A}.$

7.3 Solar Access

The proposed controls will achieve a built form outcome that has acceptable solar impacts to neighbouring properties and open space. Detailed solar analysis is provided in the Urban Design Study at **Attachment A** and also extracted below at **Figure 47**.

The proposed controls will provide a built form outcome (as illustrated by the Indicative Concept Design) that can maintain acceptable solar access to open space and will result in only minor overshadowing to the adjoining open space at Iron Cove Creek on Henley Marine Drive. The most significant overshadowing is between 10am and 2pm to the northern edge of the open space immediately west of the car parking area on Henley Marine Drive. However, this is considered to be low impact, as it only comprises a small portion of the park, adjacent to the road.

From 3pm onwards, the shadow extends further south into the open space south of Henley Marine Drive. However, as this open space receives excellent solar access for the majority of the day (before 3pm), this impact is considered to be marginal.

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Overall, overshadowing impacts are therefore considered acceptable. No areas of useable open space would be significantly affected, and any overshadowing is therefore minimal.

Provisions in the Canada Bay DCP provide requirements for solar access to neighbouring dwellings. The Canada Bay DCP requires:

Direct solar access (sunshine) to windows of principal living areas and to the principal area of open space of dwellings adjacent to commercial zones should not be reduced to less than 3 hours between 9.00am and 3.00pm on 21 June.

The controls will provide for a built form outcome that is consistent with the requirements of the Canada Bay DCP. As demonstrated by the Indicative Concept Design, it will not result in any reduction in sunlight to neighbouring properties' principal living areas or principal open space, with all dwellings receiving a minimum of 3 hours solar access between 9am and 3pm on 21 June.

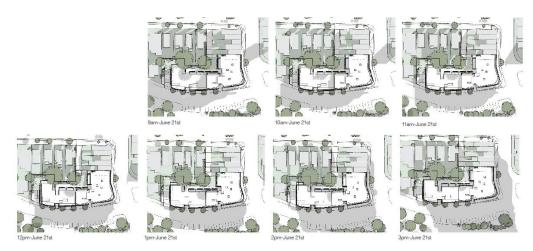


Figure 48 Shadow Diagrams

7.4 Visual Impact

A Visual Impact Assessment is provided in the Urban Design Study at Attachment A.

The assessment concludes that the proposed planning controls would result in a built form outcome that has acceptable visual impacts. The resulting building envelopes will be responsive to the context and responds well to the scale of surrounding buildings.

Please refer to Figure 48 - 53 below for extracted visual impact images.

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Figure 49 View looking north east to the subject site along Iron Cove Creek Minimal visual impact detected Source: Architectus (2021)



Figure 50 View looking south down Ramsay Road towards the subject site Subject site is visible from this direction Source: Archtiectus (2021)



Figure 51 View looking north across Iron Cove Creek to the subject site Subject site is visible from this direction. Source: Architectus (2021)



Figure 52 View looking further south down Ramsay Road towards the subject site Minimal visual impact detected/ Source: Architectus (2021)



Figure 53 View looking south east towards subject site from Harrabrook Avenue Minimal visual impact detected Source: Architectus (2021)



Figure 54 View looking down Ramsay Road from Five Dock Town Centre Barely visible from the Five Dock Town Centre Source: Architectus (2021)

7.5 Traffic and Transport

A Preliminary Traffic and Parking Assessment Report has been prepared by Varga Traffic Planning Pty Ltd at **Attachment C**, to support this Planning Proposal.

The report provides a preliminary traffic and parking assessment of the controls proposed by the proposal, as illustrated by the Indicative Concept Design in the Urban Design Study **Attachment A**.

The report concludes that a density outcome under the proposed controls would not have any unacceptable traffic implications in terms of road network capacity.

Traffic generation would be minimal with the proposal generating approximately 15 vehicles per hour during commuter peak periods.

The report also confirms that car parking provision for the residential component will be fully accommodated on-site in accordance with both the Canada Bay DCP and ADG requirements. Parking for the ground floor retail component can be suitably accommodated on-street directly in front of the site along Henley Marine Drive.

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With respect to Transport, the proposal should not trigger the need for any intersection upgrades.

It is noted that whilst the Planning Proposal and reference design has since been amended since initial lodgement in December 2020, resulting in reduced height of buildings and reduced apartment numbers, naturally, the overall traffic impacts will also be reduced.

7.6 Tree Management

An Arboricultural Impact Assessment has been prepared by New Leaf Arboriculture and is attached at **Attachment D**. This Assessment should also be read in conjunction with the Supplementary Arboricultural Assessment, prepared by New Leaf Arboriculture at **Attachment E** and the Independent Justification for Tree Removal Letter, prepared by Active Green Services (on behalf of Council) at **Attachment H**.

The Site and adjacent road verges consist of twenty five (25) trees, mainly located along the Site's boundaries and on the street's verge.

In order to accommodate the proposed development, as envisaged by the proposal, ten (10) tree's including Trees 1, 7, 9, 9A, 9B, 9C, 9D, 10, 11 & 12 will be required to be removed, with a further four (4) highly significant trees recommended for transplanting including Trees 2,3,4 & 5, as they are encroached by the footprint of the proposed development.

Eleven (11) remaining trees including Trees 6, 8, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 13 & 14 are proposed for protection and retention.

Table 5 below provides an overview of existing trees and their proposed retention, removal or transplanting.

Table 5 Tree's proposed for retention and removal

	Retain	Remove	Transplanting
Low	1	1	
Medium	3	9	<u> </u>
High	7	-	4
Total	11	10	4

Table 5 above, considers the findings of the Supplementary Aboricultural Assessment, which provides an updated assessment for Tree No.1 (known as Syzygium sp. Lilly Pilly) providing further observations that were not captured as part of the initial inspection, due to previous limited visibility from outside the boundary fence.

Tree No.1 (known as Syzygium sp. Lilly Pilly) is located along the boundary of 7 Harrabrook Avenue and 1 Ramsay Road and is now identified for removal as it will as encroach, as a result of the proposed development. Refer to Tree Protection Plan in the Arboricultural Assessment at **Attachment D**.

The Supplementary Arboricultural Assessment at **Attachment E** provides an amended tree retention value for Tree No.1 (known as Syzygium sp. Lilly Pilly) which has been reclassified from 'High' retention value to 'Low' retention value due to the structural condition of the tree which is considered to have limited growing room with respect to the proximity of the neighbouring building. The condition rating was also amended from 'Good to Average' to 'Average to Poor' and the health rating from 'Good to 'Good to Average'. As such, Tree No.1 (known as Syzygium sp. Lilly Pilly) is recommended for removal and included in the overall figures in Table 5.

In addition the above, Council engaged an Independent Arborist to review the Arborist documentation provided by the applicant and to inspect Tree No.1. This Letter is provided at **Attachment H**.

It was concluded that the tree should be removed as:

- The tree currently has a high risk of failure but a low risk of harm;

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- Any development of this site would increase the risk of harm caused by the failure of the tree to unacceptable levels;
- The process of demolition and construction on the site would lead to further deterioration in the condition and health of the tree and make the risk of failure more likely.

Council advised that the planning proposal can proceed without the retention of the Lilly Pilly, subject to replacement planting being provided to achieve the objectives of the Canada Bay Urban Canopy Strategy.

In line with Council's above recommendations and the recommendations of the Arboricultural Report, a resulting development application will ensure trees are transplanted wherever possible, either on site or in the nearby reserve and provide compensatory landscaping throughout the site.

7.7 Contamination

A Detailed Site Investigation has been prepared by Aargus Pty Ltd and is provided at **Attachment G**.

The objectives of the assessment were to:

- Identify potential areas where contamination may have occurred from current and historical activities:
- Identify potential contaminants associated with potentially contaminating activities:
- Assess the potential for soils to have been impacted by current and historical activities; and
- Assess the suitability of the site for redevelopment into a mixed commercial residential building with basement car parking and deep soil landscaping areas based on its current condition and the findings of this investigation.

Whilst the findings of the report indicated some areas of environmental concern, it is considered that the risks to human health and the environment associated with soil contamination at the site are low, within the context of the proposed use for the site.

The soil assessment revealed the following:

- Heavy metals concentrations were below the HIL 'B' and/or the site derived ElLs with the exception of:
 - A lead concentration in sample BH1 (0-0.1m) which exceeded the HIL 'B' and the site derived EIL.
 - A zinc concentration in samples BH1 (0-0.1m) and BH2 (0-0.1m) which exceeded the site derived EIL.
- TRH and BTEXN concentrations were below the HSL 'A&B', ESLs and/or Management Limits, with the exception of:
 - o A TRH F3 concentration in sample BH1 (0-0.1m) which exceeded the FSI
 - A benzo(a)pyrene concentration in sample BH1 (0-0.1m) which exceeded the ESL.
- PAH, OC & PCB concentrations were below the HIL 'B', EILs and/or ESLs with the exception of:
 - A benzo(a)pyrene as TEQ concentration in samples BH1 (0-0.1m), BH7 (0.3-0.4m) and BH7 (1-1.1m) which exceeded the HIL 'B'.
 - A benzo(a)pyrene concentration in sample BH1 (0-0.1m) which exceeded the ESL.

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Asbestos was not detected in any of the samples analysed.

The report concludes that the site is therefore considered to be rendered suitable for the proposed use, subject to the following:

- An appropriate remedial / management strategy is developed, culminating in preparation of a Remedial Action Plan (RAP) in accordance with EPA guidelines, in regards to the removal of the three hotspots BH1, BH2 & BH7, as well addressing the aforementioned data gaps.
- Any soils requiring removal from the site, as part of future site works, should be classified in accordance with the "Waste Classification Guidelines, Part 1: Classifying Waste" NSW EPA (2014).

On the basis of the recommendations of the Detailed Site Investigation and for the purposes of this Planning Proposal, the proposal is considered appropriate in this regard.

As suggested by the above recommendations a RAP will be undertaken in the subsequent DA stage.

7.8 Local infrastructure

Given the relatively modest nature of the density increase, the Planning Proposal is likely to increase demand on local infrastructure.

One of the key drivers of the Planning Proposal is not only to provide 'more housing in the right location' but to provide and revitalise the existing B1 neighbourhood centre to improve amenity along the Ramsay Road and Henley Marine Drive street frontage. Accordingly, it actually supports improvements to local economic and social infrastructure.

Shops and services

Provision of a small retail space is envisaged for the site that will allow opportunity for a future café / parkland eatery space to facilitate activation along Ramsay Road and Henley Marine Drive, and service the needs of the local community.

Up to 580sqm of retail floor can be realised by the proposed controls.

7.9 Section A - Need for the Planning Proposal

Q1. Is the planning proposal a result of an endorsed local strategic planning statement, strategic study or report?

Yes, this Planning Proposal is intended to address the priorities and objectives highlighted within the following strategic studies and reports:

- Greater Sydney Region Plan: A Metropolis of Three Cities (2018)
- Eastern City District Plan (2018)
- Housing 2041: NSW Housing Strategy
- Canada Bay Local Strategic Planning Statement (2020)
- YOUR Future 2030 Community Strategic Plan (2017)
- Canada Bay Local Housing Strategy (2020)
- Future Transport Strategy 2056 (2018)
- Five Dock Town Centre Revitalisation (2014)

An overview and assessment of compliance with each of these studies or reports is provided further below.

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Q2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

Yes. A Planning Proposal is the most appropriate means to achieve the objectives or intended outcomes for the site. The current planning controls under the CBLEP 2013 restrict and provide limited opportunities for the existing site.

This Planning Proposal seeks to amend the CBLEP 2013, to align the planning controls to achieve Government strategic outcomes and guide future development for multiple sites.

Open space

The site is well-serviced by existing public open space, being adjacent to Iron Cove Creek with direct access to a range of open spaces within walking distance to the site. These include:

- Iron Cove Creek, which provides passive open space to the southern edge of Five Dock, as well a children's playground.
- Croker Park, which includes a tennis court and children's playground.
- Wadim Jegorow Reserve with picnic areas and cycle paths.
- Timbrell Park provides significant active recreational amenity to Five Dock, including sports fields, BMX tracks, playgrounds, as well as off-leash dog areas and picnic areas.

The redevelopment of the site under the proposed controls provides the opportunity to provide public domain improvements, including enhanced accessibility along Iron Cove Creek. Improvements may include:

- Extending the Sydney Water Preliminary Concept Design for Iron Cove Creek to include the portion of the creek to the west of Ramsay Road;
- Install a council desired zebra crossing to enhance access to the development and to the Bay Run;
- Collaborate with council to implement a shared bike path outside the development;
- Providing blisters to accommodate street tree planting;
- Provide new parking bays with blisters for street tree planting;
- Provide active recreation opportunities, such as outdoor gym stations; and
- Provide a children's playground in the open space corridor.

These potential improvements, as noted earlier in the Planning Proposal, will provide public benefits. The applicant will work with Council to determine the right level of improvements and their delivery arrangements.

Economic Benefits

An Economic Report has been prepared to be read in conjunction with this report and is attached at **Attachment F**. In addition to more homes and local retail services, the report prepared by HillPDA Consulting, provides an analysis of the economic benefits for the site, including Capital Investment Value, job generation, multiplier impacts and development contributions.

Please refer to overview in **Table 6** below of the economic benefits the proposed Indicative Concept Design will generate.

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Economic Benefit	
Capital Investment Value	Estimated at \$23.35 million
Job generation	234 jobs
	58 jobs will be generated through eventual construction and design. Additionally, 92 jobs will be generated through production induced impacts and 82 jobs through consumption induced impacts.
	Moreover, the proposal will create 18 permanent jobs on site when fully occupied.
Gross Value contributed to the local	\$980,000 per annum
economy	*Includes people working from home and retail space

Affordable housing

The Planning Proposal seeks to provide a five (5) percent affordable housing contribution for the site in the form of an equivalent monetary contribution made to Council in lieu of on-site dedication of completed dwellings. This approach is in accordance with Section 2.3 of Council's Affordable Housing Contribution Scheme.

As such, the 5% affordable housing contribution rate should be based on the following key development information:

- Total GFA = 4,432sqm
- Non-residential GFA = 580sqm
- Residential GFA = 3,852sqm
- 5% of Residential GFA = 192.6sqm

It is understood that a contribution rate will be determined at a later stage of the project, subject to independent feasibility advice sought by Council.

Other

The Canada Bay Section 7.12 Contributions Plan applies to development on the site. Any future DA in response to the planning controls will be subject to levies in accordance with the plan, where applicable.

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Item 9.4 - Attachment 2



8. Justification

8.1 Section B - Relationship to strategic planning framework

Q3. Will the planning proposal give effect to the objectives and actions of the applicable regional, or district plan or strategy (including any exhibited draft plans or strategies)?

Yes. The applicable current regional strategy is the *Greater Sydney Region Plan – A Metropolis of Three Cities*. The Planning Proposal is consistent with the objectives and actions of the following strategies.

Greater Sydney Region Plan - A Metropolis of Three Cities

The Greater Sydney Region Plan provides a 40-year vision of Sydney for a city where people will live within 30 minutes of jobs, education and health facilities, services and great places.

A particular focus of the Greater Sydney Region Plan is providing housing diversity around centres and transit nodes. The plan calls for more housing in accessible locations – aligning with existing and planned infrastructure. The site is within a 10-minute walk to the Five Dock town centre and within 700m of the future Sydney Metro Five Dock station.

The Proposal will provides more housing in a liveable neighbourhood close to employment opportunities, transport services, walking and cycling options. In addition, retail space on the ground floor of development outcome will recognise local characteristics and enhance wellbeing and a sense of local community. Full assessment against the relevant directions from the Greater Sydney Region Place are noted at **Table 7** helow

Table 7 Greater Sydney Region Plan

Greater Sydney Region Plan	Consistency	Comment
Liveability		
A city for people		
Objective 6 – Services and infrastructure meet communities changing needs	Yes.	The Proposal is a response to the increasing need of for more housing in the right location. The proposed controls will provide a development outcome of more private dwellings in an accessible location.
Objective 7 – Communities are healthy, resilient and socially connected	Yes.	The Planning Proposal is consistent with Objective 7 by providing new residential dwellings in an established area. The site is in close proximity to employment, facilities, transport and shops. The proposal aims to enhance the social wellbeing of the local community through the achievability of retail space provided on the ground floor. The Proposal will improve the surrounding environment and street character.
Objective 8 – Greater Sydney's communities are culturally rich with diverse neighborhoods	Yes.	The site is located in an existing B1 neighbourhood centre. The Planning Proposal will support a mix of housing to support a range of households in Five Dock, as well as supporting retail floor space. In this way, the Planning Proposal will support a diverse and inclusive community on the site and effectively give 'a new life' to the local neighbourhood.
Housing the city		
Objective 10 – Greater housing supply	Yes.	The Proposal will support to provide housing supply in the Five Dock area. Due to its increased accessibility, (with the future Five Dock Metro) it will contribute to a more liveable neighbourhood and support the growing population of Canada Bay LGA.
A city of great places	·	
Objective 12 – Great places that bring people together	Yes.	The Proposal will contribute to the local community by supporting an uplift of a tired site with new better development, including retail, that will support people to come to the neighbourhood centre.

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Greater Sydney Region Plan	Consistency	Comment
Productivity		
A well connected city		
Objective 14 – A Metropolis of Three Cities – Integrated land use and transport creates walkable and 30-minute cities	Yes.	The subject site is well located, in close proximity to the future Sydney Metro Five Dock station and the Five Dock town centre. Additionally, the site is located within 750m of Parramatta Road – connecting the site by rail and bus services to both the Sydney and Parramatta CBD. The Proposal will provide housing in a location that is accessible to jobs and services in the 30 minute city.
Objective 17 – Regional connectivity is enhanced	Yes.	The site is in close proximity, to a range of key road and rail infrastructure that will provide enhanced connectivity to and from the site.
		The site is located in close proximity, approximately 300m to the entrance of Westconnex (M4 Tunnel), providing greater accessibility to surrounding strategic centres, such as Burwood, Sydney Olympic Park, Rhodes, and Parramatta.
		The future extension to M4/M5, and Rozelle Interchange is due to open in 2023, will also provide faster access to Sydney International Airport and the Sydney CBD.
		The Metro West line will also provide future access to major employment and education centres, such as Parramatta, Sydney Olympic Park, Westmead and Sydney CBD. The metro west is due to be completed by 2030.
Sustainability		
A city in its landscape		
Objective 25 – The coast and waterways are protected and healthier	Yes.	The site is adjacent to Iron Cove Creek and can enhance the waterway canal. Future development, in accordance with the proposal controls, can extend the Sydney Water Final Concept Design (prepared by Sydney Water) in the site's landscape strategy.
Objective 27 – Biodiversity is protected, urban bushland and remnant vegetation is enhanced	Yes.	The site does not contain any remnant bushland. Development in accordance with the proposed controls can enhance biodiversity outcomes through native tree planting, landscaping and tree canopy cover. As mentioned in the Arboricultural Impact Statement at Attachment D and Supplementary Assessment at Attachment E, Trees 2,3,4 and 5 are recommended to be transplanted either on site or nearby in the local area. This allows for biodiversity within the site to be protected and
		enhanced.
Objective 30 – Urban tree canopy cover is increased	Yes.	As mentioned above and in Arboricultural Impact Statement, attached at Attachment D and Supplementary Assessment at Attachment E , compensatory planting and transplanting of Trees 2, 3, 4 and 5 will be undertaken in suitable locations within and outside of the Indicative Concept Design development, to retain urban tree canopy cover within the area.
		Additionally, as a result of further design and development at DA stage, the proposed development will provide for additional planting and landscaping throughout the development including suitable replacement plantings to be installed to replace the lost canopy and to increase urban tree canopy cover in line with Council's goal of increasing the City of Canada Bay's urban canopy from 18 to 25 per cent by 2040.
Objective 31 – Public open space is accessible, protected and enhanced	Yes.	The site is located adjacent to Iron Cove Creek, with access to a range of open spaces along canal. For this reason, there is no need to provide public open space on the site.
		Future development in accordance with the proposed controls can provide public domain improvements along Iron Cove Creek, enhancing connections to Iron Cove

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Greater Sydney Region Plan	Consistency	Comment
		Bay. As noted earlier, the built form outcome under the proposed controls can ensure no overshadowing to the parkland along Iron Cove Creek.
Objective 32 – The Green Grid links parks, open spaces, bushland and walking and cycling paths	Yes.	The site provides opportunity for improved pedestrian and cycling connections along Iron Cove Creek.
An efficient city		
Objective 33 – A low carbon city contributes to net zero emissions by 2050 and mitigates climate change	Yes.	Sustainable transport is encouraged through the Planning Proposal, as resulting development will be in close proximity to the future planned metro station in Five Dock. This will ideally promote the use of public transport, ultimately contributing to a total reduction to carbon emission contributions.

Eastern City District Plan (2018)

The Eastern City District Plan sets out planning priorities and actions for improving the quality of life for residents as the District grows and changes.

The Eastern District's population will grow by 325,000 people by 2036, generating demand for 157,700 new homes. To meet the increasing demand, the district plan identifies that new housing must be coordinated with local infrastructure. This creates liveable neighbourhoods that are accessible and within walking distance of shops, services and transport.

The Planning Proposal aligns with the housing objectives of the Eastern City District Plan, through providing urban renewal opportunities and increasing capacity for housing in the Five Dock area.

The Planning Proposal responds to the objectives and priorities in the District Plan. Please refer below to the relevant directions stated in the Eastern City District Plan. **Table 8** Eastern City District Plan

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Table 8 Eastern City District Plan

Eastern City District Plan	Consistency	Comments
Infrastructure and Collaboration		
Planning Priority E1 – Planning for a city supported infrastructure	Yes.	The District Plan addresses the demand of residential dwellings to support the growing population in the Eastern District. The proposal increases residential development capacity, in a location that is in close proximity to transport, shops and public open space. The future Five Dock Metro will also support the residents in the proposed development, by providing efficient connectivity across Sydney.
Livability		
Planning Priority E3 – Providing services and social infrastructure to meet peoples changing needs	Yes.	The Proposal will support a new residential development in the Canada Bay LGA and support the population growth of the Eastern City District.
Planning Priority E4 - Fostering healthy, creative, cultural rich and socially connected communities	Yes.	The Proposal will contribute to creating a connected community by supporting an uplift of a tired site with new better development, including retail, that will support people to come to the neighbourhood centre.
Planning Priority E5 – Providing housing supply, choice and affordability, with access to jobs, services and public transport	Yes.	The Planning Proposal seeks to provide further private dwellings – in a highly accessible and well serviced location. Public transport connections like bus routes and the future Sydney Metro station are within walking distance to the site.
Planning Priority E6 – Creating and renewing great places and local centers, and respecting the District's heritage	Yes.	The Proposal seeks to renew a site, that will support a gateway to the Five Dock suburb. The Proposal will also support the renewal of the local neighbourhood centre, whilst responding to the surrounding character.
Productivity		
Planning Priority E7 – Growing a stronger and more competitive Harbor CBD	Yes.	The Proposal will enable the 30 minute city concept, building a stronger and competitive Harbour CBD through its accessible location by bus and the future Metro site.
Planning Priority E10 – Delivering integrated land use and transport planning and a 30 minute city	Yes.	The site is located within walking distance from the future Five Dock Metro Station and the bus services along Ramsay Road, enabling the 30-minute city concept by way of active and public transport.
Sustainability		
Planning Priority E14 – Protecting and improving the health and enjoyment of Sydney Harbour and the District's waterways	Yes.	The Proposal is adjacent to Iron Cove Creek (also known as Dobroyd Canal), which has been identified by Sydney Water as a waterway needing repair. Development outcomes can suitably manage stormwater drainage, to not negatively impact the waterway through additional downstream impact.
Planning Priority E15 – Protecting and enhancing	Yes.	The site does not contain any remnant bushland.
bushland and biodiversity		Development outcomes in accordance with the controls can provide improved biodiversity outcomes through native tree planting, landscaping and tree canopy cover.
Planning Priority E17 – Increasing urban tree canopy cover and delivering Green Grid connections	Yes.	As mentioned earlier in the report and in the Arboricultural Impact Statement and Supplementary Arboricultural Assessment, Trees 2,3,4 and 5 are recommended to be transplanted either on site or nearby in the local area. This allows for biodiversity within the site to be protected and enhanced.
		Additionally, the proposal provides for additional tree planting and landscaping throughout the development to increase overall urban tree canopy coverage.

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Planning Priority E18 – Delivering high quality open space	Yes.	The site is located adjacent to Iron Cove Creek, with access to a range of open spaces along canal. For this reason, there is no need to provide public open space on the site.
		Future development in accordance with the proposed controls can provide public domain improvements along Iron Cove Creek, enhancing connections to Iron Cove Bay. As noted earlier, the built form outcome under the proposed controls can ensure no overshadowing to the parkland along Iron Cove Creek.
Planning Priority E19 – Reducing carbon emissions and managing energy, water and waste efficiently	Yes.	The indicative concept design demonstrates that future development in accordance with the controls can manage energy, water and waste efficiency.
		BASIX and ESD measures will be addressed at a future detailed DA stage.
Planning Priority E20 – Adapting to the impacts of urban and natural hazards and climate change	Yes.	As noted above, with access to a range of existing and planned public transport networks, the site is ideally located to encourage people to utilise public transport as a sustainable alternative and will ultimately result in less reliance on private motor vehicles and help people prepare for and adapt to the impacts of natural hazards and climate change.

Housing 2041: NSW Housing Strategy

Housing 2041 provides a 20-year vision for housing in NSW. It embodies the government's goals and ambitions to deliver better housing outcomes by 2041 including housing in the right locations, housing that suits diverse needs and housing that feels like home.

The Strategy is built around four pillars including:

- Supply housing supply delivered in the right location at the right time
- Diversity housing is diverse, meeting varied and changing needs of people across their life
- Affordability housing that is affordable and secure
- Resilience housing that is enduring and resilient to natural and social change.

The Planning Proposal is consistent with the Housing Strategy, as it will increase housing supply in a location that is supported by existing and future infrastructure and in close proximity to the Five Dock Town Centre. The Planning Proposal will deliver a range of housing types and sizes including a larger portion of 1 and 3 bedroom apartments, consistent with Council's mix of dwelling sizes and suitable for a range of family types. The Planning Proposal also seeks to provide a 5% affordable housing contribution, in line with Council's Affordable Housing Contribution Scheme.

NSW State Infrastructure Strategy 2018-2038

The NSW State Infrastructure Strategy 2018-3028 builds on the NSW Government's major long-term infrastructure plans over the last seven years. The strategy sets out the government's priorities for the next 20 years, and combined with the Future Transport Strategy 2056, the Greater Sydney Region Plan and the Regional Plan Development Framework, brings together infrastructure investment and land use planning for our cities and regions

The Strategy focuses on six cross sectoral strategic directions, each designed to achieve and embed good practice across the infrastructure lifecycle. One of the main directions, integration of land use and infrastructure planning, aims to ensure jobs and housing growth are supported by infrastructure investment.

The Planning Proposal corresponds with this strategic direction, through providing residential dwellings and retail within close proximity to the Westconnex corridor, the proposed Five Dock Metro Station and the nearby Five Dock Town Centre.

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This site is in a key accessible location that will maximise effectiveness and efficiency for residents and visitors to infrastructure to connect them to the Greater Sydney region.

Future Transport Strategy 2056

The Future Transport Strategy 2056 is a 40 year strategy, supported by a suite of regional NSW and Greater Sydney plans, to achieve the vision for the New South Wales transport system.

The 40 year vision focuses on the following outcomes; customer focused, successful places, a strong economy, safety and performance, accessible services and sustainability.

The Future Transport Strategy 2056 is supported by the Planning Proposal as it seeks to increase the number of people able to access local town centres and high frequency public transport by walking. The proposal enhances pedestrian connections to the nearby Five Dock town centre through pedestrian priority crossings and enhancing the walkability of the surrounding streets. The Proposal supports future residents to commute using public transport and pedestrian connections to support the 30 minute concept city.

Additionally, the Future Transport Strategy 2056 envisions a transport system that 'supports the livability and sustainability of our communities'.

Due to close proximity to vital transport infrastructure, like WestConnex and Metro station, this would result in reliance on traffic congestion and therefore emissions.

Assessment Criteria (Strategic and Site-specific merit)

Does the proposal have strategic merit?

Yes. The Planning Proposal demonstrates strategic merit.

 Criterion 1: will it give effect to the relevant regional plan outside of the Greater Sydney Region, the relevant district plan within the Greater Sydney Region, or corridor/precinct plans applying to the site, including any draft regional, district or corridor/precinct plans released for public comment; or

Yes. The Planning Proposal will give effect to the relevant objectives in the Greater Sydney Region Plan, and planning priorities in the Eastern City District Plan. Refer to Table 4 and 5 above.

 Criterion 2: Will it give effect to a relevant local strategic planning statement or strategy that has been endorsed by the Department or required as part of a regional or district plan or local strategic planning statement; or

Yes. The Planning Proposal will give effect to the relevant planning priorities in the Canada Bay Local Strategic Planning Statement (LSPS) which was assured by the Greater Sydney Commission (GSC) in March 2020.

There are no other relevant local Council strategies that have been endorsed by the Department. Notwithstanding, the Planning Proposal has been considered against relevant Council Plans such, as addressed below in this report.

 Criterion 3: Will it respond to a change in circumstances, such as the investment in new infrastructure or changing demographic trends that have not been recognised by existing strategic plans

Yes. This Planning Proposal responds to the need to deliver 'more housing in the right locations' and further meets NSW state planning objectives linking housing supply and job growth in proximity to key transport nodes.

Infrastructure (rail and road)

The Planning Proposal is specifically motivated by the planned delivery of the Five Dock Metro Station, which will be located less than 700m from the site, in Five Dock Town Centre.

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The Planning Proposal also responds to the significant investment in Australia's largest road infrastructure project, the WestConnex, providing motorists improved access across Sydney. Relevant to the site includes the new M4, which opened in July 2019 providing a new 5.5km tunnel connecting Haberfiled to Parramatta and the M4, with an average journey time of 35minutes.

Other key stages of the WestConnex project that will benefit the site include:

- The M4-M5 Link Tunnels, opening in 2023. The M4-M5 Link Tunnels will be 7.5km tunnels linking the New M4 at Haberfield with the M8 at St Peters, with connections to the Anzac and Iron Cove bridges via the Rozelle Interchange; and
- The Rozelle Interchange, opening in 2023. The Rozelle Interchange, being
 delivered by the NSW Government, connects the M4-M5 Link to the Anzac and
 Iron Cove bridges, and the future Western Harbour Tunnel and Beaches Link.
 The Rozelle Interchange is being built almost entirely underground, freeing up
 space for a new 10ha regional park.

Housing targets

The Planning Proposal seeks to provide housing in a highly sought-after location that is close to existing (buses) and planned public transport (future metro station) and good road access (WestConnex).

Council's housing analysis indicates a 6 -10 year target for the period 2021 to 2026 of 3,800 dwellings. While future housing provision in Canada Bay LGA is on track to meet their housing targets, DPIE monitoring shows there is only 2,400 dwellings scheduled for completion by 2023/24. Canada Bay Local Housing Strategy acknowledges this and suggests there is opportunity to encouraging housing in more accessibly locations and within walkable catchments of traditional centres.

Of the 37 apartments that can be achieved by the Planning Proposal, this would provide less than 1% of the implied 2021-26 housing target but would have an overall significant benefit to the community, providing new housing in close proximity to a range of jobs, services and amenities.

Does the proposal have site-specific merit?

In preparing the Planning Proposal, significant consideration has been given to the constraints of the site, its relationship with adjoining properties, traffic, and environmental impacts.

Given the site's highly accessible location, the need for more housing in the right location, and the ability for all on-site impacts to be appropriately managed, the Planning Proposal is considered to have demonstrated site-specific merit.

- The Proposal demonstrates site specific merit for the following reasons:
- The Indicative Concept Design demonstrates that the proposed planning controls and building envelopes will deliver excellent design outcomes and high amenity apartments and communal spaces, consistent with the requirements of the Apartment Design Guideline (ADG).
- The site is within a highly walkable, accessible and well-serviced neighbourhood and has acceptable traffic impacts;
- The resulting built form minimises visual, privacy and overshadowing impacts for neighbouring properties. There is no resulting overshadowing to open space, and acceptable levels of solar access to neighbouring properties can be maintained:
- The proposal will facilitate the redevelopment of a vacant, unused site to deliver new shops and homes - providing significant benefits for the local community.

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- The proposal will activate local streets with well-designed shops and ground floor apartments, that reconnect the site with the neighbourhood and improve safety, amenity and liveability outcomes.
- The Proposal provides an opportunity to renew a tired and run down site through new development that offers amenity, as well provides for a visual gateway to this area of Five Dock through appropriate built scale.
- The Proposal provides the opportunity to provide improvements to the public domain and adjacent open space to satisfy the needs of residents and for the enjoyment of the wider neighbourhood.
- The Proposal is seen to be consistent with the established local character, provides an appropriate interface to adjoining properties and does not result in any significant visual impacts from nearby public spaces.
- The Proposal provides an opportunity to transplant highly significant trees. As recommended in the Arboricultural Impact Assessment, five (4) high retention value trees (Trees 2,3,4 and 5) are recommended to be transplanted either on site or in nearby reserve, as part of an eventual development outcome.

The Planning Proposal is further considered to have site specific merit as it meets the below site-specific merit criteria.

 Criterion 1: The natural environment (including known significant environmental values, resources or hazards);

The site does not hold any significant environmental values and is not affected by any resources or hazards that preclude the site from redevelopment. Section 7 of this report, and the supporting **Attachments** at **A** to **H**, demonstrate the site is not affected by any environmental constraints which would reasonably preclude the proposed development.

In order to accommodate the proposed development, as envisaged by this planning proposal, ten (10) trees will be required to be removed, with a further four (4) trees recommended for transplanting elsewhere on the site or within the local area, as they are encroached by the footprint of the proposed development. The remaining eleven (11) trees on site will be protected and retained. Refer to assessment provided in Section 7.6 of this report and at Attachment D, Attachment E and Attachment H.

 Criterion 2: The existing uses, approved uses, and likely future uses of land in the vicinity of the proposal;

The site forms part of an existing B1 neighbourhood centre, which continues on the eastern side of Ramsay Road. The scale of development in the B1 neighbourhood centre consists of predominately two-storey shop top housing, as well as slightly higher heights to the east of Ramsay Road, which is established by the datum line of the existing heritage listed substation building (3-storeys).

Whilst there are no plans proposed by Council to change the planning controls for the existing B1 neighbourhood zone, the site does lend itself to some uplift in height and density, as a way to strengthen the existing neighbourhood centre and to encourage renewal in and around a small neighbourhood centre that is well serviced by road infrastructure, public and active transport, and open space.

To the south of the site is Iron Cove Creek – an important open space and recreational green corridor that provides connections from the site to Iron Cove Bay. The Planning Proposal ensures no overshadowing to Iron Cove Creek.

The site is also surrounded by low density residential development to the north and east and is characterised by single and two storey residential development, which is unlikely to change. The Planning Proposal ensures amenity is maintained to surrounding residential properties through appropriate controls.

The Indicative Concept Design demonstrates that the proposal can achieve a built form outcome that minimizes visual impacts from surrounding properties and public open

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space and does not create any unreasonable amenity impacts on adjoining development and open space along the adjoining creek.

 Criterion 3: The services and infrastructure that are or will be available to meet the demands arising from the proposal and any proposed financial arrangements for infrastructure provision.

Yes. There is adequate infrastructure to support the Planning Proposal.

The site is well serviced by existing and planned transport infrastructure, as noted earlier in this report. The site is well-serviced by existing public open space and the projected population will not generate the need for additional public open space.

The Planning Proposal will provide future development that can support upgrades along Iron Cove Creek, including landscaping and public domain works in accordance with Sydney Water's master plan.

The Traffic and Transport Assessment, prepared by Varga Traffic Planning (**Attachment C**) confirms that the traffic network can accommodate the traffic generation potential of the development in accordance with the proposed controls, and there will not be unacceptable traffic implications in terms of road network capacity.

Q4. Will the planning proposal give effect to a council's endorsed local strategic planning statement, or another endorsed local strategy or strategic plan?

Yes. The Planning Proposal is consistent with Council's Local Strategic Planning Statement, as detailed below.

City of Canada Bay Local Strategic Planning Statement (2020)

The City of Canada Bay Local Strategic Planning Statement (LSPS) is the core strategic document that provides the 20-year land use and planning vision for the City of Canada Bay. The plan is implemented through four planning priorities; infrastructure and collaboration, livability, productivity and sustainability.

The LSPS was adopted by Council on 15 October 2019, with the Greater Sydney Commission granting formal assurance on 25 March 2020.

Canada Bay LSPS has a key focus on liveability, ensuring that residents have access to diverse housing types, open spaces and recreation areas, public transport and community spaces. The strategic statement identifies an additional 32, 000 residents are expected within the LGA, and in order to support the population and the amenity of its residents, preserving and enhancing the distinctive local character is imperative for the success. The Proposal will provide housing supply that can meet the housing and social needs of the changing demographics, including diverse families and communities. The Proposal will provide access to high frequency transport options and provide connection to open and recreational spaces.

A full assessment of the Proposal against the relevant objectives stated in the LSPS is outlined in **Table 9** below.

Table 9 City of Canada Bay LSPS

City of Canada Bay LSPS	Consistency	Comment
Objectives		
Infrastructure and Collaboration		
Planning Priority 1 – Planning for a city that is supported by infrastructure	Yes.	The District Plan addresses the need to provide more residential dwellings to support the projected population increase of 325,000 by 2036.
		The proposal seeks to plan for a city supported by infrastructure by increasing residential capacity of the site near to jobs, services and amenities.
		Future development in accordance with the proposed controls will have access to a range of public transport services, supported by the existing bus network along Ramsay Road and the future planned

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City of Canada Bay LSPS	Consistency	Comment
Objectives		
		metro in Five Dock (located less than 700m from the site).
Livability		
Planning Priority 3 - Providing community services and facilities to meet people's changing needs	Yes.	The Proposal is consistent with Priority 3 of the LSPS by revitalising an existing neighbourhood centre. The Planning Proposal can create 37 new homes and around 580sqm of retail floor space.
Planning Priority 4 - Foster safe, healthy, creative, culturally rich and socially connected communities	Yes.	The Proposal aims to create a healthy, accessible, and safe community for residents and local community. Future development can provide new communal open space areas, giving the local residents the opportunity to connect in a safe healthy environment.
		In addition to being in the Five Dock town centre, the site is also located in close proximity to a range of public open spaces and facilities, like the Iron Cove Creek.
Planning Priority 5 - Provide housing supply, choice and affordability in key locations	Yes.	Future development in accordance with the proposed controls can be consistent with this priority, through providing a mixture of dwelling types for all different lifestyles.
		The housing supply will deliver housing to an integral suburb of the Canada Bay LGA, in close proximity to key transport infrastructure, e.g. the future Metro site.
Planning Priority 6 - Provide high quality planning and urban design outcomes for key sites and precincts	Yes.	The Proposal plays both a key role to emphasise the gateway site to this part of Five Dock and renew an existing neighbourhood centre by providing for appropriate scaled development.
Planning Priority 7 - Create vibrant places that respect local heritage and character	Yes.	The Planning Proposal will respect the site's established character which forms part of an existing B1 neighbourhood centre. The scale of development under the proposed controls will be in accordance with the height of the Electricity Substation, that is located east to the subject site on Ramsay Road.
		The site is also surrounded by low density residential development to the north and east and is characterised by single and two storey residential development, which is unlikely to change. The Planning Proposal ensures amenity is maintained to surrounding residential properties through compliance with the setbacks and building separation parameters outlined in the Canada Bay DCP.
Productivity		
Planning Priority 9 – Enhance Employment and economic opportunities in Local Centres		The Planning Proposal will ultimately revitalise an existing B1 Neighbourhood Centre. However, by allowing around 580sqm of retail space, as demonstrated by the Indicative Concept Design , the proposal will ensure the site does not compete with the scale of retail offer available in Five Dock local centre. Alternatively, the provision of retail space can have a neighbourhood centre focus.
Planning Priority 11 - Identify land use opportunities and implications arising from Sydney Metro West	Yes.	The site is in close proximity to the metro station in Five Dock Town Centre. The site is a 700m walk from the proposed station, providing a direct transport link for residents and the local community to achieve the 30 minute city.

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City of Canada Bay LSPS	Consistency	Comment
Objectives		
Planning Priority 12 – Improve connectivity throughout Canada Bay by encouraging a modal shift to active and public transport	Yes.	Located on an important strategic green corridor and in close proximity to existing and planned public transport modes, the Planning Proposal will encourage redevelopment of the site to provide more housing that is well placed to support a modal shift through the use of buses, metro, cycling and walking and accordingly reduce dependence on private vehicle usage.
Sustainability		
Planning Priority 13 - Protect and improve the health and enjoyment of the Parramatta River Catchment and waterways	Yes.	The site is adjacent to the Iron Cove Creek waterway. Future development in accordance with the proposed controls can protect and improve the health of the waterway through extension of the Sydney Water Concept Design. Additionally, future development in accordance with the controls would have appropriate measures to ensure stormwater is captured and treated on site.
Planning Priority E14 – Protect and enhance bushland	Yes.	The site does not contain any remnant bushland.
and biodiversity		Future development in accordance with the controls can provide improved biodiversity outcomes through the opportunity for native tree planting, landscaping and tree canopy cover.
Planning Priority 16 - Increase urban tree canopy and deliver Green Grid connections	Yes.	As demonstrated by the Indicative Concept Design, the proposal can achieve a built form outcome that includes landscape areas (which may provide for adequate planting).
		The site's strategic location along Henley Marine Drive provides opportunity for pedestrian and cycling links for connection to nearby land use and amenities along the Iron Cove green grid corridor.
Planning Priority E17 – Deliver high quality open space and recreation facilities	Yes.	The Planning Proposal is located adjacent to Iron Cove Creek, with access to a range of open spaces along canal. For this reason, there is no need to provide public open space on the site.
Planning Priority 18 – Reduce carbon emissions and manage energy, water and waste efficiently	Yes	Sustainable transport is encouraged through the Planning Proposal as future residents and visitors of the site would be encouraged to use existing and planned modes of the public transport noting the sites proximity to these, which will ultimately contribute to a reduction in carbon emission contributions.
Planning Priority 19 – Adapt to the impacts of urban and natural hazards and climate change	Yes	As stated above, the site is ideally located to encourage people to utilise alternative modes of transport, including both public transport (buses and metro) and active transport modes (walking and cycling) as a sustainable alternative to private motor vehicles. As such, less reliance on private motor vehicles helps to prepare for and adapt to the impacts of natural hazards and climate change.

Canada Bay Local Housing Strategy (2019)

As the population and demographic changes within the Eastern City District, it is imperative to facilitate future housing types and growth. The Canada Bay Local Housing Strategy analyses the population, demographic and supply issues associated with the delivery of housing within the Canada Bay LGA. The strategy, prepared by Council and SGS Economics and Planning, highlights key areas of planning and delivery of optimal residential outcomes for local communities.

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The strategy identifies that 14,300 additional dwellings will be required in Canada Bay to 2036. This new housing will be delivered through medium density dwelling types, in locations that are close to centres and where there is good access to services and infrastructure. The site is in a key position within the Inner West and Greater Sydney, located on key transport corridors and within close proximity to services and retail. In saying this, the Proposal will provide key housing in a strategic area, enhancing and improving the local livability of the Five Dock area and amenity for residents.

The Planning Proposal responds to the objectives provided in the Canada Bay Local Housing Strategy. Please refer below to the relevant objectives stated in **Table 10** below.

Table 10 Canada Bay Housing Strategy

Canada Bay Housing Strategy	Consistency	Comment
Local centres are planned to provide opportunities for alternative low and moderate scale housing, within walking distance	Yes	The Proposal supports the provision of additional private housing within walking distance to shops, services and facilities. The site is proximity to public transport – connecting the LGA to the city.
Housing diversity and choice to be further addressed by infill development around centres in the form of low	Yes	The Planning Proposal will deliver residential dwellings within an already established suburb.
rise medium density, to provide a wider range of housing forms whilst being respectful of local neighbourhood character		The Indicative Concept Design demonstrates that the proposed controls will provide a development outcome that is sensitive to the surrounding streetscape, and minimises the impact bulk and scale to appropriately fit with the local context.

YOUR future 2030 Community Strategic Plan

The Canada Bay Community Strategic Plan is a strategic policy that reflects the aspirations and priorities of the community. The plan identified key themes, goals, strategies that provide direction for the delivery of outcomes until 2030.

Please refer to **Table 11** below that outlines how the Planning Proposal achieves the priorities in the Canada Bay Community Strategic Plan.

Table 11 Community Strategic Plan

YOUR Future 2030 Community Strategic Plan	Consistency	Comment
Inclusive, involved and prosperous	Yes	The site is located in a range of inclusive and accessible area. The site provides an area and space for community cohesion and engagement.
2. Environmentally responsible	Yes	Development in accordance with the proposed controls can contribute significantly to the LGA's environmental objectives and protect the surrounding waterway – Iron Cove Creek.
3. Easy to get around	Yes	The site is subject to a range of public transport options connecting future residents with employment, recreation and services in the LGA and beyond.
4. Engaged and future focused	Yes	The Proposal responds to the growing population of Greater Sydney through providing housing supply that will support emerging lifestyles.
5. Visionary, smart and accountable	Yes	The Proposal supports a more resilient, connected and sustainable community.

Five Dock Town Centre Revitalisation

The Five Dock Town Centre Urban Design Study provides a vision for Five Dock and seeks to ensure that the centre continues to provide a strong focus for the community. The strategies key role is to improve vibrant town centres to support the social and economic wellbeing of the Canada Bay local community. One key outcome identified in the Five Dock Urban Design Study, were improvements needed to the public domain.

The Urban Design Study has been endorsed by Council, with Stage Two of the study started construction in early 2019; including the planting of street trees and shrubs, installation of high quality pavements and street furnishings and improvements to the drainage system.

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Even though the site falls outside the Five Dock Town Centre boundary, the study guides the development outcome on the site by supporting complimentary streetscape and public domain upgrades through resulting landscape and architectural design.

Sydney Metro West

Sydney Metro is Australia's biggest public transport system. The Sydney Metro West project involves the construction and operation of a rail line between Westmead and Sydney CBD.

Five Dock Station will be located in the core of the Five Dock local centre off Great North Road and Fred Kelly Place. The station will support the local town centre and the site will benefit from accessible transport options to Sydney CBD and Greater Parramatta.

The Environmental Impact Statement prepared for the Sydney Metro West, identifies that new residential development near metro stations should be maximized. The Proposal will support the transport corridor along Greater Parramatta to Sydney CBD Corridor — providing improved transport for the additional 420,000 new residents and 300,000 new works forecast to be located within the corridor over the next 20 years.

Q5. Is the planning proposal consistent with applicable State Environmental Planning Policies?

As outlined below, the Planning Proposal does not preclude consistency with any State Environmental Planning Policy. Refer to the full assessment of SEPPs at **Table 12** below.

Table 12 Consistency with SEPPs

State Environmental Planning Policies	Consistency	Comment
State Environmental Planning Policy (Biodiversity and Conservation) 2021	Yes	The Planning Proposal is consistent with the aims of the SEPP. Chapter 2 is to be considered in future development where any tree removal is proposed.
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004	Yes	The Indicative Concept Design demonstrates that building massing and orientation can support BASIX compliance, which will be documented at the future development application stage.
State Environmental Planning Policy (Exempt and Complying Development codes) 2008	N/A	N/A
State Environmental Planning Policy (Housing) 2021	Yes	The Planning Proposal is consistent with the aims of the Housing SEPP whereby the Proposal will facilitate the delivery of housing that meets the needs of the State's growing population including a 5% affordable housing contribution.
State Environmental Planning Policy (Industry and Employment) 2021	N/A	N/A
State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development	Yes	This Planning Proposal is consistent with the objectives and aims of SEPP 65 and the ADG.
State Environmental Planning Policy (Planning Systems) 2021	N/A	N/A
State Environmental Planning Policy (Precincts – Central River City) 2021	N/A	N/A
State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021	N/A	N/A
State Environmental Planning Policy (Precincts – Regional) 2021	N/A	N/A
State Environmental Planning Policy (Precincts – Western Parkland City) 2021	N/A	N/A
State Environmental Planning Policy (Primary Production) 2021	N/A	N/A
State Environmental Planning Policy (Resilience and Hazards) 2021	Yes	This Planning Proposal is consistent with the objectives and aims of Chapter 3 of the Resilience and Hazards SEPP.
		The Detailed Site Investigation Report, prepared by Aargus Pty Ltd at Attachment F states "The site is therefore considered to be rendered suitable for the proposed use, subject to the following:

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State Environmental Planning Policies	Consistency	Comment
		 An appropriate remedial / management strategy is developed, culminating in preparation of a Remedial Action Plan (RAP) in accordance with EPA guidelines, in regards to the removal of the three hotspots BH1, BH2 & BH7, as well addressing the aforementioned data gaps.
		 Any soils requiring removal from the site, as part of future site works, should be classified in accordance with the "Waste Classification Guidelines, Part 1: Classifying Waste" NSW EPA (2014)."
		On the basis of the recommendations of the Detailed Site Investigation and for the purposes of this Planning Proposal, the proposal is considered appropriate in this regard.
		As suggested by the above recommendations a RAP will be undertaken in the subsequent DA stage.
State Environmental Planning Policy (Resources and Energy) 2021	N/A	N/A
State Environmental Planning Policy (Transport and Infrastructure) 2021	N/A	N/A
Draft State Environmental Planning Policy (Design and Place)	Yes	The Planning Proposal is consistent with the aims of the SEPP.
		The Design and Place SEPP is to be further considered in the future development application stage for residential apartment development.
Draft State Environmental Planning Policy (Environment)	N/A	N/A

Q6. Is the planning proposal consistent with applicable Ministerial Directions (s.9.1 directions)?

Yes. A review of the consistency of the Planning Proposal with the Ministerial Directions under Section 9.1 of the EP&A Act 1979 is discussed at **Table 13** below.

Local Planning Direction	Consistency	Comment		
Focus Area 1: Planning Systems				
1.1 Implementation of Regional Plans	Yes	The Planning Proposal is consistent with the Eastern City District Plan, as detailed in Section 8 of this Planning Proposal.		
1.2 Development of Aboriginal Land Council Land	N/A	The Planning Proposal does not apply to Aboriginal Land Council Land.		
1.3 Approval and Referral Requirements	N/A	The Planning Proposal does not include any provisions that is expected to would require the concurrence, consultation or referral of any development application to a Minister or public authority and does not identify any development as designated development. In the instance that referral is discovered to be required during the proposal assessment, it would be suitably undertaken by Council.		
1.4 Site Specific Provisions	N/A	The Planning Proposal does not propose any unnecessarily restrictive site-specific planning controls.		
Focus area 1: Planning Systems - Place-based				
1.5 Parramatta Road Corridor Urban Transformation Strategy	N/A	The Planning Proposal does not apply to land in the Parramatta Road corridor.		

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Local Planning Direction	Consistency	Comment
1.6 Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan	N/A	The Planning Proposal does not apply to land in the North West Priority Growth Area.
Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	N/A	The Planning Proposal does not apply to land in the Parramatta Priority Growth Area.
Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	N/A	The Planning Proposal does not apply to land in the Wilton Priority Growth Area.
1.9 Implementation of Glenfield to Macarthur Urban Renewal Corridor	N/A	The Planning Proposal does not apply to land in the Glenfield to Macarthur corridor.
Implementation of Western Sydney Aerotropolis Interim Land Use and Infrastructure Implementation Plan	N/A	The Planning Proposal does not apply to land in the vicinity of Western Sydney Aerotropolis.
1.11 Implementation of Bayside West Precincts 2036 Plan	N/A	The Planning Proposal does not apply to land in Bayside West.
1.12 Implementation of Planning Principles for the Cooks Cove Precinct	N/A	The Planning Proposal does not apply to land in Cooks Cove.
1.13 Implementation of St Leonards and Crows Nest 2036 Plan	N/A	The Planning Proposal does not apply to land in St Leonards and Crows Nest.
1.14 Implementation of Greater Macarthur 2040	N/A	The Planning Proposal does not apply to land in Greater Macarthur.
1.15 Implementation of the Pyrmont Peninsula Place Strategy	N/A	The Planning Proposal does not apply to land in the Pyrmont Peninsula.
1.16 North West Rail Link Corridor Strategy	N/A	The proposal is not linked to the North West Rail Link.
1.17 Implementation of the Bays West Place Strategy	N/A	The proposal is not linked to the Bays West Place Strategy.
Focus Area 2: Design and Place		
Focus Area 3: Biodiversity and Conservation		
3.1 Environment Protection Zones	N/A	The Planning Proposal does not apply to land within an Environmental Protection Zone.
3.2 Heritage Conservation	Yes	Although not a heritage item itself, the development has considered its impact on the surrounding heritage items and conservation areas.
3.3 Sydney Drinking Water Catchments	N/A	The Planning Proposal does not apply to land in the nominated Council areas.
3.4 Application of E2 and E3 Zones and Environmental Overlays in Far North Coast LEPs	N/A	The Planning Proposal does not relate to any environmental zoned land on the North Coast
3.5 Recreation Vehicle Areas	N/A	The Planning Proposal does not seek to enable land to be developed for the purposes of a recreation vehicle area.
Focus area 4: Resilience and Hazards		
4.1 Flooding	N/A	The site is not affected by flooding.
4.2 Coastal Protection	N/A	The Planning Proposal does not apply to land within the Coastal Zone.
4.3 Planning for Bushfire and Protection	N/A	The Planning Proposal does not apply to land that is identified as bush fire prone land.
4.4 Remediation of Contaminated Land	Yes	The Planning Proposal is consistent with this direction as it will reduce the risk of harm to human health and the environment by adhering to the following recommendations of the Detailed Site

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Local Planning Direction	Consistency	Comment
		"The site is therefore considered to be rendered suitable for the proposed use, subject to the following:
		An appropriate remedial / management strategy is developed, culminating in preparation of a Remedial Action Plan (RAP) in accordance with EPA guidelines, in regards to the removal of the three hotspots BH1, BH2 & BH7, as well addressing the aforementioned data gaps.
		Any soils requiring removal from the site, as part of future site works, should be classified in accordance with the "Waste Classification Guidelines, Part 1: Classifying Waste" NSW EPA (2014)."
		On the basis of the above recommendations and for the purposes of this Planning Proposal, the proposal is considered appropriate in this regard. As suggested by the above recommendations a
		RAP will be undertaken in the subsequent DA stage.
4.5 Acid Sulfate Soils	Yes	The site contains Class 5 Acid Sulfate Soils. South of the site, along Henley Marine Drive contains Class 2 acid sulfate soils.
4.6 Mine Subsidence and Unstable Land	N/A	The Planning Proposal does not apply to land that is within a mine subsidence district or that has been identified as being unstable.
Focus Area 5: Transport and Infrastructure		-
5.1 Integrating Land Use and Transport	Yes	The site is well located with easy access to transport services, including the future Five Dock Metro station within 700 metres of the site, and access to multiple bus services.
		The Planning Proposal will enable the intensification of housing in a well-connected site and will encourage use of public transport services.
5.2 Reserving Land for Public Purposes	N/A	The Planning Proposal does not propose to create, alter or reduce any existing zoning or reservation on the land for a public purpose.
5.3 Development near Regulated Airports and Defence Airfields	e N/A	The site is not located near a Regulated Airport or Defence Airfield.
5.4 Shooting Ranges	N/A	The Planning Proposal does not seek to affect, create, alter or remover a zone or provision relating to land adjacent to or adjoining an existing shooting range.
Focus area 6: Housing		
6.1 Residential Zones	Yes	The Planning Proposal is consistent with this direction as it will not reduce the permissible residential density on the site.
6.2 Caravan Parks and Manufactured Home Estates	N/A	The Planning Proposal does not relate to the location or provision for caravan parks or manufactured homes.
Focus area 7: Industry and Employment		
7.1 Business and Industrial Zones	Yes	This direction applies to all planning proposals that will affect land within an existing or proposed business or industrial zone. In this regard, the proposal seeks to permit residential flat buildings across the entirety of the site.
		This Direction aims to encourage employment growth in suitable locations, protect employment

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Loc	al Planning Direction	Consistency	Comment
			land in business zones, and support the viability of identified centres.
			In this case, the Planning Proposal proposes draft provisions for inclusion in Schedule 1 of the CBLEP 2013 which ensures that residential apartments are limited to a certain extent of Henley Marine Drive.
			The addition of proposed Clause 6.5 of CBLEP 2013 also ensures that business uses are retained on the site at the corner of Ramsay Road and Henley Marine Drive.
			The Planning Proposal is supported by an Economic Assessment which anticipates values the contribution made to the local economy from commercial operations that is capable at the site under the proposed LEP provisions to be close to a million dollars per annum.
			Therefore, it is considered that these provisions will ensure commercial uses are adequately protected at the site. The Planning Proposal is therefore considered to be consistent with the direction as it seeks to protect employment land at the site and does not reduce the potential employment density of the land.
7.2	Reduction in non-hosted short-term rental accommodation period	N/A	The Planning Proposal does not reduce the number of days of non-hosted short-term rental accommodation.
7.3	Commercial and Retail Development along the Pacific Highway, North Coast	N/A	The Planning Proposal does not apply to land along Pacific Highway, North Coast
Foc	us area 8: Industry and Employment		
8.1	Mining, Petroleum Production	N/A	The Planning Proposal does not relate to the mining of coal or other materials, production of petroleum or extractive materials.
Foc	us area 9: Primary Production		
9.1	Rural Zones	N/A	The Planning Proposal does not affect land within an existing or proposed rural zone.
9.2	Rural Lands	N/A	The Planning Proposal does not apply to an existing or proposed rural or environmental protection zone.
9.3	Oyster Aquaculture	N/A	The Planning Proposal does not relate to oyster aquaculture.
9.4	Farmland of State and Regional Significance on the NSW Far North Coast	N/A	The Planning Proposal does not apply to farmland of state and regional significance on the NSW Far North Coast.

8.2 Section C - Environmental, social and economic impact

Q7. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

No. The Planning Proposal will not adversely affect any threatened species, populations or ecological communities.

Q8. Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

No. The site is not identified by Council as having any particular environmental significance. For these reasons, it is unlikely that the planning proposal will result in

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adverse impacts on critical habitat, threatened species, populations, ecological communities or habitats.

The subject site is located within an established commercial and residential area and has been utilised for these purposes for many years as indicated by the Detailed Site Investigation Report, at **Attachment G**.

In addition to the above, Section 7 of this report provides an assessment of the likely environmental planning issues associated with the proposal. The assessment considers likely environmental impacts to occur in respect of built form, solar access, visual impact, traffic and transport, tree management, contamination and local infrastructure, as a result of the proposal.

It should be noted that the assessment of the environmental impacts of the proposal would form a key part of any subsequent DA that was submitted for the subject site.

Q9. Has the planning proposal adequately addressed any social and economic effects?

Yes. The Planning Proposal will have positive economic and social effects. The Planning Proposal will facilitate the renewal of an unused site to deliver improved employment, housing and social outcomes for the local community.

The Planning Proposal will protect and enhance local employment land and will generate local jobs (both during construction and ongoing).

The Planning Proposal will renew an existing neighbourhood centre to provide better shops and services close to people's homes. The proposed public domain improvements will improve walkability and amenity outcomes and will create a new neighbourhood gathering place for the broader community to enjoy

8.3 Section D - State and Commonwealth interests

Q10. Is there adequate public infrastructure for the planning proposal?

As previously stated in this report, the site has great accessibility, located 700m from the planned Five Dock Metro Station. The site is also well serviced by existing bus networks, as well as footpaths and on-road / off-road cycle networks.

The Traffic and Transport Study, prepared by Varga Traffic Planning Pty Ltd, confirms that the proposed increase in traffic is negligible and is not envisaged to affect the existing surrounding traffic network.

Refer to Section 7.5 of this Report and ${f Attachment}\ {f C}$ for detailed assessment of public transport infrastructure.

Q11. What are the views of state and Commonwealth public authorities consulted in accordance with the Gateway determination?

Consultation with State and Commonwealth agencies will be undertaken after a Gateway Determination is issued (if required).



9. Mapping

This Planning Proposal seeks to amend the following maps of the Canada Bay Local Environmental Plan 2013:

- Land Zoning Map Sheet LZN_005
- Floor Space Ratio Map Sheet FSR_005
- Height of Buildings Map Sheet HOB_005
- Lot Size Map Sheet LSZ_005
- Active Street frontage Map Sheet ASF_005
- Affordable Housing Contribution Map Sheet AHCS_005

The Proposed LEP maps are shown at Figures 54 -59.

Land Use Zone

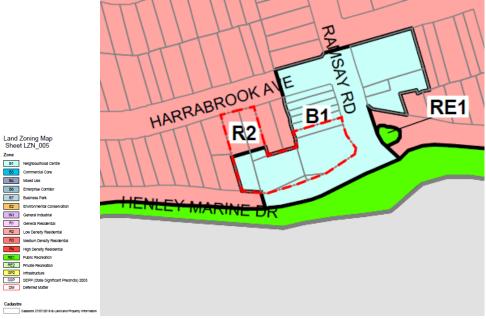


Figure 55 Proposed Land Use Zoning Map Source: Architectus and CBLEP 2013

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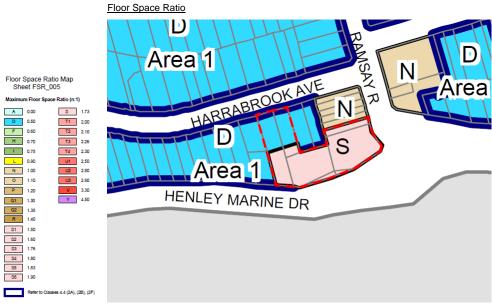


Figure 56 Proposed Floor Space Ratio Map Source: Architectus and CBLEP 2013

Height of Buildings

J 9.5 K1 10.0

K1 10.0 K2 10.5 L 11.0 M 12.0 N 14.0

O 15.5
O1 15.0
O2 16.0
P1 17.0
P2 18.0
Q 20.0
R1 21.0

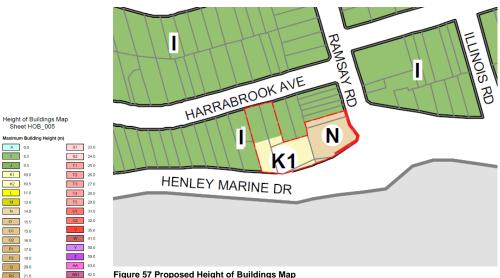


Figure 57 Proposed Height of Buildings Map Source: Architectus and CBLEP 2013

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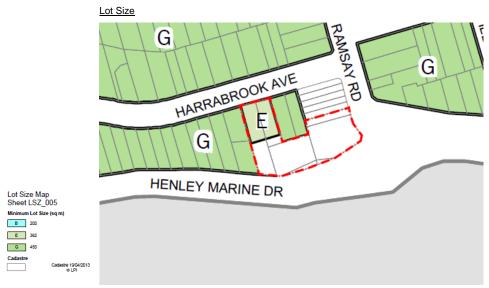


Figure 58 Proposed Lot Size Map Source: Architectus edits and CBLEP 2013

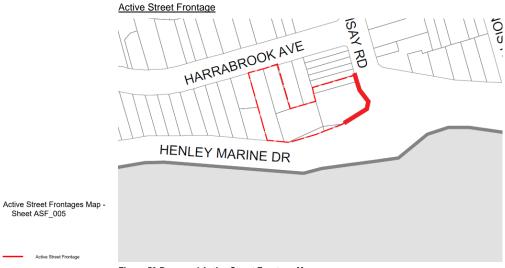


Figure 59 Proposed Active Street Frontage Map Source: Architectus edits and CBLEP 2013

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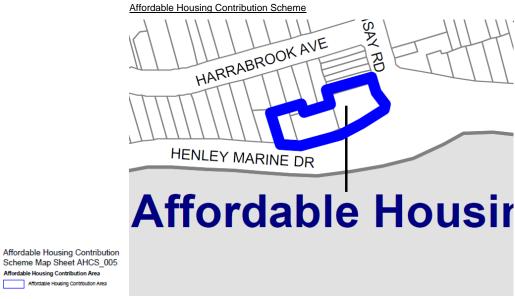


Figure 60 Proposed Affordable Housing Contribution Scheme Source: Architectus edits and CBLEP 2013

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10. Consultation

10.1 Council consultation

The Applicant has had several meetings with Council staff prior to the lodgement of this Planning Proposal. The Applicant has taken on board Council and Studio GL's feedback to deliver a high-quality development proposal that positively responds to its surrounding context. The key outcomes of these meetings are detailed below.

Meeting 1 - Early engagement with Council (7 November 2017)

On 7 November 2017, the Applicant and Architectus met with City of Canada Bay Council to discuss an early concept design for the site.

Architectus presented a preliminary urban design report which included an overview preliminary concept options for the site including shop top housing development and attached row townhouses, ranging between 2 and 6 storeys in height.

In general, Council was supportive of shop top housing along Ramsay Road, but noted that this site should not be seen as another retail or commercial centre for Five Dock and that the main activity should remain in the Five Dock town centre. Council was supportive of some type of activation in this location such as a parkland café or eatery.

Meeting 2 - Early engagement with Council (8 March 2017)

On 7 November 2017, the Applicant and Architectus met with City of Canada Bay Council to discuss a preferred concept option for the site.

Architectus presented a preferred option for the site which included a mix of shop top housing, residential flat apartments and attached terraces, ranging between 2.5 and 5 storeys in height.

Council was generally supportive of 3-4 storey height, with the continuation of retail along Ramsay Road, but did not consider a 5th storey to be appropriate for the sites location. Council recommended that increased height and densities in this location would likely cause speculation for adjoining landowners, particularly on the eastern side of Ramsay Road, and suggested Architectus develop a strategy for how the broader B1 neighbourhood centre might develop.

Council requested further information from the Applicant for Council officers to provide formal feedback.

Meeting 3 – Pre-lodgement meeting with Council 21 June 2018

On 21 June 2018, the Applicant and Architectus met with City of Canada Bay Council to discuss the preferred concept and planning pathway for the site.

Architectus provided Council with a Feasibility Study report, prepared by Architectus which included a proposal for terrace housing along Harrabrook Avenue (2.5 storeys) and Henley Marine Drive, terrace and apartments along Henley Marine Drive (4-5 storey), and a 5-storey mixed use building with ground-level retail facing Ramsay Road.

Following the meeting, Council engaged Independent urban designers, Studio GL, to provide advise on whether the submitted proposal provides an appropriate planning response for the site and its surrounding context.

Other key recommendations provided in the Studio GL report, dated July 2018 were:

- 'That the zoning of the B1 Neighbourhood Centre is not altered';
- 'Larger sites create an opportunity to address interface issues more successfully and development controls for larger sites are therefore able to be developed at a slightly higher scale and density'; and

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'Increased height may be possible, for example development facing Henley Marine Drive may be able to be increased to four storeys (i.e. 12m) if interface issues to the north and west can be addressed'.

The Planning Proposal responded to the above concerns raised by Council and Studio GL, whereby the Proposal was revised to:

- Retain the existing B1 Neighbourhood Centre zone;
- Be amalgamated, to create a large development site resulting in a total site area of 2,579 square metres;
- Ensure an appropriate transition and set back to neighbours is provided (i.e. minimum 9m set back to the northern and western neighbours); and
- Ensure an appropriate height and scale of development that is no greater than 4-storeys. Note. 4-storeys requires a 15.5m height limit to accommodate the minimum floor to ceiling levels in Council's DCP.

Meeting 4 – Pre-lodgement meeting with Council (23 May 2019)

On 23 May 2019, the Applicant, Architectus (Planners and Urban Designers) and Squillace (Architects) met with City of Canada Bay Council to discuss the preferred concept and planning pathway for the site.

Architectus and Squillace provided Council with a Urban Design report outlining two possible development scenarios, along with recommended planning controls for each scenario. The scenario's included:

- Scenario A The site at 1 Ramsay Road is developed on its own; and
- Scenario B The sites at 1 Ramsay Road and 1-7 Harrabrook Avenue are developed as one site and at the same time.

Following the meeting on 23 May 2019, Council engaged Independent urban designers, Studio GL, to provide advice on whether the submitted proposal provides an appropriate planning response for the site and its surrounding context.

In general, feedback from Council and Studio GL said that the proposed architectural resolution was considered to be excellent, however the proposed scale of the building should be reduced in recognition of the desired future character of the surrounding context, which is considered to remain substantially the same.

Other key recommendations provided in the Studio GL report, dated June 2019 were:

- That the B1 Neighbourhood Centre is not altered along Ramsay Road and around the corner of Henley Marine Drive and Ramsay Road;
- Avoid excess commercial development and encourage residential development on the rear portion of the site zoned B1 Neighbourhood Centre; and
- To ensure the provision of additional permitted uses of residential flat buildings in the B1 zone does not result in no retail/commercial uses.

The Planning Proposal responded to the above concerns raised by Council and Studio GL, whereby the Proposal was revised to:

- Retain the existing B1 Neighbourhood Centre zone, but allow for an additional permitted use to allow 'residential flat buildings' along the southern frontage of Henley Marine Drive;
- Provide 437 sqm of retail GFA on the site, which could be used for a parkland café / eatery style food and beverage premises; and
- Ensure an appropriate height and scale of development that is no greater than
 4-storeys (14m) to ensure that future development responds to its existing
 context, i.e. street wall height established by the datum line of the adjacent

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substation on Ramsay Road, and future strategic context, whereby the Proposal will be within walking distance (700m) of the Five Dock Metro Station.

Meeting 6 - Pre-lodgement meeting with Council (8 May 2020)

On 8 May 2020, the Applicant, Architectus (Planners and Urban Designers) and Squillace (Architects) met with City of Canada Bay Council to discuss a revised concept for the site.

Generally, Council was pleased with the overall design of the proposal, but expressed concern for a 17m height limit and 2:1 FSR. Council commented on the current 8.5m height plane to both sides of the canal and consider the sites interfaces as sensitive.

Council also said they would not recommend lodging a DA and Planning Proposal concurrently, as a DA cannot be approved until the Planning Proposal is gazetted.

Council confirmed no formal feedback would be provided post meeting from Council.

Additional correspondence with Council (23 June 2020)

A submission was sent to Council on 23 June seeking feedback from Council on the revised design concept. On 26 June 2020 Council provided feedback via email correspondence on the revised design concept package.

Key feedback provided from Council included:

- Development facing Ramsey Road should not be taller than four storeys (14m) with a street wall height of three storeys;
- The 14m height limit should not be allowed beyond the western edge of the right of way off Harrabrook Ave;
- Development facing Henley Marine Drive should not be taller than 3 storeys (10m) with a street wall height of three storeys along Henley Marine Drive and two storeys facing the rear boundary; and
- The design provided shows impacts of a 3 storey development, which can be mitigated by a 9m setback and deep soil planning along the boundary of 1 and 3 Harrabrook Ave (sites not included in the Proposal).

Lodgement of the Planning Proposal (18 December 2020)

On 18 December 2020, Architectus on behalf of the Applicant lodged a Planning Proposal to Canada Bay Council which sought to:

- Rezone part of the site from R2 Low Density Residential to B1 Neighbourhood Centre:
- Increase the maximum building height on part of the site from 8.5m to 15.5m;
- Increase the floor space ratio (FSR) on part of the site from 0.5:1 and 1.0:1 to 1.73:1;
- Reduce the minimum lot size map for 5 and 7 Harrabrook Ave from 450m2 to 360m2; and
- Amend Schedule 1 Additional Permitted uses to allow residential flat buildings on part of the site zoned B1 Neighbourhood Centre.

Meeting 7 – Meeting to discuss issues raised in the Local Planning Panel Report (11 February 2020)

On 11 February 2021, the Applicant met with Council to discuss some of Council's concerns raised in the report prepared for the Local Planning Panel (LPP) including the following items:

- 10m height plane proposed to the west of the right of way;
- Setback to Unit 301 and visual impact to neighbouring residential properties;
- 14m height plane proposed to the east of the right of way;

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- Affordable housing provision; and
- Retention & Protection of Tree 1 (Lilly Pilly).

Local Planning Panel Meeting (18 February 2021)

On 18 February 2021, the Planning Proposal was reviewed by the LPP. The LPP agreed with assessment undertaken by staff and noted that whilst the centre is small, it is well located to accommodate an increase in density that is compatible with the character of the surrounding area. The following advice was provided:

- The Proposal is considered to have merit subject to the following amendments:
 - a) Provide a maximum building height fronting Ramsay Road to 14.0m and a maximum building height to the west of the right of way of 10.0m;
 - b) Ensure the retention and protection of tree identified as Tree 1, Lilly Pilly Syzgium sp in the Aboricultural Impact Assessment prepared by NewLeaf Aboriculture:
 - Introduce an Active Street frontage on the land with a frontage to Ramsay Road and extending around the corner along Henley Marine Drive; and
 - d) Include a Detailed Contaminated Site Investigation.
- Council update the draft Canada Bay Affordable Housing contribution Scheme to apply to the subject site and map the land on the Affordable Housing Contribution Scheme Map under the Canada Bay Local Environmental Plan 2013;
- Negotiation with the applicant on the terms of a Planning Agreement prior to submission of the Planning Proposal for a Gateway Determination;
- A draft Development Control Plan be prepared by Council to guide the future development of the site that includes but is not limited to, the following controls:
 - a) Building envelope;
 - b) Ground level setbacks;
 - c) Upper level setbacks; and
 - d) Tree retention and landscaping requirements expressed as a percentage.
- The Planning proposal could be submitted to the Department of Planning Industry and Environment for a Gateway Determination, once the above matters have been addressed.

Councilor Meeting (16 March 2021)

On 16 March 2021 Council resolved that the Planning Proposal be submitted to the Department of Planning, Industry and Environment (DPIE) for a Gateway Determination.

However, prior to the Planning Proposal being submitted to DPIE, the Planning Proposal is to be updated in accordance with advice from the LPP and Council recommendations as detailed in **Section 3** of this report.

As such, this Planning Proposal has been updated in accordance with Council's recommendations and has been re-submitted to Council to be submitted to DPIE for a Gateway Determination. A detailed response to Council's recommendations is provided in **Table 1** in **Section 3** of this report

10.2 Consultation strategy

The duration and requirements for public exhibition of the Planning Proposal will be provided as part of a Gateway determination. Community and stakeholder consultation will be undertaken in accordance with these requirements.

It is anticipated that the Planning Proposal will be publicly exhibited for a period of 28 days on Council's website and in newspapers circulated within The Hills Local

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Government Area (LGA). It is also anticipated that adjoining and nearby property owners and residents will be notified in writing of the Planning Proposal.

10.3 Community Consultation

The applicant is consulting with the nearby community, and will continue to do so through the assessment phases on the proposal. In addition, it is assumed formal exhibition of the proposal will occur by the Council, which will also provide the opportunity for further comment.



11. Project Timeline

The timeframe for the proposed amendment to the CBLEP 2013 is expected to be dependent on the consideration by Council of the Planning Proposal and the progression of any additional information requested by Council to satisfy any matters required to be addressed as part of a Gateway determination.

It is considered that the information required to progress the Planning Proposal to a Gateway Determination has been submitted along with this Planning Proposal.

11.1 Indicative project timeline

Detail on indicative project timeframes is provided below in Table 14.

Table 14 Indicative Project Timeline

Stage	Timing	Responsible Organisation
Lodgment of initial Planning Proposal	December 2020	Architectus on behalf of the Applicant
Local Planning Panel (LPP)	February 2021	LPP and Canada Bay Council
Council endorse Planning Proposal	March 2021	Canada Bay Council
Lodgement of updated Planning Proposa	l August 2021	Architectus on behalf of the Applicant
Lodgement for Gateway Determination	October 2021	Canada Bay Council
Anticipated commencement date (date of Gateway determination)	December 2021	Minister (or delegate)
Timeframe for government agency consultation (pre and post exhibition as required by Gateway determination)	January – February 2022	Applicant and Canada Bay Council
Commencement and completion dates fo public exhibition period	rMarch 2022	Canada Bay Council
Timeframe for the consideration of a proposal post exhibition	April – May 2022	Canada Bay Council
Anticipated date Relevant Planning Authority will make the plan (if delegated)	June – July 2022	Canada Bay Council



12. Conclusion

This Planning Proposal has been prepared in accordance with Section 3.33 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), and the requirements set out in 'A Guide to Preparing Planning Proposals'.

This Planning Proposal provides comprehensive justification for the proposed amendments to the CBLEP 2013 with respect to land at 1 Ramsay Road, 7 Ramsay Road, 5 Harrabrook Avenue and 7 Harrabrook Avenue.

Specifically, this Planning Proposal seeks to amend the CBLEP 2013 to:

- Rezone part of the site from R2 Low Density Residential to B1 Neighbourhood Centre:
- Increase the maximum building height on part of the site from 8.5m to 10m and 14m:
- Increase the floor space ratio (FSR) on part of the site from 0.5:1 and 1.0:1 to 1.71:1;
- Reduce the minimum lot size for 5 and 7 Harrabrook Ave from 450m² to 360m²;
- Introduce an active street frontage on land with frontage to Ramsay Road and extending 20 metres along Henley Marine Drive;
- Introduce an affordable housing contribution of 5% affordable housing for the site: and
- Introduce an additional permitted use for the site to allow residential flat buildings on part of the site zoned B1 Neighbourhood Centre.

The proposed amendments to CBLEP 2013 are intended to facilitate development of the site for the purpose of a mixed-use development that is of suitable scale and will renew the Ramsay Road neighbourhood centre.

The Proposal provides public benefits, including the opportunity for a range of public domain improvements.

The Proposal has strategic and site-specific merit, and it is recommended that Council forward the Planning Proposal to the Minister for Planning and Open Spaces for a Gateway Determination in accordance with Section 3.34 of the EP&A Act.

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Attachment A – Urban Design Study, prepared by Architectus and Squillace

1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Planning Proposal | Architectus



Attachment B – Survey Plan, prepared by Veris

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



Attachment C – Traffic Assessment Report, prepared by Varga Traffic Planning Pty Ltd

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



Attachment D – Arboricultural Impact Assessment, prepared by New Leaf Arboriculture

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



Attachment E – Supplementary Arboricultural Assessment, prepared by New Leaf Arboriculture

Planning Proposal | 1-7 Ramsay Road & 5 and 7 Harrabrook Avenue, Five Dock | Architectus



Attachment F – Economic Report, prepared by HillPDA Consulting

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Attachment G – Detailed Site Investigation Report, prepared by Aargus Pty Ltd

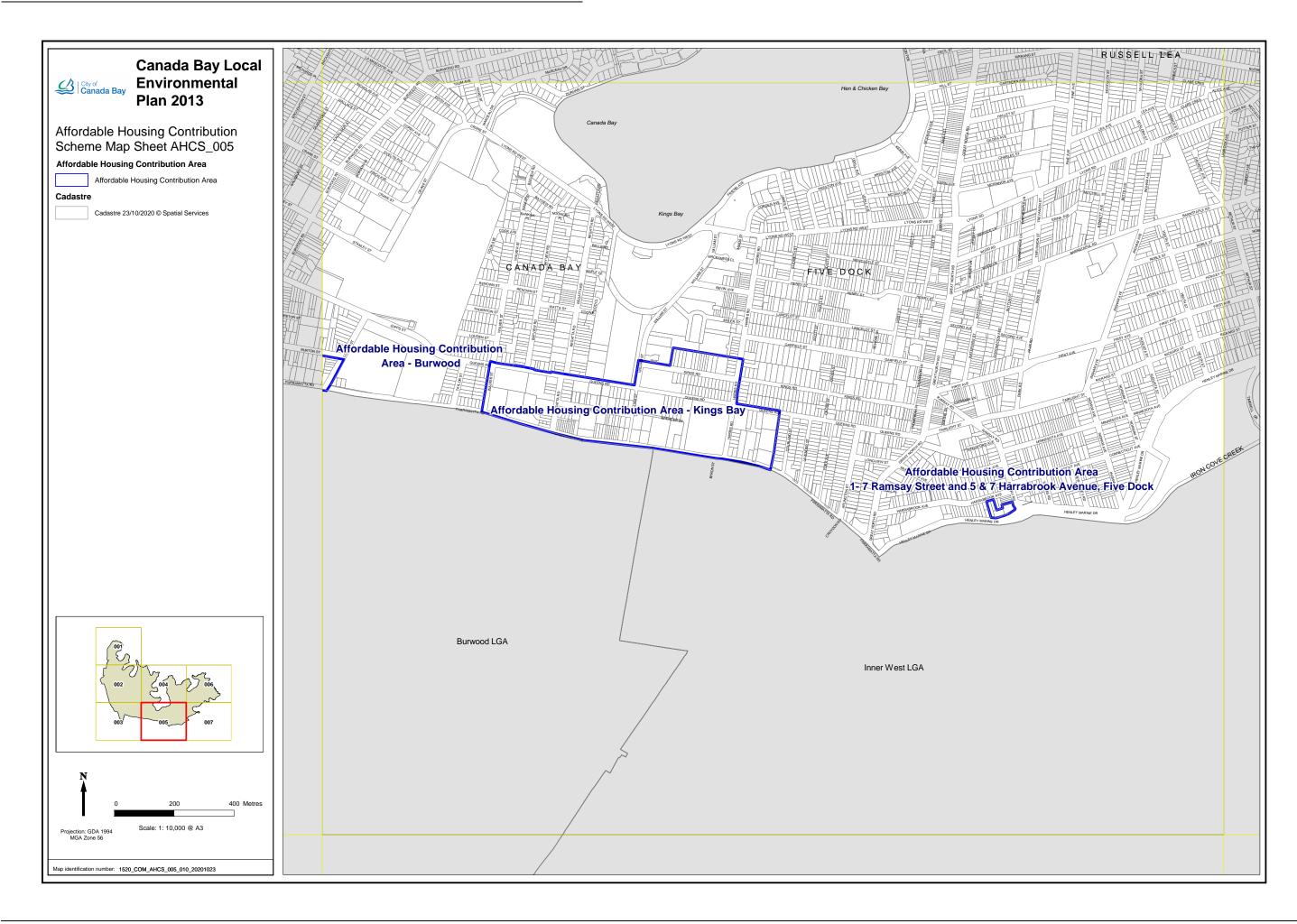
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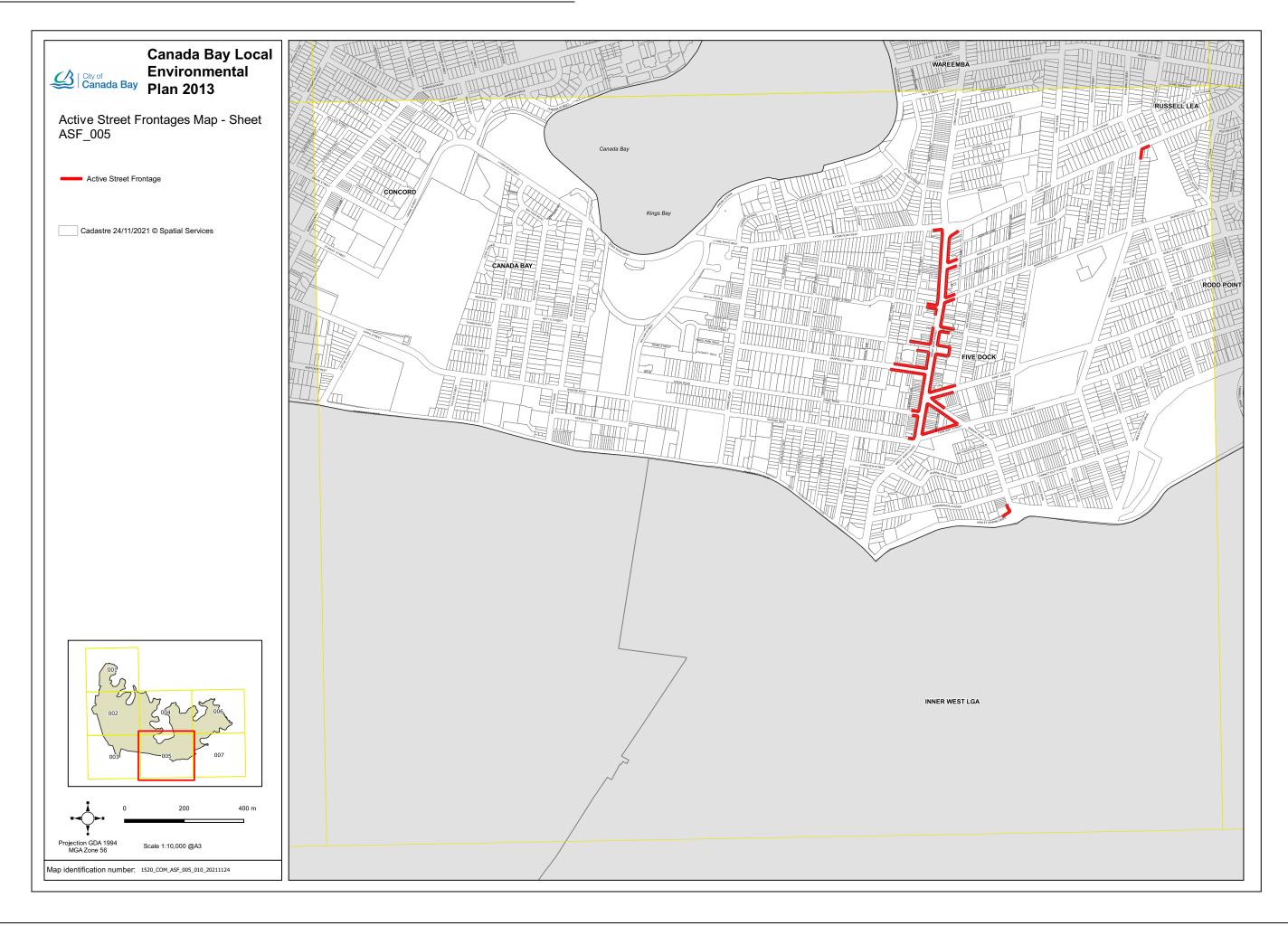
Attachment H – Independent Justification for Tree Removal Letter, prepared by Active Green Services (on behalf of Council)

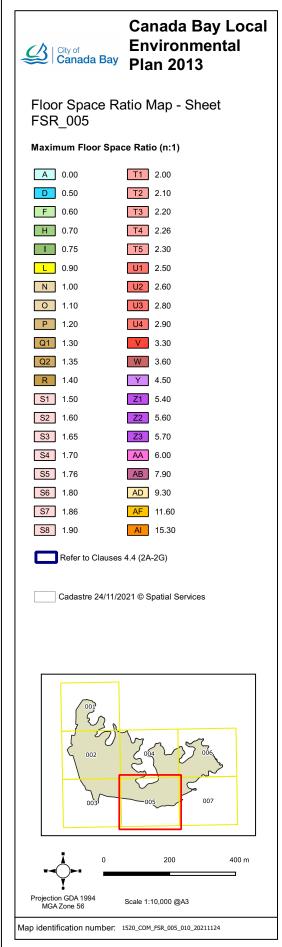
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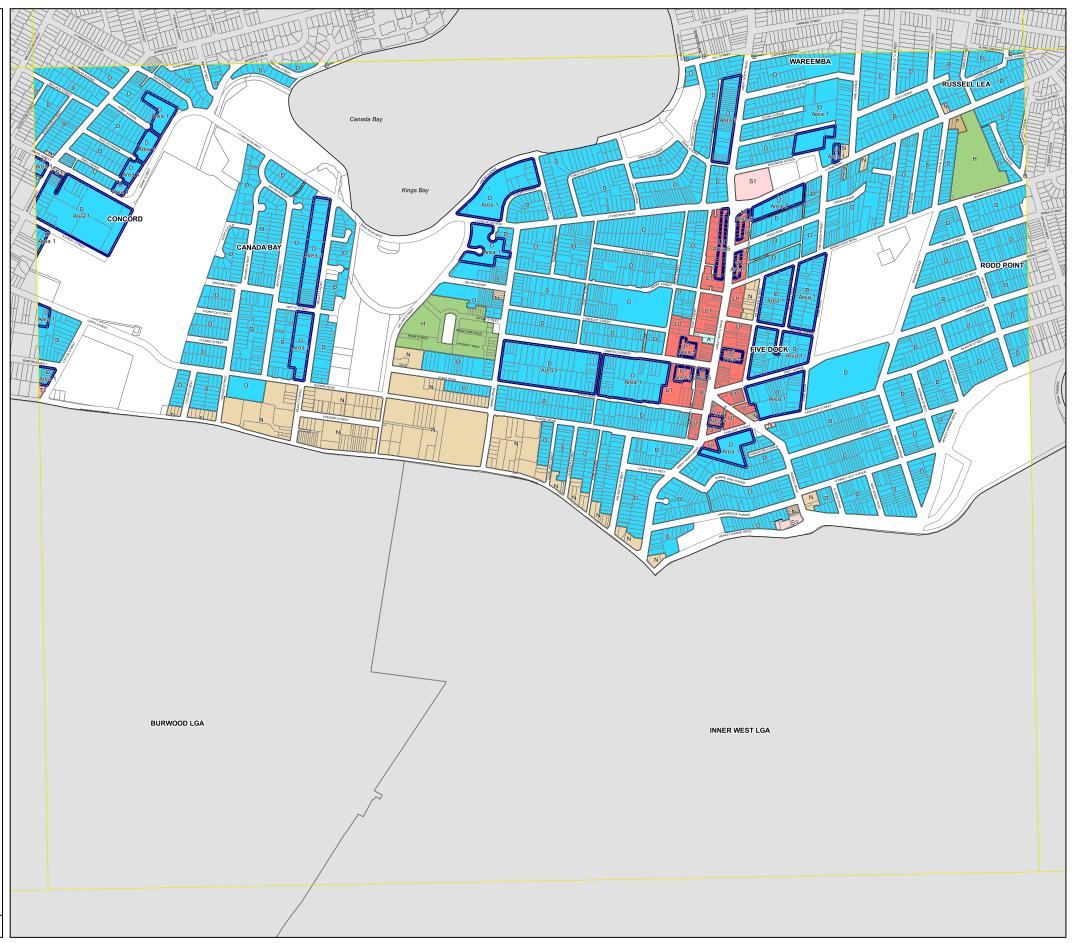


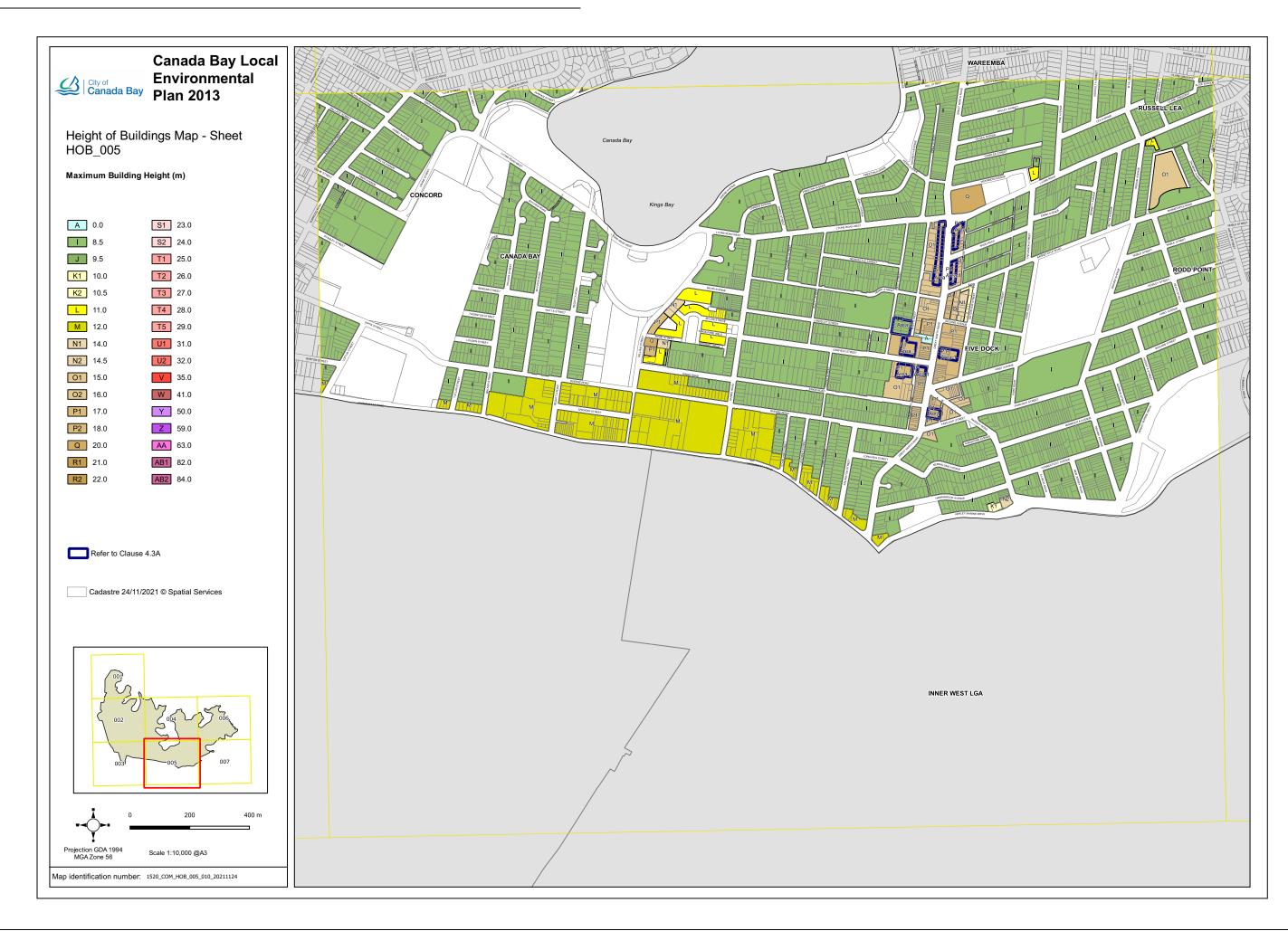




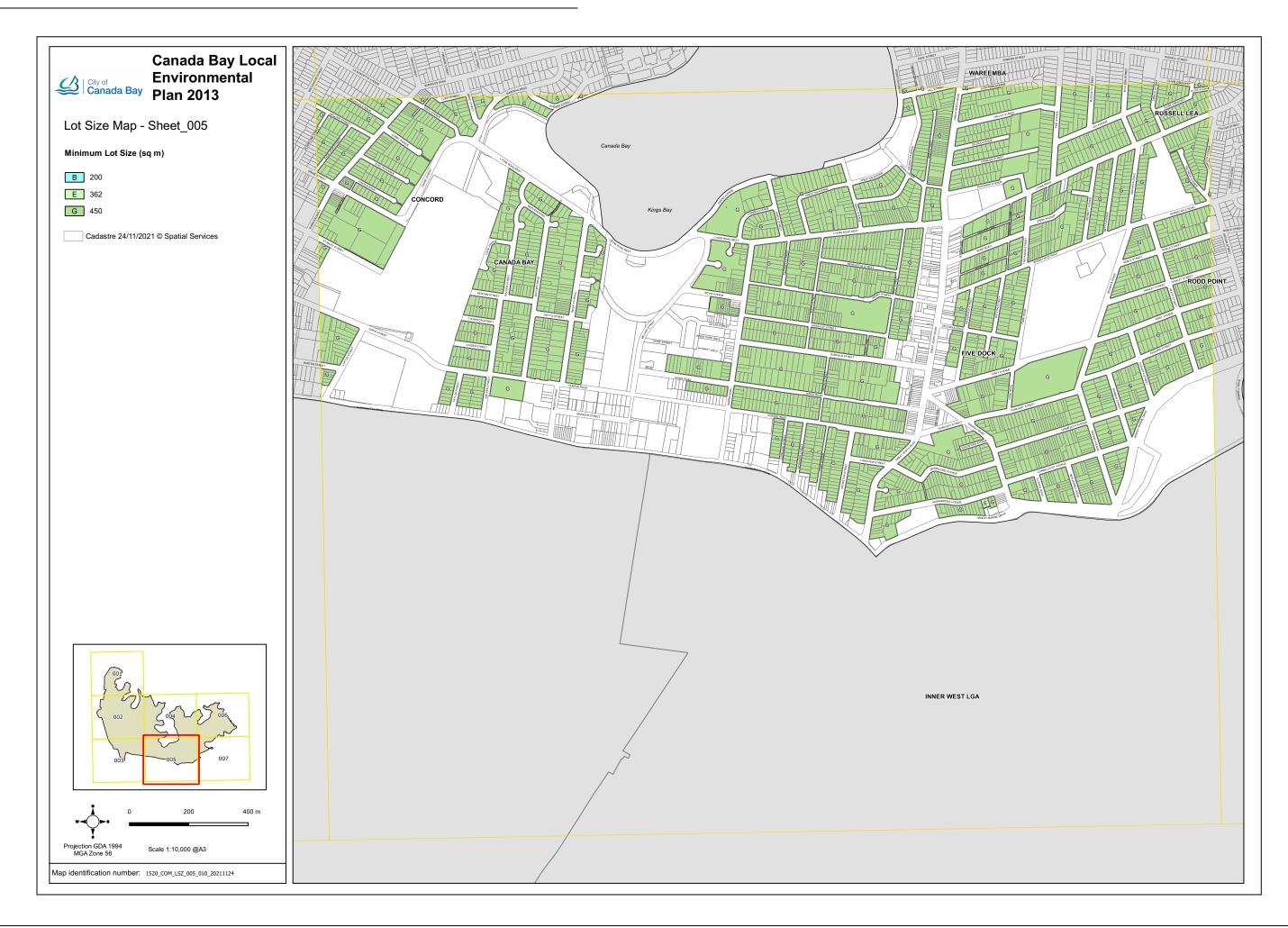




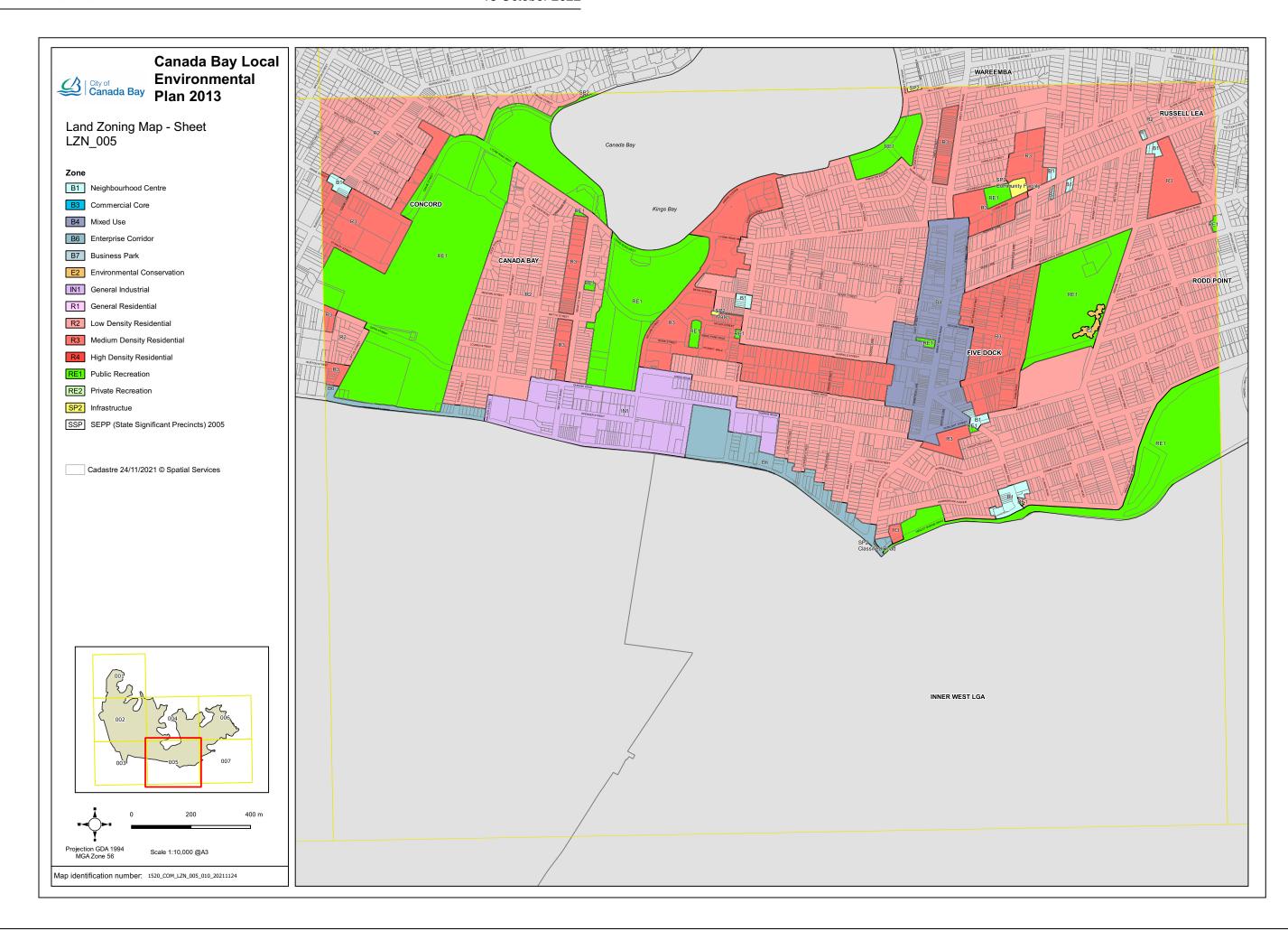


















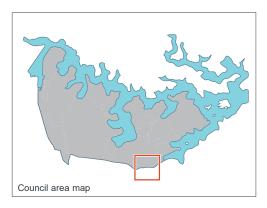
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G3.6 1 - 7 Ramsay Road, Five Dock



Context

1-7 Ramsay Road is an 'L' shaped site located to the south of Harrabrook Avenue, west of Ramsay Road and north of Henley Marine Drive. The site is located within a small neighbourhood centre, on either side of Ramsay Road immediately to the north of Iron Cove Creek. The area surrounding the site is characterised by low density, 1-2 storey detached dwelling houses, with the majority being single storey bungalows.

The neighbourhood centre forms an important gateway to the City of Canada Bay Local Government Area and a transition between the historic village of Haberfield and the Five Dock Town Centre.

The planning controls outlined below apply to this site and have been developed to ensure that the form and scale of new development responds to the surrounding context and achieves a positive urban design outcome for the location.

Land Use

Objectives

- O1. Create a high-quality mixed use building at a key intersection.
- O2. To provide ground level commercial floor space along Ramsay Road that supports the neighbourhood centre.
- O3. To encourage residential development facing Henley Marine Drive.
- O4. To ensure residential dwellings on the ground level have a high level of amenity and create a positive interface with the street.
- O5. To maximise opportunities for passive surveillance of the public domain.

Controls	
C1.	A minimum of 25% of the site area that is zoned B1 Neighbourhood Centre must be allocated to commercial development and located on the ground floor.
C2.	Residential dwellings on the ground floor facing Henley Marine Drive are to have individual entries from the street.
C3.	Where residential uses on the ground floor are permitted these should be raised between 0.4-1.0 metre above the footpath to improve internal privacy of residents.
C4.	All parking generated by the development is to be provided for on site.
C5.	Any access from the lane to the north of the site should be consistent with the terms of any applicable easement or right-of-carriageway applying to the land.

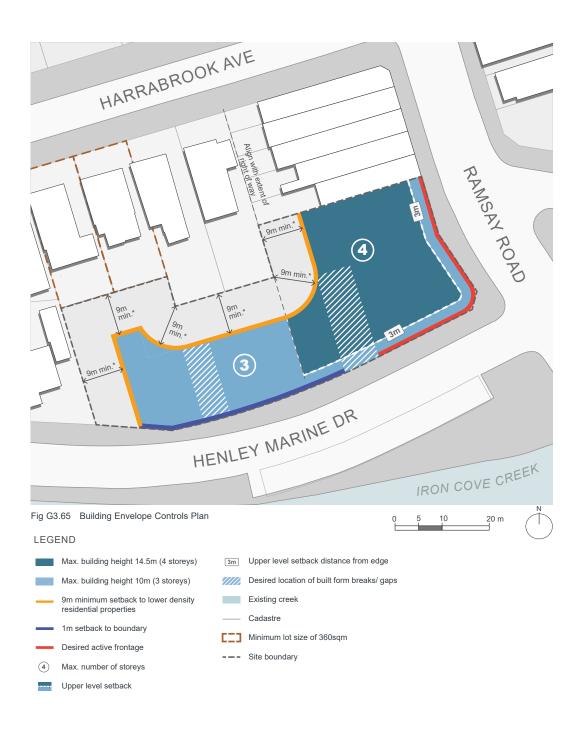
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Development Control Plan

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Built Form Envelope

Objectives

- O6. To establish an appropriately scaled gateway building for the location.
- O7. To achieve a development outcome which, in terms of its density, design, scale and bulk, responds in a sympathetic and harmonious manner to the surrounding fine grain character of the neighbourhood centre and adjoining residential development.
- To minimise the apparent height of development when viewed from Ramsay Road and Henley Marine Drive.
- To create a high quality development with high amenity which is responsive to its location.
- O10. To add visual quality and interest to the new development with a focus on breaking up the massing of higher density forms when viewed from public places and neighbouring properties.

Controls	
C6.	New development is to conform with the maximum heights and number of storeys as shown in Fig G3.65 Building Envelope Controls Plan and Fig G3.68 to Fig G3.72 Sections.
C7.	Building heights are to transition (be lower) towards the adjoining residential uses along the site's western boundary as identified in Fig G3.65 Building Envelope Controls Plan and Fig G3.68 Section.
C8.	The development is to be articulated along Henley Marine Drive and is not to present a long, unrelieved built form that dominates the streetscape and is incompatible with the local character of Henley Marine Drive.
C9.	Built form on the corner is to address both streets and use architectural elements composed so that they 'turn the corner'.
C10.	Building façades are to be articulated to incorporate breaks that reflect building entries or provide visual connectivity to community spaces.

C11.	The upper-most level is to be designed to reduce the visual bulk and scale of the building. Options to achieve this include setbacks and the use of dark colours and roof elements that create deep shadows.
C12.	New development is to use roof colours and materials that minimises the heat island effect.
C13.	Balconies above active frontages identified in Fig G3.65 and Fig G3.66 should be designed to be integrated into and reinforce the street wall. Balconies located within upper level setbacks are to integrate the parapet into the balustrade design (see Fig G3.68).
C14.	Minimum floor to floor heights are to be as per the table below:

Use	Min. floor to floor height	Min. floor to ceiling height
Retail	3.7m – 4.4m	3.3m-4m
Commercial	3.7m	3.3m
Adaptable	3.7m	3.3m
Residential	3.1m	2.7m



Example of building on a corner where the architectural elements 'turn the corner'.

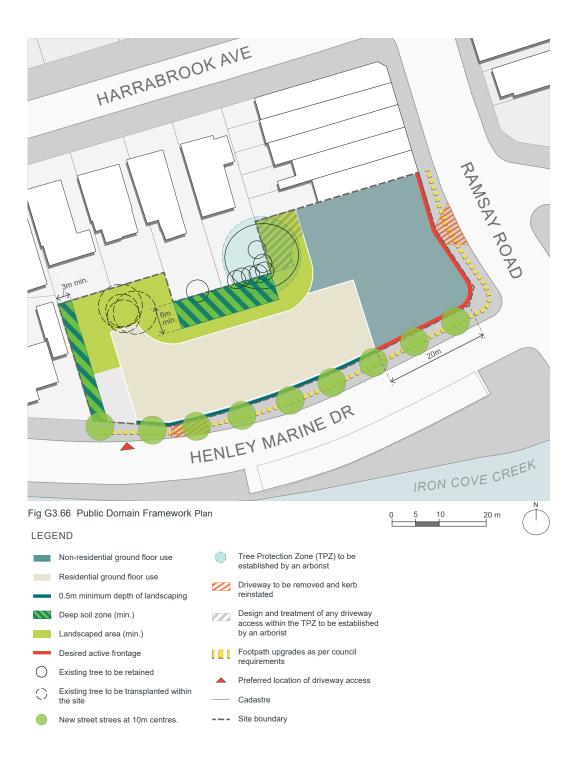
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Building Setbacks

Objectives

- O11. Reinforce and provide a continuous street wall along Ramsay Road.
- O12. Provide adequate privacy and access to daylight, ventilation and outlook for neighbouring properties.
- O13. Provide a high level of amenity and privacy for ground level dwellings facing Henley Marine Drive.

Controls	
C15.	New development must be set back as identified in Fig G3.65 Building Envelope Controls Plan and Fig G3.68 to Fig G3.72 Sections.
C16.	A three (3) storey street edge with nil setback is to be provided along Ramsay Road
C17.	All habitable rooms and balconies of the new development are to be set back a minimum of 9m from all side and rear boundaries adjoining residential areas.
C18.	Minimise overshadowing of neighbouring properties and maximise direct sunlight to adjoining public spaces.



Landscaped setbacks with integrated entries and tree planting contribute to the residential streetscape.

Landscape and public domain

Objectives

- O14. To ensure that trees and landscape on neighbouring sites are retained, existing trees on the site are to be relocated on the site where
- O15. To control climatic impacts on buildings and outdoor spaces, maximise provision of shade and reduce the urban heat island effect.
- O16. To allow adequate provision on site for infiltration of stormwater, deep soil tree planting, landscaping and areas of communal outdoor recreation.

Controls	
C19.	At a minimum, deep soil zones are to be provided as identified in Fig G3.66 Public Domain Framework plan and to be a minimum of 8% of the site area.
C20.	Bin storage is not to be located within deep soil zones.
C21.	A minimum of 20% of the site area on the ground floor is to be a landscape area as identified in Fig G3.66 Public Domain Framework plan
C22.	Ground floor residential uses along Henley Marine Drive are to be provided with a minimum 0.5m wide landscape setback.
C23.	Non-permeable hard surfaces (i.e. concrete slabs) are not permitted in identified deep soil zones.
C24.	New screening landscape is to be provided along the boundary of adjoining existing residential properties.
C25.	No communal open space is permitted above the ground floor to avoid adverse impacts to the amenity of adjoining properties.
C26.	Ensure the removal of trees on site will be offset by replacement planting on site.

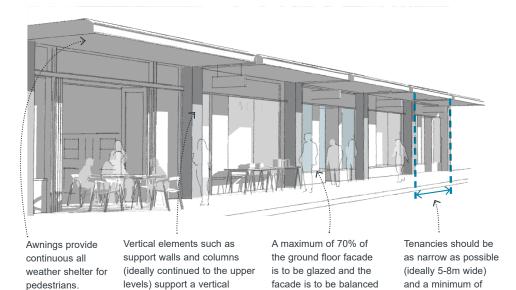
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Development Control Plan

Part G

Local Centres





with solid elements.

rhythm along the street.

Active Frontages

Objectives

O17. To enhance the commercial viability of the area and compliment existing small-scale retail, commercial, and community uses.

Fig G3.67 Design guidance for active frontages

- O18. To promote a diversity of retail shop sizes within the neighbourhood centre.
- O19. To provide a safe, interesting and vibrant environment that encourages pedestrian activity and supports the economic success of the neighbourhood centre.



Breaking the facade into smaller elements helps create variation and interest.

Controls	
C27.	Ground level active uses must be provided along 'Active frontages' as identified in Fig G3.65 and Fig G3.66.
C28.	Ground floor tenancies along active frontages should be no more than 8m wide to create a vertical rhythm, and variety and interest along the street.
C29.	Ground level active uses are to be a minimum of 10m deep.
C30.	Shop entries are to be level with the footpath. Where this is not possible entries are to be a maximum of 0.3m above the footpath level. Shop entries cannot be below the street level.
C31.	 Along active frontages: Continuous awnings must be provided to shelter pedestrians from weather conditions. The design guidance shown in Fig G3.67 must be applied.
C32.	Awnings are to be designed such that they 'turn the corner'.

10m deep.

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Development Control Plan Part G Local Centres DRAFT 14.50 max. halding height Level 3 Level 3 Level 3 Level 3 Level 3 Level 2 Level 2 Level 1 Basement Dags Soul

Fig G3.68 Building Envelope Section A-A

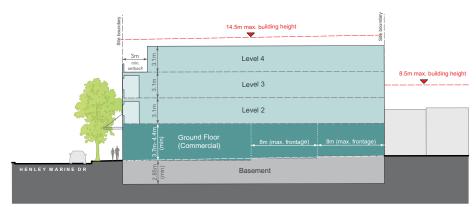


Fig G3.69 Building Envelope Section B-B

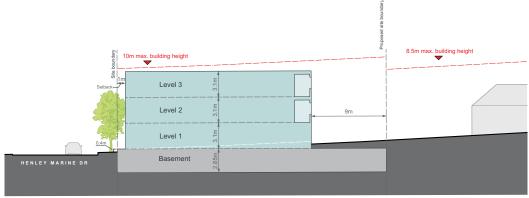


Fig G3.70 Building Envelope Section C-C

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CITY OF CANADA BAY

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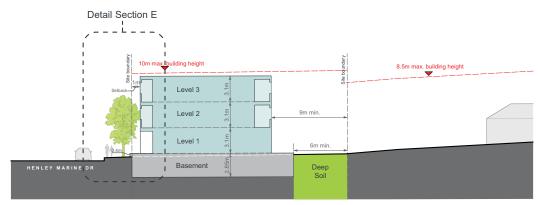


Fig G3.71 Building Envelope Section D-D

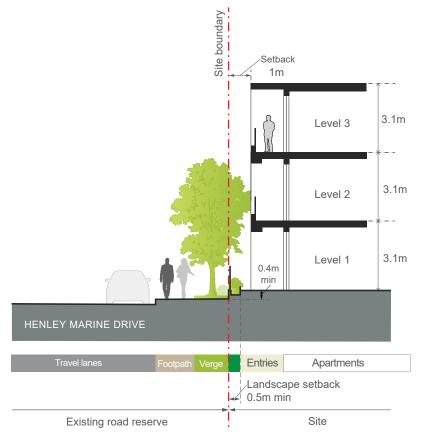


Fig G3.72 Detailed Section E through ground floor residential

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CITY OF CANADA BAY AFFORDABLE HOUSING CONTRIBUTION SCHEME

Date of adoption: 18/08/2020

Dates revised: 16/06/2021, 01/03/2022

Effective date: TBC





Version	Date	Author	Amendment
2.0	Revised 15/6/21 Effective 31/10/21	T.Kao	Rhodes West Contribution Area added to AHCS References to annual indexation are corrected to quarterly indexation
X	01/03/2022	T.Kao	1-7 Ramsay St and 5&7 Harrabrook Ave, Five Dock
			+





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APPENDICES:

- Appendix A- Local Housing Needs Assessment (Canada Bay Local Housing Strategy- SGS Economics and Planning 2019)
- 2. Appendix B- Affordable Housing Viability Assessment
- 3. Appendix C- References



SECTION 1: STRATEGIC CONTEXT AND BACKGROUND

1.1 Introduction

The City of Canada Bay Affordable Housing Contributions Scheme (the AHCS), sets out how, where, and at what rate development contributions are collected by the Council for affordable housing.

The AHCS has been prepared in accordance with the requirements of Section 7.32(1)(c) of the Environmental Planning and Assessment Act and State Environmental Planning Policy 70 - Affordable Housing (Revised Schemes) (SEPP 70).

It is consistent with the Eastern City District Plan which identifies opportunities to support affordable rental housing, particularly for key workers and skilled workers in targeted employment areas.

1.2 Context

In Sydney over the last 20 years, a growing population combined with a decrease in average household size has led to an increase in the demand for housing. This demand has exceeded the supply of new dwellings and has contributed to increased housing costs, which affects the ability of very low to moderate income households to live in large parts of the Eastern City District, including desirable locations such as the City of Canada Bay.

Within Canada Bay, the redevelopment of land at Rhodes East and in the Parramatta Road Corridor is likely to place further pressure on housing affordability. Unless there is intervention to support the provision of designated affordable housing, urban renewal is likely to push prices and rents that are already beyond the capacity of many households even further out of reach.

Council is committed to enabling affordable housing in the City of Canada Bay to maintain a diverse, vibrant and healthy community and to alleviate housing stress experienced by some individuals and families in the private rental housing market. This commitment is set out in the Canada Bay Community Strategic Plan - Your Future 2030 which identifies housing affordability as a challenge, and recognises the need to supply housing for purchase and rental across a range of income levels to ensure a broad cross-section of the community can enjoy living and working in the City. This approach is reinforced in the City of Canada Bay Local Strategic Planning Statement (the LSPS) which sets out a land-use vision that includes housing affordability and includes actions requiring Council to address affordable housing.

The City of Canada Bay Housing Strategy (the Housing Strategy, provided at Appendix A) supports the LSPS, providing an evidence base and the following vision for Affordable Housing in Canada Bay:

Affordability of housing will be addressed through the requirement for major redevelopment sites to provide affordable housing that can be managed by community housing providers. This will allow key workers and households on low-moderate incomes to live within the City of Canada Bay, and retain social and economic diversity. (SGS 2019: p 12).

This Affordable Housing Contribution Scheme is a key step towards meeting that vision.

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1.3 Objectives of the AHCS

The objectives of the City of Canada Bay AHCS are to:

- recognise the provision of affordable rental housing as critical infrastructure to support sustainable growth
- contribute to meeting the needs of very low to moderate income households for affordable housing in the City of Canada Bay
- provide certainty around the requirements for affordable housing in the City of Canada Bay, including the rate for contributions and how contributions will be collected
- ensure that contribution rates for affordable housing are viable and are evidence-based.

1.4 Where does the AHCS apply?

The AHCS applies to the following land within the City of Canada Bay Local Government Area:

- 1) Rhodes West and Rhodes East as shown in Figure 1.1, below; and
- 2) The Parramatta Road Corridor Urban Transformation Strategy Precinct Areas of Burwood, Homebush and Kings Bay as shown in Figure 1.2, below; and
- 3) 160 Burwood Rd, Concord (Bushell's site) at Figure 1.3, below; and
- 4) 1-7 Ramsay Road and 5 & 7 Harrabrook Avenue, Five Dock at Figure 1.4 below,
- 5) Other areas within the City of Canada Bay where a Planning Proposal is approved for residential or mixed-use development and an uplift of land value is created, and where Council resolves to include the area in this AHCS scheme and the Canada Bay LEP.

These lands to which the AHCS apply are collectively referred to as "the affordable housing contribution areas".

Additional land may be added to the AHCS by amendment of this document via Council resolution and amendment of the Canada Bay LEP.

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Figure 1.1a: Rhodes East Affordable Housing Contribution Area



Figure 1.1b: Rhodes West Affordable Housing Contribution Area

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Figure 1.2a: Homebush Affordable Housing Contribution Area



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Figure 1.3: 160 Burwood Road, Concord Affordable Housing Contribution Area

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Figure 1.4: 1- 7 Ramsay Street and 5 & 7 Harrabrook Avenue, Five Dock Affordable Housing Contribution Area

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1.5 What type of development does the AHCS apply to?

The AHCS applies to all new development in the areas defined by the maps in section 1.2 of this AHCS, except for:

- Development for non-residential floorspace (unless identified as adaptable floor space)
- Exempt development
- A dwelling house that results in the creation of less than 200sqm of residential floor space
- Refurbishment or repair of a building that results in additional residential floorspace less than 100 sqm
- Development for the purposes of affordable housing or social housing
- Development of community facilities, public roads or public utility undertakings.

1.6 Overview- Affordable Housing Need in City of Canada Bay

Evidence

Council has assembled a comprehensive evidence base that considers both the need for and viability of requiring affordable housing provision as part of development in the LGA. This has supported the development of the AHCS and is referenced in this section and throughout the document, with details provided in the appendices. The evidence base includes LGA-wide information such as its Housing Strategy, and locality-based affordable housing reports for the Rhodes Planned Precinct, Parramatta Road Corridor precincts and the former Bushell's site at 160 Burwood Road, Concord.

The evidence base includes the following documents:

- Council's Affordable Housing Policy (2007, revised August 2017)
- City of Canada Bay Housing Strategy (SGS Economics and Planning) 2019
- Draft Affordable Housing Program Rhodes East (Hill PDA) 2017
- Affordable Rental Housing -Evidence report Rhodes East (Hill PDA) 2017
- Draft Affordable Housing Program- Parramatta Road Corridor (AEC Consulting 2019)
- Affordable Housing Program- Parramatta Road Corridor Background Analysis (AEC Consulting 2018)
- 160 Burwood Road Concord, Affordable Housing Feasibility Analysis (AEC Consulting 2019)
- Feasibility analysis undertaken by the Department of Planning, Industry and Environment for Rhodes Gateway West (Jones Lang LaSalle 2020)
- 1 Ramsay Road, Five Dock Affordable Housing Feasibility Analysis (Atlas Urban Economics 2021)

Overview

As for many Councils within the Greater Sydney Region, the decline in the affordability of housing is a key issue for the City of Canada Bay. Over the last 20 years there has been an ongoing decline in the proportion of housing stock available for very low to moderate income households in particular. The desirable location and proximity of the LGA, together with the upward pressure on property prices from urban renewal and stagnation of wages is expected to cause further declines in affordability over future decades. This will lead to increased demand for Affordable and Social Housing. ^{1,2}

¹SGS Economics and Planning for City of Canada Bay Council (2019) Canada Bay Housing Strategy. Owner: Planning and Environment – Strategic Planning Last revised: March 2022

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 $^{\rm 2}\,\text{AEC}$ for City of Canada Bay Council (2019) Affordable Housing Program Parramatta Road Corridor.

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The lack of affordable rental housing will have the effect of displacement within the City of Canada Bay, with very low-moderate income earners at risk of being forced away from the area. This would lead to a less diverse community, the migration of young people to other areas and a reduced labour force of key workers available to support the local economy. ³

One of the key findings of The City of Canada Bay's Housing Strategy is that housing in the LGA is becoming less affordable- particularly for young families moving into larger dwellings with more than two bedrooms.⁴

Affordable and Social Housing Demand⁵

The Housing Strategy describes households who are in need of affordable housing as those who, due to financial stress (and potentially other reasons), are either:

- Unable to access market housing (including homeless persons)
- Have low household incomes and spend a high proportion of this income on rent (i.e. are experiencing rental stress)⁶

Research undertaken by SGS Economics and Planning for the Housing Strategy found that at the time of the last Census, 42% of households renting in the City of Canada Bay LGA experienced rental stress (paying more than 30% of household income on rent). Of the 3,780 households currently experiencing rental stress, 2,224 are experiencing severe rental stress (paying more than 50% of household income on rent). This has a significant impact on lower income households, including key workers, sole parents, older persons and students.

This level of rental stress translated to a demand for 5,058 social and affordable housing dwellings within Canada Bay, illustrated in Figure 1.4 below: The current 1,016 Canada Bay households living in social housing also contributes to this demand.

³ Affordable Housing Discussion Paper and Action Plan- Warringah Council (2015) in Hill PDA (2017 Affordable Housing Program Rhodes East)

⁴ SGS Economics and Planning for City of Canada Bay Council (2019) Canada Bay Housing Strategy.

⁵ Information in this section from SGS Economics and Planning for City of Canada Bay Council (2019) Canada Bay Housing Strategy.

⁶This definition excludes those who are homeowners and are experiencing mortgage stress. This cohort is typically excluded, as these households have the option of liquidating their asset and entering the rental market. (source: SGS Economics and Planning 2019).



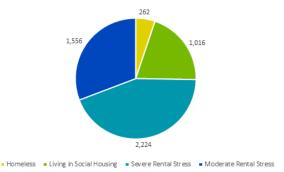


Figure 1.4: Current Demand (by number of households) for Social and Affordable Housing

Source: ABS Census 2016, ABS Homelessness Estimate (Cat. 2049.0), SGS Economics & Planning 2018

Over the 20-year period spanning from 2016 to 2036, the City of Canada Bay is expected to accommodate a high level of population growth, with the population predicted to increase from approximately 88,000 in 2016 to 120,000 in 2036.

Demand for social and affordable housing is expected to grow by approximately 770 dwellings to 2026 and up to 1,997 additional dwellings between 2016 and 2036. When added to current demand, this results in a total demand of 7,056 dwellings (i.e. 14% of all dwellings in Canada Bay). This represents an average annual growth rate of 1.7%, compared to an annual growth of 1.5% across NSW.⁷

In addition to population growth pressures, the redevelopment of land in urban renewal precincts such as Rhodes Planned Precinct and the Parramatta Road Corridor is likely to place upward pressure on property values. Unless there is intervention to support the provision of designated affordable housing, urban renewal is likely to push already high purchase prices and rents further out of reach of very low to moderate income households.

Current supply of affordable housing8

In 2016, Canada Bay had a stock of 1,187 social and affordable housing dwellings. Of these, the majority (816) were public housing dwellings, 331 were community housing dwellings and 40 were National Rental Affordability Scheme (NRAS) dwellings (SGS Economics and Planning). It is noted that NRAS is currently being phased out by the Australian Government.

When considering this supply against current demand, SGS found that in 2016, there was consequently a shortfall of 3,871 affordable and social dwellings in the Canada Bay LGA.

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⁷ Ibid

⁸ Information sourced from 8SGS Economics and Planning for City of Canada Bay Council (2019) Canada Bay Housing Strategy.



1.7 Legislative basis for Affordable Housing Contributions

Section 7.32 of the Environmental Planning and Assessment Act (EP& A Act) allows Council to levy contributions for affordable housing if a State Environmental Planning Policy (SEPP) identifies a need for affordable housing in the LGA.

In April 2018, State Environmental Planning Policy No 70 – Affordable Housing (Revised Schemes) (SEPP 70) was amended to apply to the City of Canada Bay. The SEPP provides a mechanism for Councils to develop schemes and levy developer contributions for affordable housing via conditions of consent. The SEPP now applies to all Councils in the Greater Sydney Region.

Under Section 7.32(3)(b) of the EP&A Act, any condition imposed on a development consent must be authorised by a Local Environmental Plan (LEP) and be in accordance with an affordable housing contribution scheme for dedications or contributions set out in, or adopted by, the LEP.

Clause 6.12 of the City of Canada Bay LEP 2013 authorises this AHCS, as follows:

Part 6 Local Provisions

6.12 Affordable housing

- (1) This clause applies to development on land in an affordable housing contribution area that involves—
 - (a) the erection of a new building with a gross floor area of more than 200 square metres, or
 - (b) alterations to an existing building that will result in the creation of more than 200 square metres of gross floor area that is intended to be used for residential purposes, or
 - (c) the demolition of existing floor area and the subsequent creation, whether for the same or a different purpose, of more than 100 square metres of gross floor area.
- (2) The consent authority may, when granting development consent to development to which this clause applies, impose a condition requiring a contribution equivalent to the applicable *affordable housing levy contribution* for the development specified in subclauses (2A)–(6A).
- (2A) The affordable housing levy contribution for development in Area 4 is 3.5% of the relevant floor area that exceeds the floor space achieved by applying a floor space ratio of 1.76:1.
- (3) The affordable housing levy contribution for development in the following affordable housing contribution areas is 4% of the relevant floor area—
 - (a) the Burwood affordable housing contribution area,
 - (b) the Homebush affordable housing contribution area, except for 3 King Street, Concord West and 176–184 George Street, Concord West,
 - (c) the Kings Bay affordable housing contribution area.
- (4) The affordable housing levy contribution for development on land at 3 King Street, within the Homebush affordable housing contribution area, is 5% of the relevant floor area that exceeds the floor space achieved by applying a floor space ratio of 0.5:1.
- (5) The affordable housing levy contribution for development on land at 176–184 George Street, Concord West, within the Homebush affordable housing contribution area, is 5% of the relevant floor area that exceeds the floor space achieved by applying a floor space ratio of 1.0:1.

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- (6) The affordable housing levy contribution for development in the following affordable housing contribution areas is 5% of the relevant floor area—
 - (a) the 160 Burwood Road Concord affordable housing contribution area,
 - (b) the Rhodes East affordable housing contribution area,
 - (c) the 1 7 Ramsay Road and 5 & 7 Harrabrook Avenue, Five Dock.
- (6A) The affordable housing levy contribution for development on land in the Rhodes West affordable housing contribution area, except for Area 4, is 5% of the relevant floor area that exceeds the floor space achieved by applying the maximum floor space ratio that was shown for the land on the Floor Space Ratio Map immediately before the commencement of this subclause.
- (7) A condition imposed under this clause must provide for the affordable housing levy contribution to be satisfied—
 - (a) by dedication in favour of the Council of land comprising—
 - (i) 1 or more dwellings, each having a gross floor area of not less than 50 square metres, with any remainder paid as a monetary contribution to the Council, or
 - (ii) other land approved by the Council in accordance with the Affordable Housing Contributions Scheme, with any remainder paid as a monetary contribution to the Council, or
 - (b) if the person chooses, by monetary contribution paid to the Council.
- (8) The rate at which a dedication of land or monetary contribution is taken to be equivalent to the relevant floor area for the purposes of the affordable housing levy contribution is to be calculated in accordance with the Affordable Housing Contributions Scheme.
- (9) To avoid doubt—
 - (a) it does not matter whether the floor area, to which a condition under this clause relates, was in existence before, or is created after, the commencement of this clause, or whether the floor area concerned replaces an existing area, and
 - (b) the demolition of a building, or a change in the use of land, does not give rise to a claim for a refund of an affordable housing contribution.
- (10) In this clause—

affordable housing contribution area means the following areas shown on the Affordable Housing Contribution Scheme Map—

- (a) Burwood affordable housing contribution area,
- (b) 160 Burwood Road Concord affordable housing contribution area,
- (c) Homebush affordable housing contribution area,
- (d) Kings Bay affordable housing contribution area,
- (e) Rhodes East affordable housing contribution area,
- (f) Rhodes West affordable housing contribution area,
- (g) 1 7 Ramsay Street and 5 & 7 Harrabrook Avenue affordable housing contribution area.

Affordable Housing Contributions Scheme means the Affordable Housing Contributions Scheme adopted by the Council on 18 August 2020.

Area 4 means the land identified as "Area 4" on the Additional Local Provisions Map.

relevant floor area of a building means the gross floor area of the building that is to be used for residential purposes excluding the floor area that is—

(a) to be used to provide affordable housing or public housing, or

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- (b) to be used for community facilities, schools, public roads or public utility undertakings, or
- (c) on land in Zone IN1 General Industrial.

1.8 Relationship to other affordable housing provisions in the LGA

City of Canada Bay Local Environmental Plan 2013

The Affordable Housing Contributions Scheme is affected by the inclusionary zoning provisions in the City of Canada Bay Local Environmental Plan 2013 which are authorised under the Environmental Planning and Assessment Act 1979 and State Environmental Planning Policy No. 70 Affordable Housing (Revised Schemes).

Under these provisions all residential development in the nominated locations (unless excluded) is required to provide affordable housing contributions. This can be achieved by dedicating affordable housing dwellings on-site or by a monetary contribution or by land dedication of suitable land to Council.

City of Canada Bay Local Strategic Planning Statement

The City of Canada Bay Local Strategic Planning Statement sets out the following affordable housing provisions:

- Action 2.1 includes Council's intention for 5% of new housing to be provided as affordable housing in the Rhodes Peninsula.
- Action 5.1 states that an Affordable Housing Contributions Scheme will be prepared for the Parramatta Road Corridor.
- Action 5.5 requires a minimum of 5% of the Gross Floor Area of new development to be dedicated as affordable housing for: Planned Precincts; Parramatta Road Corridor precincts; and where there is an increase in density arising from a planning proposal. It also states that 'an affordable housing contribution plan is required before the rezoning of above precincts/sites.

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The targets outlined in the Local Strategic Planning Statement are subject to detailed viability testing. Viability testing undertaken to inform the Affordable Housing Contributions Scheme has shown that it is not viable to require the 5% target contribution within the Parramatta Road Corridor, therefore a 4% contribution requirement will be applied, to be reviewed and amended in future, if conditions change and the 5% target is found to be viable.

Voluntary Planning Agreements

Council has a Planning Agreements Policy which sets out its policy, principles and procedures relating to planning agreements under section 7.4 of the Environmental Planning and Assessment Act 1979.

The minimum requirements for affordable housing as set out in this AHCS will apply to applicable development regardless whether a Voluntary Planning Agreement is negotiated with Council. In some instances, contributions additional to Affordable Housing will be negotiated and required in a Voluntary Planning Agreement.

Where Council is negotiating the terms of a proposed planning agreement that includes provision for affordable housing in connection with a development application or proposed development application, it will follow the requirements set out in Environmental Planning and Assessment (Planning Agreements) Ministerial Direction 2019.

City of Canada Bay Affordable Housing Policy

The City of Canada Bay Affordable Housing Policy provides a set of principles and clarifies the intent of Council's involvement in affordable housing. The principles are:

- Council supports the production of affordable housing stock; whether through inclusionary zoning, voluntary planning agreements or working with developers to encourage appropriately designed affordable housing
- Council aims to provide increased flexibility for a diverse range of housing types and sizes for
 varying stages of life. Council may achieve this by updating the LEP and DCP following detailed
 community engagement and analysis in order to understand needs
- Council undertakes the role of advocacy, and where possible, undertake mitigation to reduce further loss to affordable housing stock

It also provides management guidelines for the ongoing operation of affordable housing units owned by Council.

1.9 Affordable housing principles

In addition to those principles provided in the City of Canada Bay Affordable Housing Policy, the AHCS will be managed in accordance with the following principles set out in SEPP 70:

 Where any of the circumstances described in section 7.32 (1) (a), (b), (c) or (d) of the Act occur, and a State Environmental Planning Policy or Local Environmental Plan authorises an affordable housing condition to be imposed, such a condition should be imposed so that mixed and balanced communities are created.

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- 2. Affordable housing is to be created and managed so that a socially diverse residential population representative of all income groups is developed and maintained in a locality.
- 3. Affordable housing is to be made available to very low, low or moderate income households, or any combination of these.
- 4. Affordable housing is to be rented to appropriately qualified tenants and at an appropriate rate of gross household income.
- 5. Land provided for affordable housing is to be used for the purpose of the provision of affordable housing.
- 6. Buildings provided for affordable housing are to be managed so as to maintain their continued use for affordable housing.
- 7. Rental from affordable housing, after deduction of normal landlord's expenses (including management and maintenance costs and all rates and taxes payable in connection with the dwellings), is generally to be used for the purpose of improving or replacing affordable housing or for providing additional affordable housing.
- 8. Affordable housing is to consist of dwellings constructed to a standard that, in the opinion of the consent authority, is consistent with other dwellings in the vicinity.

1.10 Definitions

Affordable Housing	As defined by Environmental Planning and Assessment Act 1979: means housing for very low-income households, low income households or moderate-income households, being such households a are prescribed by the regulations or as are provided for in an environmental planning instrument.	
Affordable Rental Housing	Is affordable rental housing that is owned by the City of Canada Bay that is managed by a registered Community Housing Provider and rented to very low, low and moderate income households.	
Contribution rate	The contribution rate that is used in the calculation of the monetary contribution for a relevant development and is adjusted quarterly to take into account indexation.	
Dwelling in-kind	Dedication to the City of Canada Bay of affordable housing on-site	
Gross Floor Area (GFA)	As defined by Canada Bay Local Environmental Plan 2013: The sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes: a) the area of a mezzanine, and b) habitable rooms in a basement or an attic, and c) any shop, auditorium, cinema, and the like, in a basement or attic, but excludes: d) any area for common vertical circulation, such as lifts and stairs, and	

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	-1
	e) any basement:
	f) storage, and
	g) vehicular access, loading areas, garbage and services, and
	h) plant rooms, lift towers and other areas used exclusively for
	mechanical services or ducting, and
	i) car parking to meet any requirements of the consent authority
	(including access to that car parking), and
	j) any space used for the loading or unloading of goods (including
	access to it), and
	k) terraces and balconies with outer walls less than 1.4 metres high,
	and
	I) voids above a floor at the level of a storey or storey above.
Housing affordability	Refers to the relationship between expenditure on housing cost
	(whether a mortgage payment or a rental payment) and household
	incomes. A common benchmark measure is no more than 30% of
	gross household income is spent on housing costs.
Inclusionary zoning	A planning intervention by government that mandates a certain
, , ,	proportion of development is required (or included) as affordable
	housing dwellings as a condition of planning consent.
	This mandatory requirement is specified as a certain proportion of
	affordable housing to be 'included' within the development.
In-lieu contribution	Contribution rates for monetary contributions in lieu of affordable
in-lieu contribution	housing units. The Contribution Rate is expressed as dollar amount of
	affordable housing required. A contribution in-lieu of (instead of) cash
	could be made in-kind, whether as a contribution of land or
	contribution of completed dwellings.
	contribution of completed awenings.
Land in-kind	Dedication to the City of Canada Bay of land for affordable housing
Vert low, low &	As defined in State Environmental Planning Policy 70 Affordable
moderate income	Housing (Revised Schemes), very low to moderate income households
households	are those households whose gross incomes fall within the following
	ranges of percentages of the median household income for the time
	being for the Sydney Statistical Division according to the Australian
	Bureau of Statistics:
	Very low-income household < 50%
	Low income household 50% -80%
	Moderate income household 80% to 120%
Registered Community	Community housing providers who are registered under the National
Housing Provider	Regulatory System of Community Housing. In NSW a community
Tiousing Frovider	housing provide must be registered by the Registrar of Community
	Housing provide must be registered by the Registral of Community Housing to receive assistance from the Department of Family and
	Community Services or the NSW Land and Housing Corporation.
Not Colooble Avec (NCA)	
Net Saleable Area (NSA)	A term used for residential property which refers to the internal floor
	area including internal walls, mezzanines, bathrooms and hallways but

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City of Canada Bay Council Affordable Housing Contribution Scheme

excludes common spaces and uncovered areas such as balconies, patios and verandahs.

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SECTION 2: AFFORDABLE HOUSING CONTRIBUTIONS

2.1 Contribution rates

Affordable housing contributions are in addition to other contributions including local infrastructure contributions (\$7.11 or \$7.12) and special infrastructure contributions (Subdivision 4 of the Act).

All development in the Affordable Housing Contribution Areas must contribute to affordable housing, required through a condition of development consent. Contributions must meet the following requirements:

- A contribution is to be calculated in accordance with the requirements of this section. There
 are no savings or credits for floor space that may exist on the site, even if the building is
 being adapted or reused.
- If the contribution is less than 50 sqm then it must be made as a monetary contribution.
- A contribution in some instances may comprise a combination of in-kind dedication and monetary contribution.
- Adaptable floor area (from existing commercial/industrial to residential) is calculated in the total residential gross floor area for the purpose of calculating an affordable housing contribution.
- In all instances Council will require evidence that that the condition of consent has been satisfied prior to the granting of a Construction Certificate.

The rates of affordable housing contributions required under the AHCS are as follows:

Rhodes East and Rhodes West Affordable Housing Contribution Areas

Rhodes East Affordable Housing Contribution Area: 5% of the total gross floor area that is to be used for residential uses.

Rhodes West Affordable Housing Contribution Area: 5% of the additional gross floor area that is to be used for residential uses (except for 4 Mary Street and 1-9 Marquet Street in Rhodes where 3.5% of the additional gross floor area applies) ⁹

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⁹ With regard to the Rhodes West Affordable Housing Contribution Area (Rhodes Gateway West) additional gross floor area is taken to mean any additional floor area that is granted development approval in addition to what is permissible under the Canada Bay LEP as at October 2020, with the exception of 4 Mary Street and 1-9 Marquet Street where additional gross floor area is taken to mean any additional floor area that is granted development approval in addition to what is permissible under the Canada Bay LEP as at October 2020.



Parramatta Road Corridor Affordable Housing Contribution Areas:

- Kings Bay Affordable Housing Contribution Area 4% of the total gross floor area that is to be
 used for residential uses.
- Burwood Affordable Housing Contribution Area 4% of the total gross floor area that is to be
 used for residential uses.
- Homebush Affordable Housing Contribution Area 4% of total gross floor area (except for 3
 King St and 176 George Street in Concord West where 5% of additional gross floor area applies)¹⁰

160 Burwood Road, Concord Affordable Housing Contribution Area:

160 Burwood Road, Concord: 5% of the total gross floor area that is to be used for residential uses.

A detailed justification for the above rates and description of the viability testing for each of the locations can be found in Appendix B.

There are three methods by which a contribution requirement may be satisfied:

- Dedication of completed dwellings (refer section 2.2);
- Making an equivalent monetary contribution (refer section 2.3); or
- Contribution of land for affordable housing (refer section 2.4).

When submitting a DA, the documentation should confirm which method of contribution is proposed.

1-7 Ramsay Street and 5 & 7 Harrabrook Avenue Affordable Housing Contribution Area:

1 – 7 Ramsay Street and 5 & 7 Harrabrook Avenue, Five Dock: 5% of the total gross floor area that is to be used for residential uses.

A detailed justification for the above rates and description of the viability testing for each of the locations can be found in Appendix B.

There are three methods by which a contribution requirement may be satisfied:

- Dedication of completed dwellings (refer section 2.2);
- Making an equivalent monetary contribution (refer section 2.3); or
- Contribution of land for affordable housing (refer section 2.4).

When submitting a DA, the documentation should confirm which method of contribution is proposed.

2.2 Dedication of dwellings

The affordable housing contribution requirement may be satisfied through the dedication of completed dwellings free of cost, and to the satisfaction of Council. The completed dwellings must be purposed as affordable rental dwellings and meet the following requirements:

- Align with the affordable housing principles in Section 1. 7.
- The location, size and quality of the affordable housing dwellings are to be to the satisfaction of
 Council and its nominated Community Housing Provider (CHP) and generally consistent with the
 standard of new housing in the LGA. They should not be distinguishable from market housing
 within the LGA. If not to its satisfaction, Council may require the contribution to be satisfied by
 way of an equivalent monetary contribution.
- Completed dwellings (and land) are dedicated to Council in perpetuity and free of cost. Council

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or its Community Housing Provider will be responsible for rental arrangements.

- Total gross floor area (GFA) exceeds 50sqm. If the GFA is less than 50sqm, a monetary contribution will instead be payable (as described in section 2.3 of the Scheme).
- The internal living space (net saleable area, NSA) of the competed dwellings is to be a similar efficiency ratio to the overall residential dwellings.
- The dwellings shall meet the minimum sustainability and energy-efficiency requirements set out in the City of Canada Bay LEP and DCP.
- Where only part of a contribution is satisfied through dedication of completed dwellings, any remaining requirement is to be paid as a monetary contribution.

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¹⁰ The affordable housing contributions rates in the Homebush Scheme Area are different for the sites at 3 King St and 176 George St, West Concord, as these are subject to negotiated Voluntary Planning Agreements where an agreement was made that 5% of additional gross and the subject to the properties of the subject to thfloor area would be required as affordable housing contributions.



CALCULATING DWELLING CONTRIBUTION FOR 5% RATE (APPLIES TO RHODES EAST,160 BURWOOD RD CONCORD, AND 1-7 RAMSAY STREET and 5 & 7 HARRABROOK AVE FIVE DOCK AFFORDABLE HOUSING CONTRIBUTION AREAS)

Calculating the Contribution - Residential development

Calculation: Gross floor area x 5% = required affordable housing square metre provision.

Example: A development application for a new residential development comprising 8,000 square metres of GFA.

- = 8,000sqm x 5%
- = 400sqm affordable housing GFA required to be dedicated

Calculating the Contribution - Mixed-use development

Calculation: Total GFA - non-residential GFA = residential GFA

Residential GFA x 5% = required affordable housing square metre provision

Example: A development application for a new 8,000sqm mixed use development comprising 7,000sqm of residential GFA and 1,000sqm of non-residential GFA.

- = 8,000sqm 1,000sqm = 7,000sqm Residential GFA
- = 7,000sqm x 5%
- = 350sqm affordable housing GFA required to be dedicated

Calculating the Contribution -Adaptable Use

A change of use of an existing non-residential use to a residential use would attract an affordable housing contribution.

Affordable Housing contribution provision:

- = contribution rate x converted residential gross floor area
- = CR x RGFA

Example: A development application for a conversion of a of an existing 2,000 SQM commercial/industrial space to residential GFA.

- 2,000sqm of converted GFA
- = 2,000sqm x 5%
- = 100 sqm affordable housing GFA required to be dedicated

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CALCULATING DWELLING CONTRIBUTION FOR 4% RATE (APPLIES TO HOMEBUSH*, BURWOOD-AND KINGS BAY AFFORDABLE HOUSING CONTRIBUTION AREAS)

*Excluding 3 King St and 176 George Street in Concord West.

Calculating the Contribution - Residential development

Calculation: Gross floor area x 4% = required affordable housing square metre provision.

Example: A development application for a new residential development comprising 8,000 square metres of GFA.

- = 8,000sqm x 4%
- = 320 sqm affordable housing GFA required to be dedicated

Calculating the Contribution - Mixed-use development

Calculation: Subtract the non-residential gross floor area from the total building gross floor area to determine the residential gross floor area

Therefore: Total GFA - non-residential GFA = residential GFA

Residential GFA x 4% = required affordable housing square metre provision

Example: A development application for a new 8,000sqm mixed use development comprising 7,000sqm of residential GFA and 1,000sqm of non-residential GFA.

- = 8,000sqm 1,000sqm = 7,000sqm Residential GFA
- =7,000sqm x 4%
- = 280 sqm affordable housing GFA required to be dedicated

Calculating the Contribution -Adaptable Use

A change of use of an existing non-residential use to a residential use would attract an affordable housing contribution.

Monetary contribution provision:

- = contribution rate x converted residential gross floor area
- = CR x RGFA

Example: A development application for a conversion of a of an existing 2,000 SQM commercial/industrial space to residential GFA.

- 2,000sqm of converted GFA
- = 2,000sqm x 4%
- = 80sqm affordable housing GFA required to be dedicated

Note: If the dedication of dwellings is in deficit of more than 1 sqm, the remaining balance of the GFA is paid as a monetary contribution using the methodology detailed in section 2.3.

If the dedication of dwellings exceeds the gross floor area required, the amount is not recoverable by the developer. Each affordable housing dwelling is required to have a gross floor area of 50sqm or greater.

Where dedication of dwellings exceeds the GFA requirement, there is no offset available against other contributions.

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CALCULATING DWELLING CONTRIBUTION FOR 5% of Additional Gross Floor Area (APPLIES TO RHODES WEST* & 3 KING ST AND 176 GEORGE STREET CONCORD WEST AFFORDABLE HOUSING CONTRIBUTION AREAS)

*Excluding 4 Mary Street and 1-9 Marquet Street, Rhodes

Calculating the Contribution - Residential development

Calculation:

Additional gross floor area# x 5% = required affordable housing square metre provision.

*Additional gross floor area = Subtract the total gross floor area permissible under the *Canada Bay Local Environmental Plan* prior to the amended development controls, from the proposed gross floor area

Example: A development application for a new residential development comprising 8,000 square metres of additional GFA.

- = 8,000sqm additional GFA x 5%
- = 400sqm affordable housing GFA required to be dedicated

Calculating the Contribution - Mixed-use development

Calculation: Total additional GFA – total additional non-residential GFA = Total additional residential GFA

Total additional residential GFA x 5% = required affordable housing square metre provision

Example: A development application for a new residential development with an additional 8,000sqm mixed use development comprising 7,000sqm of additional residential GFA and 1,000sqm of additional non-residential GFA.

- = 8,000sqm 1,000sqm = 7,000sqm additional residential GFA
- = 7,000sqm x 5%
- = 350sqm affordable housing GFA required to be dedicated

Calculating the Contribution -Adaptable Use

A change of use of an existing non-residential use to a residential use would attract an affordable housing contribution.

Affordable Housing contribution provision:

- = contribution rate x converted residential gross floor area
- = CR x RGFA

Example: A development application for a conversion of a of an existing 2,000 SQM commercial/industrial space to residential GFA.

- 2,000sqm of converted GFA
- = 2,000sqm x 5%
- = 100 sqm affordable housing GFA required to be dedicated

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CALCULATING DWELLING CONTRIBUTION FOR 3.5% of Additional Gross Floor Area (APPLIES TO 4 MARY STREET & 1-9 MARQUET STREET RHODES AFFORDABLE HOUSING CONTRIBUTION AREAS)

Calculating the Contribution -Residential development

Calculation:

Additional gross floor area# x 3.5% = required affordable housing square metre provision.

***Additional gross floor area** = Subtract the total gross floor area permissible under the *Canada Bay Local Environmental Plan* <u>prior</u> to the amended development controls, from the proposed gross floor area.

Example: A development application for a new residential development comprising 8,000 square metres of additional GFA.

- = 8,000sqm additional GFA x 3.5%
- = 280sqm affordable housing GFA required to be dedicated

Calculating the Contribution - Mixed-use development

Calculation: Total additional GFA – total additional non-residential GFA = Total additional residential GFA

Total additional residential GFA x 3.5% = required affordable housing square metre provision

Example: A development application for a new residential development with an additional 8,000sqm mixed use development comprising 7,000sqm of additional residential GFA and 1,000sqm of additional non-residential GFA.

- = 8,000sqm 1,000sqm = 7,000sqm additional residential GFA
- = 7,000sqm x 3.5%
- = 245sqm affordable housing GFA required to be dedicated

Calculating the Contribution -Adaptable Use

A change of use of an existing non-residential use to a residential use would attract an affordable housing contribution.

Affordable Housing contribution provision:

- = contribution rate x converted residential gross floor area
- = CR x RGFA

Example: A development application for a conversion of a of an existing 2,000 SQM commercial/industrial space to residential GFA.

- 2,000sqm of converted GFA
- = 2,000sqm x 3.5%
- = 70 sqm affordable housing GFA required to be dedicated

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2.3 Equivalent monetary contribution

Where a monetary contribution is to be made in lieu of the on-site dedication of completed dwellings, an equivalent monetary contribution will be made and indexed quarterly and the contribution rate will be reviewed periodically. The monetary contribution and sample calculations are outlined below.

The contribution rate^ (CR) to be used for each affordable housing contribution area is:

Affordable housing contribution area	Contribution rate^ (% RATE)	Contribution rate /sqm GFA (CR)
Rhodes East	5%	\$488.75
Rhodes West	5.0% additional	\$488.75
4 Mary Street and 1-9 Marquet Street in Rhodes	3.5% additional	\$488.75
Homebush, Burwood, Kings Bay precincts	4%	\$430.70
3 King St and 176 George Street in Concord West	5% additional	\$538.35
160 Burwood Road, Concord	5%	\$578.00
1 – 7 Ramsay Street and 5 & 7 Harrabrook Avenue Five Dock	5%	\$606.00

[^] The monetary contribution rate is reviewed and indexed quarterly as per Section 3.2 of this Scheme, with reference to median prices for the City of Canada Bay shown in the current NSW Family and Community Services Sales and Rent Reports. The current contributions rates are provided within the AHCS Summary Table on Council's website at https://www.canadabay.nsw.gov.au/development/plans-policies-and-controls/development-contribution-plans.

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CALCULATING DWELLING CONTRIBUTION – APPLIES TO ALL AFFORDABLE HOUSING CONTRIBUTION AREAS

Calculating the Contribution - Residential development

Calculation: Gross Floor Area x Contribution rate[^] = required affordable housing square metre provision (CR).

(For 3 King St and 176 George Street in Concord West, Additional Gross Floor Area $^{\#}$ x 5% = required affordable housing square metre provision; and for 4 Mary Street and 1-9 Marquet Street in Rhodes, Additional Gross floor x 3.5% = required affordable housing square metre provision.)

= Contribution rate^ multiplied by gross floor area

= CR x GFA

*Additional gross floor area = Subtract the total gross floor area permissible under the *Canada Bay Local Environmental Plan* prior to the amended development controls, from the proposed gross floor area.

Example: A development application for a new residential development comprising 8,000 square metres of GFA.

= CR x GFA

= \$538.35 x 8,000sqm

Total payable contribution = \$4,306,800.00

Calculating the Contribution - Mixed-use development

Calculation: Subtract the non-residential gross floor area from the total building gross floor area to determine the residential gross floor area

Therefore: Total GFA - non-residential GFA = residential GFA

Monetary contribution provision:

= contribution rate^ x residential gross floor area

= CR x RGFA

Example: A development application in Rhodes East for a new 8,000sqm mixed use development comprising 7,000sqm of residential GFA and 1,000sqm of non-residential GFA.

= 8,000sqm - 1,000sqm = 7,000sqm Residential GFA

= 7,000sqm x CR (\$488.75 for Rhodes East)

Total payable contribution = \$3,421,250.00

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Calculating the Contribution -Adaptable Use

A change of use of an existing non-residential use to a residential use would attract an affordable housing contribution.

Monetary contribution provision:

= contribution rate^ x converted residential gross floor area

= CR x RGFA

Example: A development application in Rhodes East for a conversion of an existing commercial/industrial space to residential GFA.

1,000sqm of converted GFA

= 1,000sqm x \$488.75

Total payable contribution = \$488,750.00

^The monetary contribution rates are reviewed and indexed on a quarterly basis as per Section 3.2 of this Scheme. The current Contributions rates are provided on Council's website within the AHCS Summary Table.

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2.4 Dedication of Land

The acceptability of land for dedication (as an alternative to dedication of dwellings or monetary contribution) is subject to Council's discretion and approval, in consultation with the community housing sector and Council's partner CHP. The following requirements are identified to guide the assessment of suitability.

- Minimum area of 800sqm
- Within 5-min walking catchment (400m) of bus station or 10-min walking catchment (800m) of train station
- Not be subject to environmental constraints, in particular:
 - Be of residential building quality, not contaminated or require remediation
 - o Be of good quality building land, not subject to flooding or flood constraints
- Have access, locational and site characteristics comparable to the proposed residential development.

The value of the dedicated land (assuming the associated floorspace potential is not transferred/realised elsewhere on the site) should be equivalent to the monetary contribution calculated under the AHCS

If the floorspace potential of the dedicated land is able to be transferred and developed elsewhere on the site, the land should be dedicated to Council at nominal cost (\$200/sqm to cover cost of legal and administrative matters) and a monetary contribution will still be required for affordable housing.

If the floorspace potential of the dedicated land is not transferred and developed elsewhere on the site, the expertise of a valuer/ land economist is required. In this circumstance, the following steps are relevant for the dedication of land as a contribution.

- Assess if the land to be dedicated meets with the identified requirements
- If land is suitable for dedication, identify the proposed land in a subdivision plan to be approved by Council
- Calculate the equivalent monetary contribution payable
- Obtain independent valuation of land to be dedicated
- If the assessed land value is less than the equivalent monetary contribution payable, subject to acceptability by Council, pay the difference in monetary contribution.

If the assessed land value exceeds the equivalent monetary contribution, no offset or refund is applicable.

A development application must include the following information:

- The quantum and location of land to be dedicated and any residual amount for which a monetary contribution is required
- Identify on the subdivision plans the land proposed for dedication
- Demonstrate the value of the land to be dedicated against the equivalent monetary contribution
- Demonstrate the appropriateness of the land proposed for dedication with reference to the principles of the AHCS.

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CALCULATING LAND DEDICATION CONTRIBUTION (Equivalent Monetary Contribution Payable)

Contribution rates: In 2019, Contribution rate/sqm GFA (CR) was equivalent to % contribution:

Affordable Housing Contribution Area	Contribution rate^ /sqm GFA (CR) in 2019
Rhodes East	\$488.75
Rhodes West	\$488.75
4 Mary Street and 1-9 Marquet Street in Rhodes	\$488.75
Homebush, Burwood, Kings Bay precincts	\$430.70
3 King St and 176 George Street in Concord West	\$538.35
160 Burwood Road, Concord	\$578.00
1 – 7 Ramsay Street and 5 & 7 Harrabrook Avenue Five Dock	\$606.00

^Contribution rates are indexed quarterly as per Section 3.2 of this Scheme. To view the current contribution rate, refer to Council's AHCS Summary Table at

https://www.canadabay.nsw.gov.au/development/plans-policies-and-controls/development-contribution-plans

Calculating the Contribution - Residential development

Example: A development in the Kings Bay Precinct proposes new residential floorspace of 4,000sqm GFA. The affordable housing contribution rate of 4% is applied to the residential GFA as follows:

4,000sqm GFA x 4% = 160sqm GFA to be completed and dedicated as affordable housing

An equivalent monetary contribution of \$1,722,800 (4,000sqm x \$430.70) is required.

If contribution through land dedication is proposed, consideration should be given to whether the floorspace potential associated with the dedicated land can be transferred and developed elsewhere on the site, or if the floorspace potential is foregone with the land that is dedicated.

These two scenarios are illustrated below:

- Scenario 1 floorspace potential cannot be transferred/ developed elsewhere
 - If the land proposed for dedication is valued at \$2,000,000, its value exceeds the equivalent monetary contribution of \$1,722,720 required. If accepted for dedication, no offset or refund is applicable.
 - If the land proposed for dedication is valued at \$1,500,000, its value is less than the equivalent monetary contribution of \$1,722,720 required. A monetary contribution of \$222,720 is required.
- Scenario 2 floorspace potential can be transferred and developed elsewhere on the site
 - In this example, the land should be transferred to Council at nominal cost (\$200/sqm) and a monetary contribution (\$1,722,720) made.
 - If the land proposed for dedication measured 800sqm, a monetary contribution of \$1,562,720 would be required, calculated below:

= \$1,722,720 - \$160,000 (800sqm x \$200/sqm) = \$1,562,720

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2.5 Development that is exempt from the affordable housing contribution scheme

The following development is exempt from the AHCS:

- a) Development for non-residential floorspace (unless identified as adaptable floor space)
- b) Exempt development
- c) A dwelling house that results in the creation of less than 200sqm of residential floor space;
- Refurbishment or repair of a building that results in additional residential floorspace less than 100 sqm
- e) Development for the purposes of affordable housing or social housing
- f) Development of community facilities, public roads or public utility undertakings.

The justification for granting exemptions to these development categories is:

- In the case of a) and f), above, the development of non-residential floorspace and
 community facilities, public roads or public utility undertakings are excluded from affordable
 housing levies. This is because they are considered to have community value due to their
 ability to accommodate jobs (commercial or community development) and/ or community
 services (community facilities).
- In the case of b), c), and d), the works are considered to be of a minor nature and imposition of an affordable housing levy is considered an unfair burden in such minor circumstances.
- In the case of e), development for the purposes of affordable or social housing will already
 contribute substantially to the aims of the AHCS.

2.6 Conditions of consent for affordable housing

Council will levy developer contributions for affordable housing via conditions of consent.

The condition of consent must include the following information:

- a) The total residential gross floor area of the development that was used to calculate the contribution or the monetary contribution required.
- the different floor areas that can contribute to the total contribution amount (this only applies in instances where rates differ between development types or between commercial and residential floor space)
- c) the relevant contribution rates
- d) the indexation period at time of determination (for any monetary contributions).
- e) a requirement to demonstrate that the title of any dwellings will be transferred to a community housing provider or council prior to the granting a Construction Certificate.
- f) a requirement to make any monetary payment at a specified time or stage in the development application process
- g) a requirement that any dwellings that will be dedicated are shown on approved plans in the same development application and referenced in the affordable housing condition.
- h) The dedicated affordable housing is to be constructed to a standard which in the opinion of Council is consistent with other dwellings in the development.
- i) If a staged development, affordable housing must be provided at each stage.

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SECTION 3: ADMINISTRATION AND IMPLEMENTATION

3.1 How to make a contribution

All development to which this AHCS applies (other than development excluded by Canada Bay LEP 2013) is required to provide affordable housing. This requirement will be by way of a condition of development consent.

There are three different ways to make the required affordable housing contribution. The first is the dedication of affordable housing dwellings to Council. Secondly where it is not possible or practical for affordable housing to be dedicated an equivalent monetary contribution can be made. The third and least preferred is the dedication of land and is expected to apply in exceptional situations.

A contribution requirement forms part of a development consent. Council will require evidence that the affordable housing contribution requirement is satisfied prior to granting of any construction certificate or complying development certificate. Where no construction certificate is required, evidence that the affordable housing contribution requirement is satisfied will be required by Council before commencement of use/occupation.

The Scheme also includes a methodology for the dedication of land, however it is expected that this approach would only occur in exceptional circumstances.

Dedicating affordable housing dwellings

Where affordable housing is proposed to be dedicated on site, the applicant must transfer the titles of the dwellings to Council. An agreement to transfer the titles must be made and evidence provided to Council prior to the granting of a Construction Certificate.

Council must be satisfied that the nominated dwellings achieve the affordable housing principles and design details as set out in this Scheme. Where appropriate Council will seek comment from the Community Housing Provider to ensure this.

Council and the Community Housing Provider (as appropriate) will also consider the suitability of the proposed dedication and quantum of dwellings from an operational perspective, that is, the cost implications of management and maintenance.

The affordable housing contribution will be satisfied when the title is transferred to Council prior to issue of an Occupancy Certificate.

Paying a monetary contribution

Where an applicant is to make a monetary contribution towards affordable housing the amount of the contribution will be specified in the condition of development consent. The contribution must be paid to Council prior to the issue of any Construction Certificate.

If the applicant is unable to pay the monetary contribution at Construction Certificate stage, evidence must be provided to Council to this effect and arrangements made for Council to secure payment such as a Bank Guarantee or equivalent at a later stage in the development period.

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Dedicating land

Where land is proposed to be dedicated as a contribution, Council will ensure the proposed land satisfies Council's requirements and refer the application to a preferred CHP for comment.

Council will undertake an assessment of the appropriateness of land proposed for dedication with reference to the affordable housing principles and comment received from the preferred CHP.

3.2 Indexing of payments

Contribution rates will be adjusted quarterly within one week of the first of March, June, September and December, to ensure that the contributions reflect the costs associated with the provision of affordable housing over time. Rates will be adjusted with reference to movement in the median price for strata dwellings in the City of Canada Bay LGA. All monetary contributions must be indexed at the time of payment to ensure funds received will cover the full costs of delivering the required affordable housing contributions.

The median strata price is published quarterly in the NSW Government Rent and Sales Report, Table: Sales Price - Greater Metropolitan Region - Strata.

The formula for the adjustment is:

Next Quarter's Contribution Rate = Current Contribution Rate x (MDP2/MDP1)

Where:

MDP1 is the median strata dwelling price for the PREVIOUS quarter

MDP2 is the median strata dwelling price for the CURRENT quarter

The City of Canada Bay's website will display the current rates within the AHCS Summary Table.

3.3 Processes for the distribution and management of funds

Contributions will be pooled and managed by Canada Bay Council or its nominated Community Housing Provider until there is sufficient funding available to issue a tender or request for expressions of interest. Any financial return resulting from the management of funds in waiting is to be used for the purpose of developing affordable housing in accordance with this Scheme.

Rental income received from affordable housing stock will be managed in accordance with the terms outlined in Council's Affordable Housing policy. This will ensure returns are re-invested in affordable housing stock in the form of property maintenance and renewal and replacement.

3.4 Registered community housing providers and delivery program

Affordable Housing properties acquired or achieved under this AHCS or by any other means, are to be transferred in property title to the City of Canada Bay Council. Alternatively, the City of Canada Bay Council may nominate a Community Housing Provider, to which the property title is transferred.

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Council will outsource the management of the affordable housing contributions and dwellings to a Housing Manager with demonstrated experience and expertise in the management of affordable housing. Selection of the Housing Manager to manage the dwellings will be conducted in accordance with Council's Procurement Policy. Council will enter into a management agreement for the affordable rental housing dwellings with the successful Housing Manager following the selection process.

A Council inter-departmental Affordable Housing Steering Committee will be involved in the ongoing management of the Affordable Housing program and preparation of a management agreement that clearly delineate the responsibilities of both Council and the Community Housing Provider. Council will also provide a delivery program that outlines how funds raised or dwelling provided under the scheme will be used and requirements for reporting and transparency.

3.5 Monitoring and review of scheme

The AHCS will be reviewed by the Affordable Housing Steering Committee on an annual basis. Key considerations will include:

- A review of evidence relating to the Affordable Housing Contribution Scheme where monitoring identifies issues or considerable change in market conditions.
- number of delivered affordable housing dwellings
- total amount of funds in waiting
- allocation of funding within that year
- Size, type, quality and locational appropriateness of dwellings
- Maintenance and management issues
- Retention and use of affordable housing revenue by Council
- Social capital objectives community building and connectedness
- Access to and use of support services by tenants
- Performance of the Housing Manager in accordance with the Management Agreement
- Internal management issues for Council
- an affordable housing covenant is registered on the title of the land;
- affordable rental dwellings are rented to very low, low and moderate income households at a per cent of gross household income or at a discount-to-market rent;
- all rent received after deduction of management and maintenance costs will be used only for the purpose of improving, replacing, maintaining or providing additional affordable rental housing; and
- affordable rental dwellings are designed and constructed to a standard which, in the opinion of Council, is generally consistent with other dwellings in the LGA, that is they are not differentiated as affordable housing compared with the design of other housing.

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City of Canada Bay Council Affordable Housing Contribution Scheme

Affordable Housing Covenants

The affordable housing covenant ensures the benefits of affordable housing are secured in accordance with this Program in the long term.

The affordable housing covenant will be required to be registered, before the date of the issue of the occupation certificate, against the title of the property, in accordance with section 88E of the Conveyancing Act 1919. The covenant will:

- require affordable rental housing to be retained as affordable rental housing in perpetuity;
- require affordable rental housing to be managed in accordance with the Affordable Rental Housing Principles;
- allow at the sole discretion of Council for the removal of the covenant to facilitate the sale of affordable rental housing where Council is satisfied equivalent or better replacement stock is to be provided within the LGA; and
- allow for the lifting of the covenant at the sole discretion of Council in the
 circumstance that the eligible community housing provider becomes insolvent and
 another eligible community housing provider, or the Council, is unable or unwilling to
 take over the interest in the asset.

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TRAFFIC COMMITTEE

29 September 2022

(VIA EMAIL)

MINUTES

Committee Members:

Cr Michael Megna Chair
Sergeant S Tohme NSW Police
Angelica Joie Abragan Transport for NSW

Mr J Sidoti Local Member of Parliament

Advisory Members:

Mr B MacGillicuddyCCB CouncilMs M CarpenterCCB CouncilMr L HuangCCB CouncilMr S LindsayCCB CouncilMr S PandeyCCB Council

Mr P Whitney State Transit Authority, Sydney Buses

TBA Access Committee

Mr G Ashton Bay Bug – Canada Bay Bicycle Users Group

Minute Taker: Mr B MacGillicuddy CCB Council



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APOLOGIES

Mr P Whitney State Transit Authority, Sydney Buses TBA Access Committee

DECLARATIONS OF PECUNIARY INTEREST

The Local Member of Parliament declared an interest in the 'Five Dock - Permit Parking Scheme' item as his family owned property in the area. They did not participate in the associated discussion and recommendation.

CONFIRMATION OF MINUTES

<u>Traffic Committee Meeting – 25 August 2022</u>

COMMITTEE RECOMMENDATION

THAT the minutes of the Traffic Committee Meeting of 25 August 2022 be confirmed.

ITEM 1 FIVE DOCK – PERMIT PARKING SCHEME

Department City Services and Assets

Author Initials: LH

REPORT

Permit Parking Schemes Requirements

Council operates Permit Parking Schemes (PPS) in various locations. These schemes operate in accordance with the guidelines for permit parking which are set by TfNSW. Whilst the TfNSW Permit Parking guidelines are referred to as guidelines, these are in fact mandatory requirements for the installation and operation of all permit schemes throughout New South Wales.

Council operates Resident Parking Schemes (RPS), Visitor Parking Schemes (VPS) and Business Parking Schemes (BPS) across five locations currently.

On a local level, PPS are intended to:

- •Á Improve amenity for classes of road users who do not have sufficient offstreet parking facilities or unrestricted on-street parking facilities.
- •Á Provide equitable on-street parking space for all road users.
- •Á Provide an appropriate mix of on-street parking spaces in residential streets.

To comply with the above objectives, PPS should be introduced to provide preferential treatment for permit holders whilst at the same time providing sufficient on-street parking for tradesmen, carers, visitors and other users who do not have



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permits (including residents who may not be eligible for permits). These schemes should be introduced with a sufficient mix of parking restrictions to achieve this balance.

Background of new Five Dock PPS

Recent feedback on Council's community-led plan (Our Future 2036) highlighted that parking within Five Dock was a key area of community interest. It is also noted that a new Metro West station is currently under construction in Five Dock, due to open in 2030. Parking is in increasing demand due to this and other factors such as new multi-unit developments in the area with constrained off-street parking numbers.

In December 2021, Council undertook a survey of approximately 3300 residences and businesses in Five Dock regarding the concept of implementing a PPS in the area.

A total of 332 responses were received from this survey with over 80% of respondents supporting the concept of a PPS within their street. As a result, detailed plans have been prepared for the introduction of a PPS.

Configuration of proposed scheme

The new Five Dock Area 5 scheme is proposed to include Resident, Visitor and Business Parking Permits. The same eligibility criteria would apply as in Council's other existing areas.

Some modern developments will not be eligible for permits due to Development Application approval conditions. These conditions were imposed as a proactive measure, particularly on large multi-unit developments, to assist in ensuring a scheme would operate effectively if it were to be implemented in the area at some point.

It is necessary to exclude these modern developments as the demand for permits would otherwise likely exceed the available parking spaces in the area. This approach is consistent with Council's plans to gradually transition the community away from private car usage towards active and public transport.

Existing 1/2P and other time restrictions along commercial frontages in the Five Dock Town Centre are proposed to be retained generally unchanged. They are not proposed to be included in the new permit schemes as such restriction would result in long term parking, negatively impacting the availability of short-term parking for customers.

A mixture of time limits are proposed within the new scheme area, with the shorter restrictions near the centres of parking demand, transitioning to longer restrictions further away. To assist in balancing the competing parking demands in the area, where feasible, some unrestricted parking has been retained.



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Consultation

In July 2022, Council consulted approximately 3300 residents, with a total of 257 submissions received. Of these submissions, 60% supported the scheme as proposed, 34% opposed, and a further 6% neither supported or opposed. The full consultation summary report is attached, with key matters outlined below.

Allocation of permits

Some respondents stated that the allocation of permits would be insufficient for their needs. A variety of reasons were cited such as large extended family gatherings, multiple vehicles registered to the address, ownership of trailers and boat trailers, etc.

Whilst the impact to residents lifestyle is noted, the proposed allocation of permits is consistent with Council's other existing areas and greater than in the schemes managed by other Councils. Given the successful operation of PPS in other areas and the need to ensure an equitable distribution of permits throughout the community, it is not proposed to alter the permit allocation at this time.

High demand for all day parking will be pushed further from Great North Road, into streets that do not currently have parking issues

Some residents and business owners were concerned that the restrictions would result in pushing visitor, commuter and worker parking further away from their destination. In turn leading to further pressures being put on the unrestricted parking around the perimeter of the scheme, which could disincentivise workers and visitors from coming to Five Dock.

Further concerns were raised that the scheme would disadvantage residents living just outside of the scheme area, due to increased parking demand. Several of the responses noted that Erina Avenue and Great North Road between Longview Street and Parramatta Road, in particular, would likely see increases in parking demand as a result of the proposal.

Noting this, it is intended to consult the community in the aforementioned areas regarding their potential inclusion in the proposed PPS. Other Streets may also warrant inclusion in the scheme in the future, based on community feedback and follow up investigations into the actual impacts of the scheme once it is operational.

Requests to remove streets from proposal

A number of responses requested that their street be removed from the proposal due to being too far from the Town Centre and/or were not currently experiencing any parking demand issues.

It is noted that the proposed scheme does include some streets they currently only have moderate parking demand. Were however they not to be included in the scheme at this time, they would likely see increased parking demand.



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Refinements can be made to the restrictions post implementation based on community feedback and follow up investigations into the actual impacts of the scheme once it is operational.

Requests for one-way restrictions in some streets

Several responses requested one-way restrictions to improve traffic flow in narrow streets such as West Street, East Street, Henry Street, Lancelot Street, Scott Street and Kings Road.

Whilst these streets are narrower than ideal, a one-way restriction would result in increased traffic circulation and inconvenience to access properties in the area. It would likely also result in increased vehicle speeds as drivers would no longer need to give way to vehicles travelling in the opposing direction.

Requests to provide more parking to offset lost parking

Several responses requested that Council investigate options for a multi-storey carpark to help offset the loss of parking as a result of Metro's construction. Respondents cited both the Kings Road carpark and the Waterview Street carpark as potential sites. Council is already investigating options and has sought support from the State Government.

Perceived loss of parking

Several responses, including a submission made by the Five Dock Primary School P&C, cited a perceived loss of parking as a result of proposed restrictions. The submission made by Five Dock P&C placed emphasis on the importance of the existing parking on Henry Street, given parking close by the school is required for parents to safely escort their children to and from the school grounds.

Most of the perceived loss of parking is as a result of formalising the statutory 'No Stopping' restrictions and the provision of 'No Parking' in a number of key areas.

These 'No Parking' areas are necessary to assist drivers in parking appropriately, particularly on narrow roads where parking is being formalised on the opposite side. On these narrow roads, standard vehicles cannot be parked on both sides of the road whilst still maintaining 3m clear width for through traffic as required under the Road Rules.

4P restriction applying on weekends

A number of respondents noted that the proposal included a 4P restriction only applying from 8:30am-12:30pm on Saturday, making it a redundant restriction.

It is not anticipated weekend restrictions will be required, with observations indicating parking demand in the area is generally lower on the weekend. Noting this, the proposal has been updated to remove the weekend restriction for the 4P section only.

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Request for Disabled Parking Space outside 4 Arlington Street

The area outside 4 Arlington Street includes a mailbox and as a result, it was originally proposed to formalise a section of 'No Parking'. The area from this mailbox through to Parramatta Road (including the frontage of 2 Arlington Street) is restricted to 'No Stopping'.

Feedback from the resident at 2 Arlington Street has however noted that the proposed 'No Parking' would not meet their needs. They are wheelchair bound with no suitable off-street parking for the vehicle registered to their address. As a result, they are reliant on on-street parking in close proximity to their residence.

Noting this, it is proposed to install a disabled parking space outside 4 Arlington Street. To provide parking for mail collection, it is proposed to restrict parking outside 2 Arlington Street to 'Mail Zone, 11:30am – 2:30pm Mon-Fri, No Stopping All Other Times'. Australia Post have been consulted in the development of this proposal.

Next Steps

Noting the feedback received and how it has been considered, it is proposed to implement the parking restrictions outlined in the attached plan. On-going monitoring and refinement of the scheme will be required to ensure that it best meets the needs of the community.

STAFF RECOMMENDATION

THAT parking restrictions be implemented as per the attached plan.

DISCUSSION

The Local Member of Parliament declared an interest in this item as his family owned property in the area. They did not participate in the associated discussion and recommendation.

The TfNSW representative noted that the proposal included changes to parking restrictions and implementation of a PPS on State Roads. Specifically, this was in relation to Queens Road between Arlington Street and Great North Road, and on Great North Road between Queens Road and Longview Street.

Council staff agreed that changes to parking restrictions on State Roads is outside of what the Traffic Committee can consider under Council's delegations. Changes to parking restrictions on State Roads would be a matter for separate approval by TfNSW. The recommendation has been updated to reflect this.

Staff did note that Council already successfully managed permit schemes on State Roads elsewhere, specifically Marlborough Street in Drummoyne between Tavistock Street and Lyons Road.



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The Police representative noted that the parking changes will need to be reviewed within six months to a year to see if it is working and what further changes will need to be implemented. The issue of the number of permits allocated to a house was noted to be understandably problematic.

Council staff agreed that post implementation monitoring would be undertaken and matters brought back to Traffic Committee as appropriate to further refine the scheme. The exact timing of this would be subject to a variety of factors such as the level of community feedback.

COMMITTEE RECOMMENDATION

THAT parking restrictions be implemented as per the attached plan, with changes on State Roads subject to separate approval from TfNSW.

Attachments:

- 1. A Five Dock Permit Parking Scheme Map.
- 2.ÁConsultation Report.

ITEM 2 EDWIN STREET, DRUMMOYNE – HALLOWEEN ROAD CLOSURE

Department City Services and Assets

Author Initials: BM

REPORT

Whilst not a formal event, Renwick Street in Drummoyne has historically attracted a high volume of trick or treaters on Halloween. Council has previously assisted in managing this in various ways, including delivering educational messaging about road safety.

This year Council has received a request from the community to implement a road closure. Following a review of the request and to minimise the impact on the broader community, it is proposed to close Edwin Street between Renwick Street and Ferry Lane.

This closure would provide an area for additional activities and would operate from 4pm until 8pm on Monday 31 October 2022. This is considered a Class 3 event under TfNSW guidelines given that the closure itself should have minimal impact on the area.

STAFF RECOMMENDATION



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THAT the closure of Edwin Street between Renwick Street and Ferry Lane on 31 October 2022 between 4pm and 8pm be approved.

DISCUSSION

The TfNSW representative noted that although the proposed road closure is on a short stretch of Edwin St (between Renwick St and Ferry Ln) and is only scheduled for four hours, the identified times (4pm-8pm) are weekday PM peak hours and may cause significant delays to traffic due to event area's proximity to traffic signals at the Victoria Rd intersection. With this local traffic impact, TfNSW considers it a Class 2 event.

Council staff noted that if it were to be categorised as a Class 2 event, the significant differentiating factor would be the preparation of a Traffic Management Plan (TMP). A TMP could be readily produced and provided to TfNSW for concurrence, with the committee recommendation updated correspondingly.

COMMITTEE RECOMMENDATION

THAT the closure of Edwin Street between Renwick Street and Ferry Lane on 31 October 2022 between 4pm and 8pm be approved, subject to concurrence from TfNSW.

Attachments:

1.ÁTraffic Guidance Scheme

ITEM 3 LINKS AVENUE, CONCORD – HALLOWEEN ROAD CLOSURE

Department City Services and Assets

Author Initials: BM

REPORT

Whilst not a formal event, Links Avenue in Concord has historically attracted a high volume of trick or treaters on Halloween.

Links Avenue is approximately 8m wide and accommodates parking on both sides of the roadway. As a result, vehicles travelling in opposing directions need to give way to one another by pulling into gaps between parked vehicles.

Halloween by its nature is an informal event and is spread-out along the length of Links Avenue based on which residences choose to participate. Due to the constraints of the roadway, the increased traffic and pedestrian volumes in the area



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on Halloween and requests for it from the community, in 2019 Council implemented a road closure in Links Avenue on Halloween

The impacts of Covid-19 on participant levels meant that similar measures were not required in the last couple of years, however it is anticipated that attendance levels will be high again in 2022.

As a result, it is proposed that Links Avenue be closed between Cumming Avenue and Majors Bay Road from 4pm to 8pm on 31 October 2022. This is considered a Class 3 event under TfNSW guidelines given that the closure itself should have minimal impact on the area.

Access across Links Avenue will be maintained where it intersects with Flavelle Street at a roundabout as indicated in the Traffic Guidance Scheme. This minimises impacts on the surrounding area noting that Flavelle Street provides access to Concord Golf Club.

STAFF RECOMMENDATION

THAT the closure of Links Avenue on 31 October 2022 between 4pm and 8pm be approved.

DISCUSSION

Item is in order.

COMMITTEE RECOMMENDATION

THAT the closure of Links Avenue on 31 October 2022 between 4pm and 8pm be approved.

Attachments:

1.ÁTraffic Guidance Scheme

ITEM 4 KENDALL INLET COMMUNITY ASSOCIATION – FREE PARKING AGREEMENT

Department City Services and Assets

Author Initials: LH

REPORT

Council has been requested by The Owner's Corporation of DP270214, SP63025 and SP63027, collectively referred to as the Kendall Inlet Community Association



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(KICA), to consider entering into a Free Parking Agreement under section 650A of the *Local Government Act 1993*.

The purpose of Free Parking Agreements is to place parking areas on private land in the control of Council to impose and enforce parking restrictions. Signage reflecting the parking restrictions is required to allow Council's Enforcement Officers the ability to issue parking infringements.

Whilst Council has entered into such agreements with other private estates, the main distinguishing factor is the request for the Community Association to limit parking for the use of authorised residents and their visitors.

Under the Permit Parking Guidelines as set out by Transport for NSW (TfNSW), the KICA is not defined as a Declared Organisation and thus, cannot issue parking permits as defined by *The Road Transport (General) Regulation 2021*.

However, legal advice obtained by Council staff has indicated that it is possible to use a "device" issued by KICA for the purposes of identifying the status of a vehicle. This identification, when used in conjunction with the appropriate signage, empowers Council's Enforcement Officers to be able to issue infringements if vehicles are parked contrary to the signage erected.

Noting this, it is proposed to restrict parking to '1/4P Kendall Inlet Authorised Vehicles Excepted'. The management of authorisations would be a matter for the Community Association. Existing 'No Parking', 'No Stopping' and 'Disabled Parking' restrictions are proposed to be retained and upgraded to current standards as required.

It is proposed enforce parking restrictions by entering into an agreement with the Community Association under s650A of the *Local Government Act 1993*, with associated signage to be installed as per the attached plans. It is noted that the cost of installing and maintaining such signage will be borne by the Community Association.

STAFF RECOMMENDATION

THAT parking restrictions be installed as per the attached plans in support of entering into an agreement under s650A of the *Local Government Act 1993*

DISCUSSION

Item is in order.

COMMITTEE RECOMMENDATION

THAT parking restrictions be installed as per the attached plans in support of entering into an agreement under s650A of the *Local Government Act 1993*.

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Attachments:

1.ÁKendall Inlet Free Parking Agreement Plans.

ITEM 5 RUSSELL LEA PUBLIC SCHOOL - PROPOSED

CROSSINGS

Department City Services and Assets

Author Initials: SL

REPORT

At its meeting on Monday 1 November 2021, Council resolved to give in-principal support to installing a pedestrian crossing on Barnstaple Road for Russell Lea Public School students and the broader community. Council also resolved to investigate a traffic refuge or appropriate safety measures on Brent Street.

At present there is no designated point to assist pedestrians in crossing Barnstaple Road and Brent Street in the vicinity of Russell Lea Public School. Observations of pedestrian movements were undertaken at the two subject locations on typical school days, with AM and PM counts undertaken on the same day. These results are as follows.

Location	Time of Day	Pedestrian Flow	Vehicle Flow
Barnstaple Road	8:15am-9:15am	33	635
Barnstaple Road	2:40pm-3:40pm	51	512
Brent Street	8:15am-9:15am	40	695
Brent Street	2:40pm-3:40pm	39	529

These results show that both traffic and pedestrian volumes in both the morning and afternoon periods justify the installation of pedestrian crossing in both locations.

Accordingly, it is proposed that a pedestrian crossing be installed to assist the volume of pedestrians attempting to cross the road at both locations as well as enhancing overall safety. As outlined in the attached plans, it is proposed that they be constructed as raised pedestrian crossings to reduce vehicle speeds in the area.

The proposal on Barnstaple Road requires the removal of 3 on-street parking spaces. The proposal on Brent Street also requires the removal of 3 on-street parking spaces. The selection of locations and use of kerb buildouts has been implemented into the designs in order to minimise the loss of on-street parking.

Brent Street is a bus route and as such the crossing would be constructed at a height of 75mm. Whilst the section of Barnstaple Road that the crossing is proposed to be constructed on is not currently a bus route, it is proposed that this crossing also be



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constructed at a height of 75mm. This is noting the high traffic volume and to future proof for any changes to bus routes.

Community Consultation

Consultation has been undertaken with the surrounding properties of both proposed crossings, as well as throughout the Russell Lea Public School community. Feedback was sought via online survey, community drop-in session, email, and phone calls. A copy of the consultation report is attached.

Council received over 140 responses in various formats. Overall, 88% of survey participants were in support of the pedestrian crossing on Barnstaple Road and 87% were in support of the pedestrian crossing on Brent Street. The full consultation summary report is attached, with key matters outlined below.

Design for Cyclists

Concerns were raised that the proposed kerb extensions will block the path for cyclists riding on the left side of the carriageway. This would require them to move to the right, into the path of following motor vehicles (travelling in the same direction).

The concept designs have been amended reflect that the kerb extensions would be 2.5m on both sides of road, which still meets TfNSW guidelines without requiring further parking removal.

$Barnstaple\ Road-Alternate\ location$

Several requests were received to consider moving the proposed crossing location to Larkins Reserve, near McCulloch Street, or to the eastern side of Speed Avenue, closer towards Nield Park.

At present Russell Lea Public School frequently utilises Nield Park for school sport related activities. Larkins Reserve is used by the school as their emergency evacuation zone. Additionally, many school pupils reside in the Rodd Point area. The proposed location was a consolidation of the various pedestrian desire lines.

As part of initial, pedestrians were observed crossing in various locations along Barnstaple Road between Arthur Street and Nield Avenue due to there being no designated crossing infrastructure provided.

Placing the crossing east of Speed Avenue would mean that a direct link would be created with the existing crossing on Whittall Street, however following on-site observations most of the student pedestrian traffic was west of this area and therefore it does not match the pedestrian desire line.

While providing a pedestrian crossing at Larkins Reserve would minimise the direct impact on residents through loss of on-street parking, there is no existing footpath infrastructure within the park to connect to, which would cause issues in wet weather and be inappropriate for mobility impaired users.



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Brent Street - Alternative Location

Several requests were received to consider moving the proposed crossing location north of the intersection of Whittall Street. Where the crossing is south of Whittall Street, pedestrians need to cross Whittall Street to go to/from the school, as there is no footpath along the south side of Whittall Street.

The proposed location was based on on-site observations which noted a number of students commuting on foot from the southern section of Brent Street. On-street parking loss is also minimised at this location by incorporating the statutory 10m 'No Stopping' zones at the intersections of Clements Street and Whittall Street.

Placing the crossing further north would have greater on-street parking loss and impact more residences. It is noted that traffic volumes on Whittall Street are generally low and Whittall Street is also within the 40km/h School Zone area.

STAFF RECOMMENDATION

THAT a raised pedestrian crossing and associated linemarking and signage be installed on Barnstaple Road adjacent to Speed Avenue as detailed in the attached plan.

THAT a raised pedestrian crossing and associated linemarking and signage be installed on Brent Street adjacent to Whittall Street as detailed in the attached plan.

DISCUSSION

The BayBUG representative raised concern that whilst the kerb extensions had been reduced to 2.5m, it is likely that the arrangement will still represent a "squeeze point" for cyclists. It was queried if the size of the kerb extensions could be reduced further. Alternatively, it was suggested to consider making the kerb extensions larger and creating a gap in them for a cyclist bypass and/or ensuring traffic is slowed to less than 25km/h.

The length of the 'No Stopping' restrictions was also queried by the BayBUG representative, noting that it was proposed to extend restrictions at the relatively new crossing on Gale Street under the item 'Cabarita-Mortlake Peninsula Traffic Study'.

Council staff noted that Brent Street is approximately 12.4m wide kerb to kerb, and as a result there would be a clear width of approximately 7.4m between the kerb extensions.

Council staff confirmed that the 'No Stopping' zones proposed on Brent Street complied with relevant standards. Under relevant standards, reducing the size of the kerb extension below 2.5m would require the removal of additional parking. It would also increase the distance pedestrians are on the roadway, outside of the protection of the kerb extensions.

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The extension of 'No Stopping' restrictions on Gale Street is in excess of minimum requirements. This however considered appropriate as, due to an adjoining driveway, the removal of one parking space significantly enhanced sight lines.

The pedestrian crossing would be signposted with an advisory speed of 25km/h as per relevant standards. Given the proximity of intersections and parking, it is undesirable to direct cyclists close to the existing kerb line via some form of bypass.

The BayBUG suggested that Council establish performance benchmarks and objectives for each new and upgraded treatment so that the success or otherwise and the value for money of the different treatments is assessed. For example, traffic flow, crash history (including near miss data) and perceived safety (by survey), measured before construction and within 3- 6 months after construction with the results and analysis published in Council's six-monthly progress reports.

Council staff noted that following the completion of construction works and a settling in period, on-site observations are undertaken by Council staff. In conjunction with other factors such as any community feedback received, this assists in determining if a facility is operating satisfactory or if further works are warranted. A more formal review process for every project is not considered warranted or practical.

The BayBUG representative requested that kerbs in the road area should be of a roll over pattern rather than a vertical one, to minimise injury to a cyclist that may come into contact with one.

Council staff noted that the type of kerb used needed to comply with relevant standards. For example, the kerb extensions would have a near vertical typical kerb to comply with standards and the intent of making it difficult for vehicles to mount the kerb.

The TfNSW representative raised concerns with regards to the location of the raised pedestrian crossings, especially for the proposed location on Brent St. Due to proximity to the side roads, location increases consideration factors in pedestrian decision-making. Children would have to check all four directions before crossing. However, it was noted that if Council is satisfied with the proposed locations and with the associated safety risks, TfNSW has no objections.

Council staff noted that careful consideration had been given to the location of the proposed crossing location on Brent Street, balancing a variety of factors such as pedestrian desire lines. The crossing is sufficiently setback from intersections such that there is sufficient room for drivers to complete a right turn onto Brent Street and stop before the crossing.

COMMITTEE RECOMMENDATION

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THAT a raised pedestrian crossing and associated linemarking and signage be installed on Barnstaple Road adjacent to Speed Avenue as detailed in the attached plan.

THAT a raised pedestrian crossing and associated linemarking and signage be installed on Brent Street adjacent to Whittall Street as detailed in the attached plan.

Attachments:

- 1. ABarnstaple Road proposed pedestrian crossing
- 2.ÁBrent Street proposed pedestrian crossing
- 3.ÁCommunity Consultation Report

ITEM 6 MARQUET STREET, RHODES - RAISED PEDESTRIAN CROSSING

Department City Services and Assets

Author Initials: SP

REPORT

It is proposed to install a raised pedestrian crossing on Marquet Street, Rhodes, near Anne Leggett Promenade.

The proposed crossing is designed to enhance pedestrian safety and connectivity. This crossing is part of broader works to enhance the area in conjunction with private redevelopments works. Following the opening of Rhodes Central shopping centre on the east side of Marquet Street in mid-2021, there has been a significant increase in the volume of pedestrians crossing Marquet Street at this location.

Whilst data on the exact number of pedestrian and vehicle movements at the proposed crossing location have not been obtained, general observations have found both high pedestrian and traffic volumes. This reflects the strong pedestrian desire line between Shoreline Drive, Rhodes Central and Rhodes Station.

As outlined in the attached plan, it is proposed that it be constructed as a raised crossing to reduce vehicle speeds. As Marquet Street is a bus route, it would be constructed at a height of 75mm. Street lighting would also be upgraded to assist in ensuring pedestrians are visible at night. The location of the crossing is designed to maintain required service vehicle access to Anne Leggett Promenade.

The Promenade is privately owned with easements for public access. Council staff are aware of concerns from the community regarding lighting and inappropriate vehicle access along the Promenade. Council staff are currently reviewing the



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matter and will work with key stakeholders to see how these issues can be addressed.

The proposed crossing will require the removal of two on-street parking spaces on the western side of Marquet Street. No additional parking removal is required on the eastern side of Marquet Street, as 'No Stopping' restrictions already apply. These restrictions were implemented in conjunction with other changes to parking restrictions on Marquet Street, foreshadowing the proposed installation of a pedestrian crossing.

Consultation

Historically Council has received a number of requests from the community to provide a pedestrian crossing at this location. Consultation has been undertaken through a letterbox drop with the surrounding residents, via Councils online engagement webpage Collaborate, and on-site posters at the proposed crossing location. This consultation period was between 29 July and 4 September 2022.

There were 41 online submissions and 4 email submissions, including one on behalf of BayBUG. Most of the replies were in favour of the proposal however there were some suggestions and objections, as summarised below. A number of matters were raised about other locations in Rhodes and these will be investigated separately by Council staff.

Location of crossing relative to the Promenade

Several requests were made for the crossing to be shifted such that it directly aligned with the Promenade. This is however not feasible given the need to maintain service vehicle access, for example to the Ausgrid substation located in the Promenade. The proposed location of the crossing is approximately 6m south from Anne Leggett Promenade, so still closely aligns with the pedestrian desire line.

Proximity to Rhodes Central driveway and associated traffic congestion Council received some submissions objecting the proposal on the basis that the pedestrian crossing would contribute to traffic congestion. It is noted that there will be some delay in traffic on Marquet Street, however the proposal will improve the safety of the pedestrians and encourage the use of active transport.

The proposed location of the crossing provides a small buffer between it and the retail customer driveway for Rhodes Central slightly further north. It should be noted that in the medium term once redevelopment works are completed, this access is planned to be closed and access instead provided from Walker Street.

Concerns regarding removal of parking

One of the intents of the re-development of the Rhodes Peninsula was to restrict private car usage (such as through limits on off-street parking provisions) to encourage the use of active transport. The proposed pedestrian crossing aligns with these objectives, with the overall impact of the required removal of two parking spaces being negligible.

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Request for a signalised pedestrian crossing facility

An initial assessment indicates that this location does not meet the warrants for traffic signals set out by the Transport for NSW (TfNSW).

Request for wider travel lanes

Concerns were raised that the proposed kerb extensions will block the path for cyclists riding on the left side of the carriageway. This would require them to move to the right, into the path of following motor vehicles (travelling in the same direction).

The concept design has been amended where the distance between the kerb extensions widened to approximately 7.4m. This is achieved by reducing the kerb extensions to 2.5m on both sides of road, which still meets TfNSW guidelines without requiring further parking removal.

STAFF RECOMMENDATION

THAT a raised pedestrian crossing be constructed in Marquet Street as outlined in the attached plan.

DISCUSSION

The BayBUG representative raised the same concerns regarding the creation of a "squeeze point" for cyclists as were raised with respect to the item 'Russell Lea Public School – Proposed Crossings'. The same responses from Council staff applied.

The TfNSW representative requested details on the exact number of pedestrian and vehicle movements. It was noted that TfNSW has recently published TS 00043:1.0 – Pedestrian Crossing Guideline.

The Guideline encourages Councils to develop their own policy framework for implementation of pedestrian crossings and suggests the following for consideration:

As an alternate to the TfNSW warrants, councils may use the following pedestrian demand calculation:

- •Án each of two separate one-hour periods in a typical day, the pedestrian flow per hour (P) crossing the road is, or is expected to be, equal to or greater than 20
- •ÁChildren and elderly or mobility impaired pedestrians count as two pedestrians.

Council staff undertook observations on Wednesday 5 October 2022, which was during school holidays and impacted by rain. Notwithstanding this, a high volume of pedestrians was observed, exceeding the recently updated TfNSW guidance.



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Time of Day	Pedestrian Flow	Vehicle Flow
8am-9am	165	168
3:30pm-4:30pm	135	285

COMMITTEE RECOMMENDATION

THAT a raised pedestrian crossing be constructed in Marquet Street as outlined in the attached plan.

Attachments:

1.ALocality Plan

ITEM 7 CABARITA-MORTLAKE PENINSULA TRAFFIC STUDY

Department City Services and Assets

Author Initials: SL

REPORT

Background

At its meeting on Tuesday 15 June 2021, Council resolved that a traffic study be undertaken for the Breakfast Point/Mortlake/Cabarita area.

Community consultation was undertaken by the community formed Peninsulas Action Group (PAG, formerly the Mortlake, Breakfast Point and Cabarita Traffic Safety Action Group). Separate consultation was also undertaken by Council in September 2021. This consultation identified a number of key streets and intersections, which were the focus of investigations undertaken by Bitzios Consulting who were engaged to undertake the Mortlake Cabarita Peninsula Traffic Study.

The purpose of the study is to address the key traffic, pedestrian, and parking issues raised by the residents of the Mortlake-Cabarita Peninsula area as a result of nearby redevelopments and increasing external traffic accessing the recreational areas.

Study Findings

Several locations were identified as being suitable for upgrade. Specifically, these include:

- •Á Tennyson Road / Bertram Street Pedestrian refuges installed at northern and western leg to improve pedestrian safety, and speed cushions to reduce vehicle speeds
- •Á Tennyson Road / Orchard Street Median on the eastern leg to be shortened to not obstruct crossing line

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- •Á Mortlake Street / Brays Road / Gale Street Improvements to pedestrian crossing infrastructure at all legs
- •Á Cabarita Road, near Moore Street Pedestrian refuge installed to improve the safety of pedestrian movements when crossing the road
- •Á Mortlake Street / Cabarita Road Pedestrian refuge to allow more safe crossings on the northern leg
- •Á Adams Lane Conversion to one-way southbound to reduce vehicle conflicts, and installation of a continuous footpath to slow vehicles, and improve pedestrian safety
- •Á Gale Street, near St Patrick's Catholic Church Relocation of a No Stopping sign to improve sight lines
- •Á Brays Road / Majors Bay Road Removal of an unused kerb ramp which may confuse pedestrians
- •Á Brays Road, near Mortlake Public School Kerb buildouts and median extensions to narrow the road visually and physically near the raised crossing to reduce vehicle speeds.

Parking occupancy was reviewed in the precinct, and ongoing monitoring was recommended ahead of making changes to specific areas. The full study report is attached.

Community Consultation

Consultation has been undertaken with the Community in Mortlake, Cabarita, and Breakfast Point, as well as part of Concord in the vicinity of the subject area. Feedback was sought via an online survey, community drop-in session, email, and phone calls.

Council received approximately 100 responses in various formats from the approximately 6,000 residences/businesses within the consultation area. The full consultation summary report is attached, with key matters outlined below.

Tennyson Road traffic calming

The proposed traffic calming on Tennyson Road consists of speed cushions, a median island, and kerb blisters. The speed cushions would be configured suitable for a bus to straddle them, noting Tennyson Road is a bus route.

Feedback was received objecting to the proposed kerb blister on the southern side of the road, as it would prevent a vehicle from pulling up for pick-up/drop-off movements. It was requested that an on-street disabled parking space be provided in that location instead. Concerns were also raised that the speed cushions would create additional vehicle noise and were not necessary.

It is noted that the primary purpose of these measures was to reduce the speed of vehicles on Tennyson Road as they approach, and in some cases turn into, Bertram Street. Given this and noting concerns raised by the community, it is now proposed to only install a central median island and a speed cushion on the north side of Tennyson Road at this stage. Following this, monitoring can be undertaken to determine if and what further action may be warranted.

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Bertram Street pedestrian refuge

Feedback on the proposed pedestrian refuge with kerb buildouts was primarily concerning the safety of the existing right-out turn movement from Bertram Street onto Tennyson Road. Additionally, there were requests for a roundabout at this intersection.

The recently installed raised pedestrian crossing on Tennyson Road near this intersection has already resulted in lower vehicle speeds for westbound traffic coming past this intersection. Parking was also setback further from the intersection, enhancing sight distances. Post construction observations indicate that the new crossing and adjoining intersection are operating satisfactorily.

The additional proposed traffic calming on Tennyson Road will reduce vehicle speeds further for eastbound traffic approaching the intersection, further enhancing safety.

Given the geometry of the intersection with Adams Lane, Bertram Street and Tennyson Road, as well as an existing bus stop, the installation of a roundabout at this intersection is not feasible.

Brays Road, Gale Street and Mortlake Street Roundabout

The primary feedback received on the proposed upgraded pedestrian infrastructure at this location was requests for an additional pedestrian refuge on Brays Road to the west of the roundabout.

The installation of a pedestrian refuge would result in further parking restrictions in addition to what has been proposed, which would require the relocation of the existing bus stop and loss of timed parking adjacent businesses. It would also likely restrict larger vehicle turning manoeuvres from Frederick Street into Brays Road.

The proposed kerb extension in this location will significantly reduce the crossing distance for pedestrians, from approximately 11.5m to 7m. Based on this, the installation of kerb extensions remains the proposed treatment at this location. Careful detailed design work is required for the works proposed at this intersection noting site constraints and that it is on a bus route. As a result, it is proposed that these detailed designs be referred back to Traffic Committee once available.

Adams Lane one-way

Adams Lane varies in width between kerb lines from approximately 4.5 to 5m. This does not meet relevant standards for two-way traffic. There are also no footpaths provided along either side of the lane. Whilst the volume of traffic in the lane is relatively low, where larger vehicles such as waste collection trucks encounter a vehicle travelling in the opposing direction, it results in long reversing movements.

In feedback received to the proposed conversion to one-way, concerns have been raised regarding the increased difficulty for residents accessing their driveways off Adams Lane. There have been requests for two-way traffic to be maintained, along

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with requests that the one-way restriction be the opposite direction. Queries have also been raised regarding how waste collection would be undertaken as it is currently undertaken from the Lane using a side loading truck.

Suggestions have been made to consider alternate or additional treatments, such as reducing the speed limit, installing speed cushions, restricting pedestrian activity in the lane, etc. There were also requests for a pedestrian crossing on Adams Lane between the gates on either side which provide access to the school and the church carpark

For a pedestrian crossing to be installed, there must be adequate sight distances for a driver to observe pedestrians who are about to use a crossing. Due to an existing building within the church property, it is not feasible to achieve these requirements where Adams Lane carries northbound traffic. To achieve adequate sight distances for southbound traffic, modifications would be required on private property, including to the boundary fence along the Church.

In line with regulatory requirements, there are several steps in the process or making a street one-way, including the preparation of a Traffic Management Plan (TMP) and its approval by TfNSW. A TMP is required to consider various factors to assist in determining if it is the most appropriate outcome.

Feedback from the community is proposed to be further reviewed through this process to determine if one-way restrictions are appropriate and what additional/alternate works may be appropriate.

Cabarita Road pedestrian refuge

It is noted that there is no pedestrian infrastructure in this section of Cabarita Road and most feedback was in support of providing a safer crossing facility and reducing vehicle speeds.

There were however several suggestions of potentially more appropriate locations it could be provided, in particular adjoining Kendall Reserve. This feedback has been noted and further investigations are required into the most appropriate location of this proposal.

Mortlake Street and Cabarita Road intersection

Requests were made for the installation of a roundabout at this intersection, along with requests to upgrade the intersection to a 'Stop' restriction. Concerns were raised that vehicles are going to fast on Cabarita Road, making it difficult to turn out of Mortlake Street

In the Study, it is noted that a "Review of the crash data and intersection counts at this location does not indicate that the installation of a roundabout is warranted at this time". It is also noted that whilst roundabouts can be effective for traffic efficiency, they do not necessarily enhance safety.



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Under current Australian Standards, 'Stop' restrictions should only be installed at locations where sight distances are restricted. The use of 'Stop' signs where poor sight distance is not a factor can lead to driver disobedience, and lack of credibility of 'Stop' signs. The sight lines at the intersection of Mortlake Street and Cabarita Road are consistent with a typical intersection, and as such a 'Stop' restriction is not an appropriate measure to enhance road safety.

Council staff will arrange traffic counts on Cabarita Road to further assess vehicle speeds on the approaches to Mortlake Street. This will assist in determining if and what further works may be warranted, such as speed cushions.

Requests for further investigations outside of study area

Several requests were received outside of the proposed recommendations of the traffic study. These requests have been noted and will be investigated in consultation with the community. This includes but is not limited to:

- Additional pedestrian facilities on Tennyson Road to the north of McDonald Street
- •Á Additional lighting on Tennyson Road
- •Á Crossing facility on Adams Street near the school
- •Á Adams Street and Brays Road intersection safety

Braddon Street petition from residents

A petition with 36 signatures was received from the residents of Bayard Street, Braddon Street and Norman Street. Concerns have been raised that the proposed works will result in traffic diverting via these streets. The petition requests further investigations be undertaken to assess the impact of the proposals. Additionally, safety and compliance concerns were raised about the intersections of Braddon Street and Kingston Avenue, and Norman Street and Majors Bay Road.

It is noted that there are existing traffic calming devices installed in Norman Street, Rickard Street, Braddon Street and Bayard Street. Safety at the intersection of Norman Street and Majors Bay Road was previously investigated and works undertaken in the 2020/21 Financial Year to enhance safety under the Australian Government Black Spot program.

Previous counts have been undertaken in these streets and compared to other surrounding streets. It was found that whilst traffic volumes in these streets have gradually increased over time, other roads such as Gale Street and Brays Road have seen much larger increases.

Traffic counts will be undertaken in these streets prior to implementing the proposed changes in the broader area. Further counts can be undertaken post implementation to identify any notable change in traffic conditions. Notwithstanding this, works proposed in the broader area are not anticipated to have any notable impact on the traffic volumes in the identified streets.

STAFF RECOMMENDATION

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- 1.Á THAT a pedestrian refuge, speed cushion and kerb extensions with pram ramps be installed on Bertram Street at the intersection of Tennyson Road.
- 2.Á THAT the median island on Orchard Avenue, at the intersection of Tennyson Road, be shortened.
- 3.Á THAT a median island and a speed cushion be installed on the northern half of Tennyson Road, west of the intersection with Bertram Street.
- 4.Á THAT speed cushions, kerb extensions, pram ramps and pedestrian refuges be supported in principle at the intersection of Brays Road, Gale Street and Mortlake Street, with the detailed design being presented to a future Traffic Committee.
- 5.Á THAT location of the proposed pedestrian refuge, speed cushion and kerb extensions with pram ramps on Cabarita Road at the intersection of Moore Street, be further investigated.
- 6.Á THAT a pedestrian refuge, speed cushion and kerb extensions with pram ramps be installed on Mortlake Street at the intersection of Cabarita Road.
- 7.Á THAT further traffic calming measures be investigated on Cabarita Road near the intersection of Mortlake Street.
- 8.Á THAT the conversion of Adams Lane to one-way southbound, be further investigated.
- 9.Á THAT a continuous footpath be supported in principle across Adams Lane at the intersection with Adams Street, with the detailed design being presented to a future Traffic Committee.
- 10. ÁTHAT the existing 'No Stopping' zone on the southwestern side of the existing pedestrian crossing on Gale Street, be extended by 6m.
- 11. ÁTHAT the redundant pram ramp on Majors Bay Road at the intersection of Brays Road be removed.
- 12.ÁTHAT the kerb buildouts and median islands be extended at the existing pedestrian crossing on Brays Road adjacent Mortlake Public School.

DISCUSSION

The BayBUG representative noted that the study had not proposed a reduction in speed limits e.g. 40km/h, 10km/h. Council staff noted that speed limits were under the care and control of TfNSW. It is understood they are planning to release updated guidelines for the implementation of lower speed limits later this year. Once available, Council staff will review potential opportunities around the Council area.

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The BayBUG representative noted that they were disappointed that the Traffic Study had not investigated the possible causes of resident discomfort with the traffic environment in which they live. For example, vehicle usage data and opportunities to influence that.

Council staff noted that the scope and focus areas of the study was informed by community feedback gathered in 2021. Specifically, the community was asked to identify a 'traffic issue', 'facilities needed' or 'improvement idea'.

The ability to significantly influence transport mode choices is beyond the scope of the study, with the peninsula nature of the area being a significant constraint. Notwithstanding this, many the works should encourage walking as a mode of transport by enhancing connectivity and safety.

The BayBUG representative suggested consideration be given to continuous footpath treatments in lieu of the works, such as pedestrian refuges, proposed at the terminating leg of a number of intersections. It was also suggested that raised treatments be provided across the road at some locations, such as at the Brays Road, Gale Street and Mortlake Street roundabout.

Council staff noted that the volume of traffic movements exceeded TfNSW requirements for a continuous footpath treatment at the terminating leg of the subject intersections.

It was also noted that in accordance with relevant standards, raised treatments cannot be provided across roads such as at the Brays Road, Gale Street and Mortlake Street roundabout. Such devices need to either give pedestrian priority with pedestrian crossing signage (which was found to be not warranted) or be designed to physically discourage pedestrian access across them e.g. fencing.

The BayBUG representative raised concerns regarding the proposed removal of the pram ramp on Majors Bay Road near Brays Road, noting that some people walk along the west side of the road and need to cross at some point.

Council staff noted that the existing pram ramp did not provide any useful connectivity and that no objections had been raised to its removal during community consultation. If/when a footpath is proposed along the length of the west side of the road, how pedestrians cross to/from it would be considered as part of that project.

The TfNSW requested that, once available and where applicable, the detailed designs for the works be provided to them for review and concurrence. TfNSW supported further investigation of proposals (e.g. conversion of Adam Lane to oneway road) and reminded Council that any permanent road changes proposed by Council requires TMP submission for TfNSW approval.



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Council staff agreed that the detail designs could be provided to TfNSW for review and concurrence, with the committee recommendation updated correspondingly. The requirement for a TMP was also noted.

COMMITTEE RECOMMENDATION

- 1.ÁTHAT a pedestrian refuge, speed cushion and kerb extensions with pram ramps be installed on Bertram Street at the intersection of Tennyson Road, subject to concurrence of the detailed design from TfNSW.
- 2.ÁTHAT the median island on Orchard Avenue, at the intersection of Tennyson Road, be shortened.
- 3.ÁTHAT a median island and a speed cushion be installed on the northern half of Tennyson Road, west of the intersection with Bertram Street, subject to concurrence of the detailed design from TfNSW.
- 4.ÁTHAT speed cushions, kerb extensions, pram ramps and pedestrian refuges be supported in principle at the intersection of Brays Road, Gale Street and Mortlake Street, with the detailed design being presented to a future Traffic Committee.
- 5.ÁTHAT location of the proposed pedestrian refuge, speed cushion and kerb extensions with pram ramps on Cabarita Road at the intersection of Moore Street, be further investigated.
- 6.ÁTHAT a pedestrian refuge, speed cushion and kerb extensions with pram ramps be installed on Mortlake Street at the intersection of Cabarita Road, subject to concurrence of the detailed design from TfNSW.
- 7.ÁTHAT further traffic calming measures be investigated on Cabarita Road near the intersection of Mortlake Street.
- 8.ÁTHAT the conversion of Adams Lane to one-way southbound, be further investigated.
- 9.ÁTHAT a continuous footpath be supported in principle across Adams Lane at the intersection with Adams Street, with the detailed design being presented to a future Traffic Committee.
- 10. ATHAT the existing 'No Stopping' zone on the southwestern side of the existing pedestrian crossing on Gale Street, be extended by 6m.
- 11. ATHAT the redundant pram ramp on Majors Bay Road at the intersection of Brays Road be removed.

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12. ATHAT the kerb buildouts and median islands be extended at the existing pedestrian crossing on Brays Road adjacent Mortlake Public School, subject to concurrence of the detailed design from TfNSW.

Attachments:

- 1.ÁMortlake Cabarita Peninsula Traffic Study
- 2.ÁCommunity Consultation Report

ITEM 8 GEORGE LANE, NORTH STRATHFIELD – PARKING MANAGEMENT

Department City Services and Assets

Author Initials: MC

REPORT

A request has been received to review the parking arrangements on George Lane, North Strathfield.

The existing eight angled parking spaces on the west side of the lane are unrestricted and in high demand. The area also comprises of one Disabled Parking Space. It is noted that the parking spaces are located at the entrance to an Out of School Hours Care (OSHC) centre with parents required to sign out their child in line with national regulations.

To assist with turn-over of vehicles, it is proposed that two of the angled parking spaces be restricted to '1/4P, 2.30pm-7pm, Mon-Fri'. It is also proposed that the existing Disabled Parking Space be upgraded to meet current Australian Standards. This will result in the loss of one parking space.

Consultation was undertaken with Shiny Star Play Centre (OHSC) and with Centre Management at the Bakehouse Quarter. No objections were received, however it was requested that vehicles be prohibited from parking adjacent to the eastern edge of a nearby delivery dock driveway on George Lane.

Currently, this location allows for a single vehicle to be parked. Observations note that due to the road environment, if two vehicles were approaching from opposing directions, conflict occurs when a vehicle is parked at this location. As such, it is proposed that the length of existing 'No Stopping' be extended, as outlined in the attached plan.

STAFF RECOMMENDATION



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- 1.ÁTHAT two '1/4P, 2.30pm 7pm, Monday Friday' parking spaces be installed on George Lane as detailed in the locality plan
- 2.ÁThe existing Disabled Parking Space on George Lane be upgraded as detailed in the locality plan.
- 3.ÁTHAT the existing 'No Stopping' signage on George Lane be extended 2.4 meters west as detailed in the locality plan.

DISCUSSION

Item is in order.

COMMITTEE RECOMMENDATION

- 1.ÁTHAT two '1/4P, 2.30pm 7pm, Monday Friday' parking spaces be installed on George Lane as detailed in the locality plan
- 2.ÁThe existing Disabled Parking Space on George Lane be upgraded as detailed in the locality plan.
- 3.ÁTHAT the existing 'No Stopping' signage on George Lane be extended 2.4 meters west as detailed in the locality plan.

Attachments:

1.ÁLocality plan

ITEM 9 REMOVAL OF MIPPS – VARIOUS LOCATIONS

Department City Services and Assets

Author Initials: MC

REPORT

Council conducts regular reviews of on-street Mobility Impaired Person parking Spaces (MIPPS) to determine whether they are still required. Due to the high demand for on-street parking in many areas, it is important to maximise availability of on-street parking spaces.

The majority of these spaces have been installed as a result of requests from individual residents with disabilities, who for one reason or another cannot park within their property.

Council has recently written to residents who have disabled parking spaces in front of their properties, asking if they still need the space. Council was notified through this process that the following MIPPS is no longer required:

•Á 361 Victoria Place, Drummoyne

In some instances, no return correspondence was received from the initial review period conducted in May 2022. Noting this, a further follow up correspondence was sent in July 2022 to seek final verification of the continued MIPPS installation at the following locations:

- •Á 14 Bayswater Street, Drummoyne
- •Á 36 Bayswater Street, Drummoyne
- •Á 19 Therry Street, Drummoyne
- •Á 164 Burwood Road, Concord
- Á 33 Churchill Crescent, Concord
- •Á 41 Llewellyn Street, Rhodes

No return documentation was received from any of the residents listed as part of the follow up review. It is therefore proposed to remove the MIPPS at these locations.

Due to the State Road classification of Bayswater Street, the removal of these spaces does not require consideration by Traffic Committee however they are included for completeness. Transport for New South Wales (TfNSW) was notified of the proposed removal and permission was granted for this to take place.

STAFF RECOMMENDATION

THAT the MIPPS in front of 361 Victoria Place, 19 Therry Street, 164 Burwood Road, 33 Churchill Crescent and 41 Llewellyn Street be removed.

DISCUSSION

Item is in order

COMMITTEE RECOMMENDATION

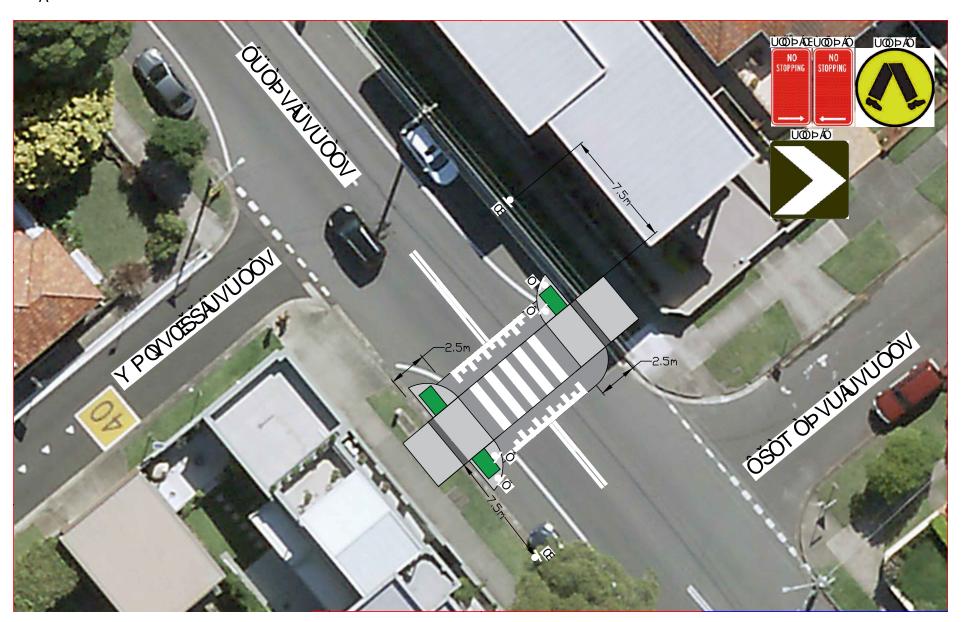
THAT the MIPPS in front of 361 Victoria Place, 19 Therry Street, 164 Burwood Road, 33 Churchill Crescent and 41 Llewellyn Street be removed.

Attachments:

1.ALocality plan



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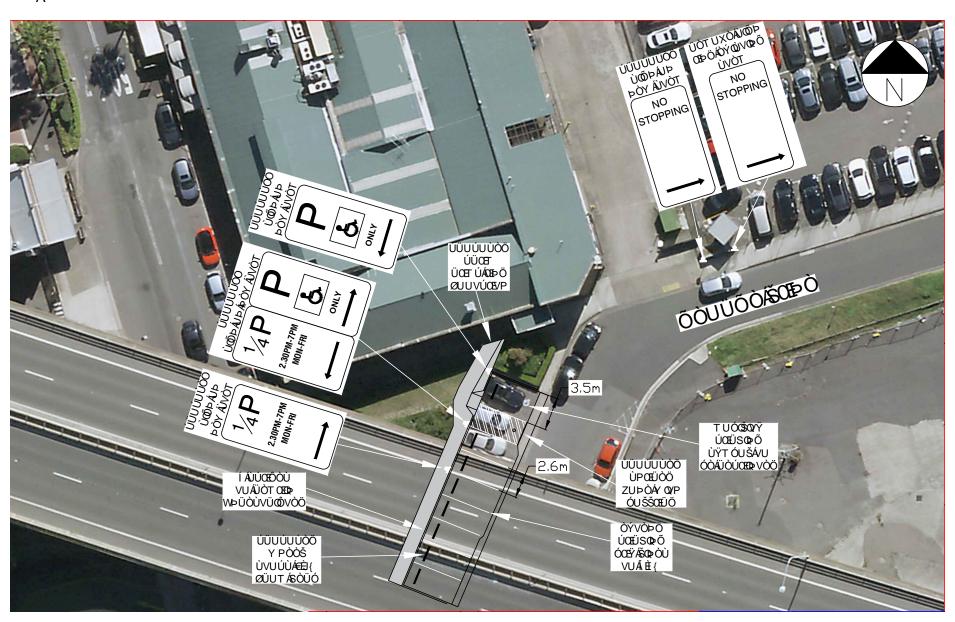


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CONSULTATION REPORT

Set out below is the summary of feedback received during the second round of community consultation for the preparation of a Five Dock Permit Parking Scheme (PPS).

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Background

Council is proposing a Permit Parking Scheme to address parking concerns in the Five Dock town centre.

Following the commencement of construction in the heart of Five Dock for the future Metro West station, and recent feedback on Council's community-led plan (Our Future 2036), parking within Five Dock has been highlighted as a key area of community interest. In light of this feedback, Council consulted the community to develop a parking scheme.

After an initial consultation with the community in December 2021, we shared a draft map of proposed restrictions for the community's review in July/August 2022.

Permit Parking Schemes (PPS) are areas where residents, business owners, and other eligible permit holders are given priority over other visitors in relation to on-street parking. This is typically achieved through the installation of timed parking restrictions with exemptions for permit holders, thereby increasing parking turnover whilst minimising the impact on residents and local businesses.

Council currently operates five PPS in Drummoyne, Chiswick, Strathfield and Concord West. Historically, these locations were selected due to a range of factors affecting the demand for the limited number of parking spaces in these areas. Over the years, these schemes have proven an effective way to balance the provision of parking for visitors to these areas whilst also meeting residents and business owner's needs.

Consultation round 1 – 1 – 21 December 2021

Feedback gathered during the first round of consultation showed strong support for a Permit Parking Scheme to better balance the demands of the various road users in Five Dock, with over 80% of respondents supporting a Permit Parking Scheme on their street.

Consultation round 2 - 14 July - 12 August 2022

Council shared a proposal for the Permit Parking Scheme (PPS) which was developed using feedback from round 1. This report outlines the results of this consultation



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Community Consultation Round 2

The consultation period for this project was from 14 July – 12 August 2022

What methods were implemented to notify the community of this consultation opportunity?

- Á Direct Notification Letters to approx. 3,300 owneroccupiers, tenants, and absentee landlords of properties in the study area outlined here.
- •Á Council website homepage tile
- •Á Email notification to round 1 participant
- •Á Promotion via Council's social media channels and print Newsletter

What engagement methods were undertaken?

- •Á Online engagement survey at collaborate.canadabay.nsw.gov.au
- •Á In-person drop-in at Five Dock Library on Wednesday 26 July from 5 – 7pm
- •Á Direct email and phone number provided for further information.



Consultation Summary

Consultation Participation

Approx. 40 drop-in participants

1,662 visits to the Collaborate website page 149 survey submissions 108 emails Approx. 30 phone calls

Overall Findings

Based on 257 submissions across email and Collaborate Canada Bay:

- •Á 60% of participants support the Permit Parking Scheme
- •Á 34% of participants oppose the Permit Parking Scheme
- •Á 6% of participants neither support nor oppose the Permit Parking Scheme

Survey Results

149 submissions

- •Á 66% (99) of participants support the proposed Permit Parking Scheme (PPS)
- •Á 33% (50) do not support the PPS
- •Á 93 participants believe the PPS will improve parking around Five Dock
- •Á 87 participants believe the PPS will address future parking demands
- •Á 32 participants believe the PPS will encourage more visitors to Five Dock
- •Á 36 participants do not agree with any of the above statements
 - oÁ Please note, this option was only made available after 40 participants had submitted their survey. Council officers emailed these participants to rectify this mistake and 3 participants altered their original response and this is reflected here.



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Feedback Themes - Survey

Support for the PPS	# of submissions
Prioritises residents	53
Addresses current and future demand	13
Deters people from leaving cars all day, including auto repair shops	12
Equitable access for shoppers	3

Examples of feedback:

"It is a fair and equitable proposal for the residents, businesses and community."

"Restricted parking for visitors to the area - fairer for everyone"

"Allows residents access to their street rather than streets being overtaken by long-term parked vehicles using the metro for transportation to work. NSW Government need to work out a high-density parking/transit parking solution for those who will be travelling on the metro."

"With the metro coming in I think a time limit on times people can park outside our homes will deter people from leaving their car there all day. It will also give people equal time to spend shopping on the main road and restrict the people driving to work in Five Dock taking the parking spots all day so local residents can drive to the local shops and support our local businesses"

Opposition to the PPS	# of submissions
Not enough permits per household	16
Unrestricted streets will be parked out (+ requests to add street to PPS)	7
Not enough permits for businesses/teachers, negative impact on businesses	6
Negative impact on visitors	6
Requests to make certain streets one way to improve traffic flow	5
Build a new parking lot/s	5
Future problem, not a current problem	4
Build a new parking lot/s	5
Street not close enough to metro to warrant restrictions (+ request to remove street from PPS)	2

Examples of feedback:

"The number of spaces in the community cannot be increased without new parking stations. The number of cars per household is more of a problem. The present proposal seems difficult to make sense of and rewards people who own unsustainable numbers of cars. It would require a lot of effort and expense to enforce."

"This scheme does not solve the significant problem of lack of parking and parking spaces removed due to Metro construction"

"I don't want visitors to my home or my children when they have cars to be restricted with parking. I don't think our street is close enough to the metro to warrant this. If it is, there are other streets in surrounds that are just as close that don't seem to have any proposed parking schemes."



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"I can support the idea if we are looking in the future. Many people will park their cars in our streets and take the metro for go somewhere else, so they will block a parking spot for most of the day. In this case the permit is a perfect idea. But I am concern in case I have 2 or more visitor at my place. It will not happen every week but is possible few times in a month."

Email Feedback

108 emails

- •Á 51% (55) of participants support the proposed Permit Parking Scheme (PPS)
- •Á 33% (36) of participants do not support the PPS
- •Á 16% (17) of participants were neutral in their feedback and neither supported nor opposed the scheme. These submissions often had many suggestions which made it difficult to assess.

Emails contained many suggestions that are difficult to summarise.

Overall, themes were similar to the survey, including:

- •Á Negative impact on businesses staff and customers
- •Á Not enough permits per household
- •Á Not enough permits for teachers at Rosebank
- •Á Negative impact on visitors to residences
- •Á Response to a future problem, not a current problem
- •Á Requests for one-way streets
- •Á Requests to exclude streets from the PPS
- •Á Requests to extend PPS to streets
- •Á Priority for residents

Examples of negative feedback:

"I have 5 people in my household with their own cars + 1 boat parked on street. I was forced to remove my boat previously to boat storage costing me a lot of money when it was legal to be on the street. This will not be beneficial at all for me as I have a shared common driveway and cant leave my cars in backyard/driveway. Once again, it will benefit the pub on the corner of Arlington Street. Street is always full after hours when I come home from work never any parking."

"I am a teacher at Rosebank College in Five Dock. I am against the PPS in the streets around the school, which has been there for over 150 years. I understand that Rosebank staff parking in the streets is annoying for residents but it is generally only within the day, when they are also out at work. The school is in the midst of upgrading the onsite school carpark, which once finished, will reduce the stress. It will not be able to fit all staff members though, so timed parking would still be problematic."

"I have 10 or so staff working at the clinic on any given day and these all park in the surrounding streets. There is parking under the building however my staff are not permitted under the lease to park."

Examples of positive feedback:

"As my house in Cross Street is on a very narrow street, I often find myself and my car unable to exit my car port. When my family come to visit me they have nowhere to park! I am a senior citizen and i value the visits from my family!"

"Hopefully restricted parking will discourage all day parkers making it easier for residents to park"

"In principal we agree that a parking permit system should be adopted at some stage prior to the Metro coming into effect or as the density of the area increases as planned."

Drop-in report



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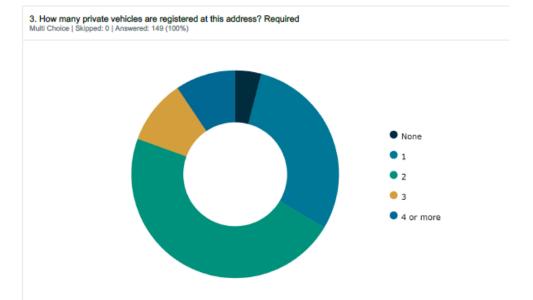
Stephanie Kelly, Franco Guerrisi, Brendan MacGillicuddy and Lawrence Huang from Council hosted the session at Five Dock Library where approximately 40 members of the community attended over the 2 hour session. The general themes of the discussion were:

- •Á Insufficient permit allocation for residents/businesses needs
- •Á Negative impact on visitors/businesses
- •Á Requests to exclude certain streets from the PPS
- •Á Requests to extend the PPS into certain streets
- ulletÁ Planning issues related to the provision of off-street parking that impacts permit eligibility
- $\bullet \acute{A} \ \ \text{Requests for provision of additional parking, such as a multi-storey carpark}$



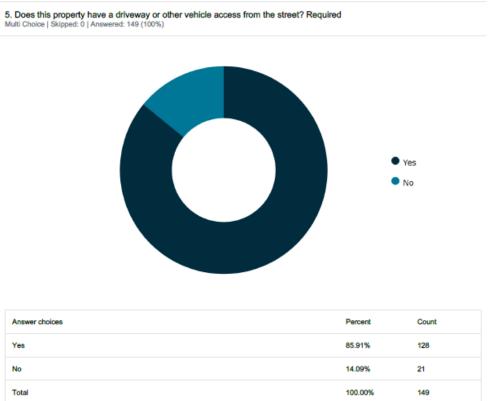
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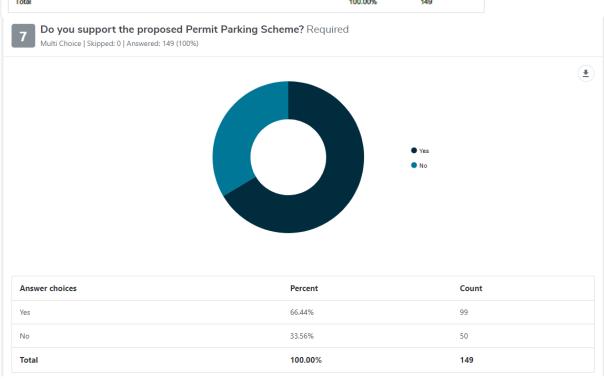
Survey results on car ownership and residence details



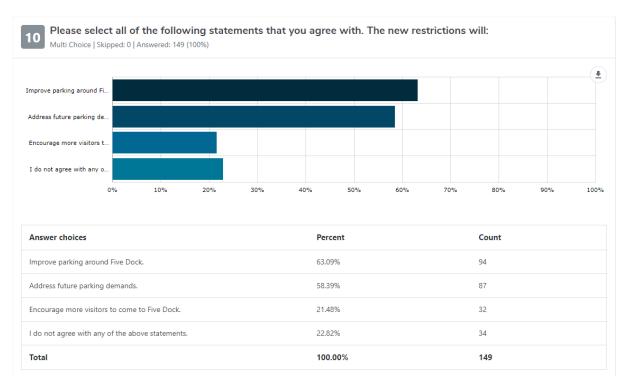
Answer choices	Percent	Count
None	4.03%	6
1	29.53%	44
2	46.98%	70
3	10.07%	15
4 or more	9.40%	14
Total	100.00%	149

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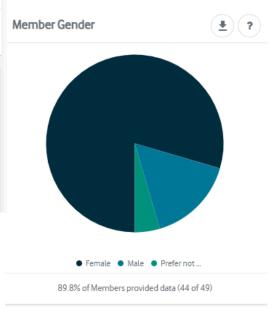
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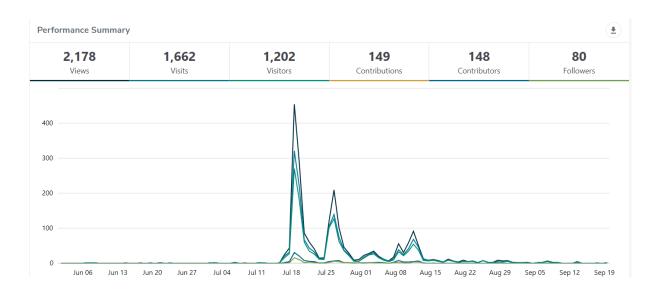


Participant demographics (survey)

- •Á Over 70% of respondents are from 2046 postcode which comprises Wareemba, Five Dock, Canada Bay, Russell Lea, Rodd Point, Chiswick, Abbotsford.
- •Á 80% of respondent are female.

Member Contributions by Location ?					
Location	Postcode	Contributors	Contributions	% Men Contril	nber outions
Abbotsford	2046	32	32		71.11%
Mortlake	2137	6	6		13.33%
Drummoyne	2047	2	2		4.44%
Petersham North	2049	1	1		2.22%
Croydon Park	2133	1	1		2.22%









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Sign Type	Comm	pont
Sign Type		
$\stackrel{\wedge}{\sim}$	•A	1/4P, Kendall Inlet Authorised Vehicles Excepted.
	•Á	No Parking
	•Á	Disabled parking
•	•Á	Giveway sign
	•Á	No Stopping
	•Á	No Parking Emergency Vehicles Excepted.
	•Á	Section 650A sign (see below for proposed signage design)

KENDALL INLET CAR PARK VOT ÒÆSOT QVÙÆŒÚÚŠŸ ÜÒØÒÜÁVUÆÙØÞÙ

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- ÙVŒĐÖÁKÒPÔŠÒÁÐÁŒÜÒŒÝ PÒÞÁÔŠUÙÒÖÁ/UÁÚWÓŠÔÔ
- ÞUVÁÚVŒÞÖÁKÒPÔŠÒÁQÞÁTŒÜSÒÖÁÚŒÜSOÞÕÁÚÚŒÔÒ
- ÙVŒĐÖÁKÒPÔŠÒÁQÞÁJÔÔWÚÔÇÖÁTŒÜSÒÖÁÚŒÜSOPÕÁÙÚŒÔÒ
- ÞUVÁÙVŒÞÖÁXÒPÔŠÒÁY PUŠŠŸÁQÞÁT ŒÜSÒÖÁÚŒÜSQÞÕÁÙÚŒÔÒ
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- ØOEŠÁVUÁÔUT ÚŠŸÁY QYPÁÚŒÜSŒŐÁÖÖÖÒÔVQJÞ
- QOESÁVUÁÔUT ÚŠŸÁY QYPÁXÒP QÔŠÒÁT UXÒT ÒÞ VÁÖQÜÒÔ VQUÞ
- ÙVŒĐÖÁXÒPÔŠÒÁÐÁŒÜÒŒŠUÞÕÒÜÁ/PŒÞÁŒŠŠUYÒÖ

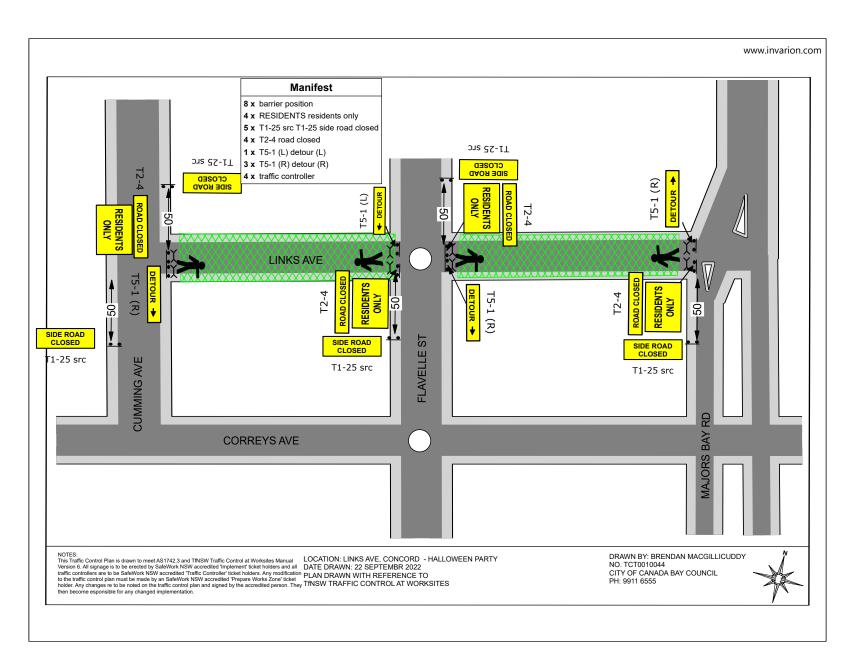
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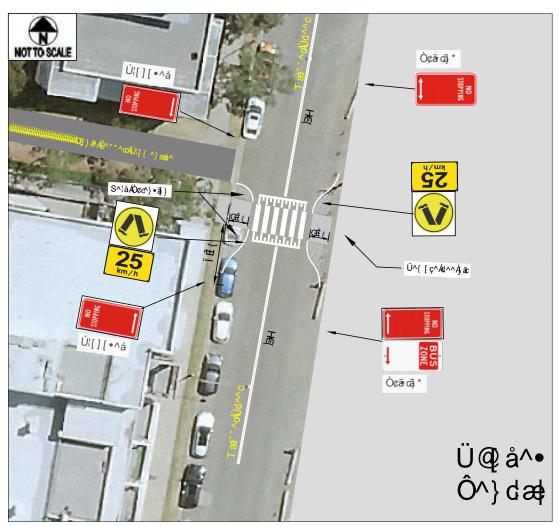
ÙÒÔVQJÞÁÌÍ€Œ ŠUÔŒŠÁÕUXÒÜÞTÒÞVÁŒÔV FJJH **MAX PENALTY EXCEEDS \$500**



ÓŸÁJÜÖÖÜ ÕÒÞÒÜŒŠÁTŒÞŒÕÖÜ





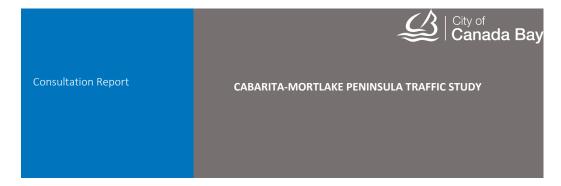


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CONSULTATION REPORT

Having consulted the community in September – October 2021 regarding issues in the Cabarita-Mortlake Peninsula, feedback showed that traffic flow concerns needed to be addressed. Council then commissioned a traffic study of the area in March – July 2022 and has shared the findings and proposed infrastructure upgrades in September 2022.

Set out below is the summary of feedback received during the community consultation period.

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Background

Having consulted the community in 2021 regarding issues in the Cabarita-Mortlake Peninsula, feedback showed that traffic flow concerns needed to be addressed. Following from this, Council shared a traffic study with the community and sought feedback on the upgrades proposed in response to the study's findings.

Bitzios Consulting was engaged by City of Canada Bay (Council) to undertake a traffic study within the Mortlake-Cabarita Peninsula area. The purpose of this study is to address the key traffic, pedestrian, and parking issues raised by the residents of the Mortlake-Cabarita Peninsula area because of nearby redevelopments and increasing external traffic accessing the recreational areas.

The 2021 consultation undertaken by the community, the recently formed Peninsula Action Group (PAG), and separate consultation undertaken by Council, has identified a number of key streets and intersections. As such, the extent of this traffic study includes the below streets and intersections:

Streets

- ulletÁ Mortlake Street, between Cabarita Road and Brays Road
- •Á Gale Street, between Brays Road and Tennyson Road
- •Á Bertram Street & Hilly Street, between Tennyson Road to Mortlake Ferry
- •Á Tennyson Road, between Gale Street and Palace Lane
- •Á Cabarita Road, between Mortlake Street and Cabarita Park
- •Á Adams Lane, between Tennyson Road and Adams Street
- A Brays Road, between Majors Bay Road and William Street.

Intersections

- •Á Cabarita Road / Mortlake Street
- •Á Brays Road / Mortlake Street / Gale Streets
- •Á Bertram Street / Tennyson Road
- •Á Bertram Street / Hilly Street
- •Á Kendall Street / Cabarita Road.

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Community Consultation

The consultation period was from 2 – 18 September 2022

What methods were implemented to notify the community of this consultation opportunity?

- •Á Direct Notification Letters to approx. 6,000 owneroccupiers and tenants in the study area >
- •Á Email notification to 100+ participants from 2021 consultation
- •Á Email notification to 63 Collaborate project followers
- •Á Direct emails and phone calls to Peninsula Action Group

What engagement methods were undertaken?

- •Á Online engagement survey at collaborate.canadabay.nsw.gov.au
- •Á In-person drop-in at Kendall Reserve on 11 September at 2 – 4pm
- Á Direct email and phone number provided for further information
- •Á Information session with Peninsula Action Group
- •Á Information session with Councillors



Consultation Summary

Consultation Participation

922 visits to the Collaborate website page

39 survey submissions

15 emails

5 phone calls

Approx. 40 drop-in participants

Email Feedback

15 emails were received by Council, containing varied feedback on the traffic study and individual proposals. Feedback has been outlined in the below tables. Two emails contained a petition with 36 total signatures seeking expansion of the study area to Bayard, Braddon and Norman Streets.

Drop-in Session Feedback

Brendan MacGillicuddy and Samuel Lindsay hosted a drop-in consultation at Kendall Reserve from 2-4pm on Sunday 11 September 2022. Over 40 people attended the session. Feedback was taken by Council staff and has been outlined in the below tables.

Survey Results

Proposal	# of submissions	Support	Oppose
Adams Lane (north)	10	7	3
Adams Lane (south)	10	7	3
Bertram Street	10	4	6
Brays Road and Gale	10	7	5
Street roundabout	12	/	



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Brays Road	6	5	5
Gale Street	4	1	3
Cabarita Road	11	6	5
Majors Bay Road	4	3	1
Mortlake Street	10	7	3
Tennyson Road	11	6	5
The Traffic Study	21		
findings overall	21		
	100	·	

Feedback on proposals (survey, drop-in and emails)

Proposal	Feedback and # of submissions			
	Survey feedback:			
	•Á Add speed humps (3)			
	•Á No change as the road currently has minimal usage (1)			
	ulletÁ An alternative would be to close the laneway during school drop off and pick up			
	times (1)			
	ulletÁ No parking zone all the way down the lane (1)			
	•Á This issue was previously addressed under DA MP10_0154; in that proposal Adams Lane was proposed to be one way but one way in a North direction. Making Adams Lane one way does not solve the issues at the intersection of Bertram/Tennyson Road/Adams Lane.			
	•Á Speed limit restrictions and no stopping for all areas of the laneway (1)			
	•Á Close the lane way, it is too dangerous (1)			
	•Á St Patricks school need to utilise Herbert St better. Adams lane isn't sufficiently wide enough to allow ingress/egress from properties (1)			
	•A 30km/h speed limit (1)			
	•A Roundabout at intersection of Bertram St, Tennyson Rd and Adams Lane (1)			
Adams Lane	• A Will make things a lot safer, especially redrawing the lines around the curve and			
	putting in the footpath extension at the end of the lane (1)			
	 A Add pedestrian crossing further down Adams Lane near Herbert Street to allow people to cross the road safely if they are coming from the southern end of Adams Street (2) 			
	Drop-in feedback:			
	•Á Do not make one way (4)			
	•Á One way direction from Tennyson Rd is unsafe (1)			
	•Á Suggest one way in other direction (1)			
	•Á Support for one way (1)			
	•Á Parents line up at pick up times in Adams Lane - very dangerous (1)			
	•Á Issues with construction of properties if made one way, access to properties (1)			
	Email feedback:			
	•Á Do not make one way (3) – access to some properties would be impossible			
	•Á Supports changes, additional investigations needed around the school (1)			
	•Á Suggest one way in other direction (1)			
	Request no change to waste collection in Adams Lane (1)			
	Survey feedback:			
Bertram Street	•Á Changes do not resolve issues (3) e.g. the dangerous intersection of cars turning right out of Bertram St onto Tennyson Rd.			
	•Á Do not narrow the roads (2)			
	•Á Put a roundabout and a pedestrian crossing (2)			



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	•Á Intersection and traffic lights are a better solution (1)
	Drop-in feedback:
	•Á Limiting traffic flow will funnel traffic into Bayard/Braddon/Norman Street and
	create a "rat run" (1)
	•Á Kerb extensions create a bottle neck (1)
	•Á Restrict access in and out of Bertram (1)
	Survey feedback:
	•Á Refuge Island added on Brays Road outside Cnr 58 (4)
	•Á Pedestrian crossing needed at this location (2)
	•Á Removal of hedge at the intersection will help with visibility (1)
	•Á No speed cushions, they are a nuisance and damages the wear and tear on cars (1)
	•Á Reduce speed limit (1)
	•Á Don't take away parking (1)
	•Á The proposal will not address the traffic interfaces at the roundabout. Mortlake
	street north bound get too close to cars on roundabout (1)
Brays Road and	•Á Proposal won't resolve issue of congestion in the peninsula (1)
Gale Street	
roundabout	Drop-in feedback:
	•Á Between Gale St and Adams Lane could be one way east bound with parking on left
	hand side (1)
	•Á Cars turn in from Brays Road to Adams Lane very fast (1)
	•Á Very dangerous area – cars written off and one child run over (1)
	•Á Loss of parking (1)
	•Á Proposal won't resolve safety concerns (1)
	Email feedback:
	•Á Make Brays Rd east one way going east (2)
	•Á Add speed reduction measures before the roundabout (1)
	•Á Add traffic lights (1)
	•Á Turning into Brays Rd from Adams Street – poor visibility
	•Á Eastern side of Gale St supported, do not remove western side car parks as is not
	needed (1)
	Survey feedback:
	•Á No speed cushions (1)
	•Á Proposal won't resolve issue of congestion in the peninsula (1)
Brays Road	•Á Needs better lighting at night (1)
	Email feedback:
	•Á Blind intersections (1)
	Survey feedback:
Gale Street	•Á Don't remove parking (1)
	•Á Proposal won't resolve issue of congestion in the peninsula (1)
	Survey feedback:
	•Å Roundabout should be moved to Kendall Street – very dangerous intersection (3)
	•Á More speed cushions (1)
	•Á No speed cushions (1)
Cabarita Road	•Á Proposal won't resolve issue of congestion in the peninsula (2)
Capanta Koau	
	Drop-in feedback:
	.
	•À Relocate proposal towards Kendall Reserve (7)
	•À Do not take 3 parking spaces as residents need them (3)



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	· ·
	•À Restrict driveway access for 103 Cabarita Road (1)
	•À Noise concerns with speed hump – particularly at night (2)
	•A Treatment too far away, needs to have additional traffic calming (1)
	•Á People speed through the roundabout and don't slow down, accident last week
	occurred at nighttime, colliding with a parked car (1)
	•Á Move towards Grenville Avenue (1)
	•Á Slow down traffic before bus stop (1)
	•Á Prefer chicanes to speed hump (1)
	Email feedback:
	•Á Needs a roundabout or traffic lights (1)
	•Á Suggest pedestrian crossing (1)
	•Á Move closer to Kendall Reserve (1) – removal of car parks would help with
	improving sight lines around Kendall Reserve also
	•Á Do not support traffic island - will not encourage slower speeds and removes
	parking (1)
	•Á Move towards Grenville Avenue (1)
Majors Bay Road	•Á Proposal won't resolve issue of congestion in the peninsula (1)
Majors Bay Road	Survey feedback:
	•Á Give Way or Stop sign at the corner of Mortlake Street and Cabarita Road (4)
	•Á Support for refuge island or roundabout (4)
	•Á Should be a pedestrian crossing (2)
	•Á No speed cushions (2)
	•Á Don't remove parking (2)
	•Á Proposal won't resolve issue of congestion in the peninsula (1)
	•A Proposal won tresolve issue of congestion in the peninsula (1)
Mortlake Street	Email feedback:
	•Á Include stop sign (1)
	•Á Work with police on enforcing stop sign (1)
	•Á This intersection is dangerous (2)
	•Á Include roundabout or traffic lights here instead (2)
	•Á Suggest one way from Cabarita Road (3)
	•Á Do not remove parking (2) – modify kerb extension to retain two parking spaces on
	Mortlake St
	Survey feedback:
	•Á No speed cushions (3)
	•Á Proposal won't resolve issue of congestion in the peninsula (2)
	•Á Proposal doesn't serve a purpose now that there is a pedestrian crossing on
	Tennyson Road on the other side of Bertram St (1)
Tennyson Road	•Á Install pedestrian crossing and flashing lights (1)
	•Á Proposal won't resolve issue of congestion in the peninsula (1)
	Email feedback:
	•Á This proposal will push more traffic into Braddon St (3)
	Query on why study does not address issues on Hilly St (7):
	•Á More traffic counts needed
Farallards on the	I • A Chooding
Feedback on the	•Á Speeding
Traffic Study	•Á Access from Palace Lane
Ethical the age of the con-	●Á Access from Palace Lane ●Á Parking
findings overall	 Á Access from Palace Lane Á Parking Á Lighting levels in Tennyson Road and Hilly Street – very dark
findings overall	 Á Access from Palace Lane Á Parking Á Lighting levels in Tennyson Road and Hilly Street – very dark Á Whether current stop signs at Braddon and Kingston streets properly sited
findings overall	 Á Access from Palace Lane Á Parking Á Lighting levels in Tennyson Road and Hilly Street – very dark



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- •Á Weekend traffic
- •Á Speeding concerns
- •Á Cricket centre on Saturday morning
- •Á Illegal U-turns
- •À Slow down 50km/h speed limit, there are too many pedestrians for this speed
- •Á Wangal Reserve- parking and safety concerns cars parking across driveways. Can Council install road lines to show driveways. Suggest permit parking scheme between the punt and Wangal Reserve.

The proposals are not needed: (3)

- •Á The roads should be clear and left to cars to drive on. There are footpaths. Can you provide deaths or injuries related to cars hitting pedestrians in these streets? You should be providing this info to give everyone a better understanding of the reasons behind this.
- •Á The data in the report does not support the actions proposed nor the improvements intended with their implementation. What is the target for reduction of accidents?
- •Á Proposal for more speed cushions on the roads, narrowing the roads, is not conducive to a growing suburb.

Proposals do not resolve issue of congestion in the peninsula (6):

- A The main issue is traffic congestion when entering and exiting the peninsula which has increased due to development
- •Á More work needs to be done to address traffic flow throughout the area
- •Á Traffic islands, bumpers, raised speed humps (especially the half ones) and the removal of car spaces does not solve anything and in fact it creates more issues
- $\bullet \acute{A}$ Other speed reducing measures added in previously have created more frustration, speeding and more accidents

Opposition to speed cushions: (2)

•Á The roads are congested enough. Speed cushions do not save lives. They are a nuisance and increases wear and tear to the cars. They also become a maintenance issue at the taxpayers' expense.

Other feedback:

- •Á Some points seemed glossed over
- •Á Study period is too short
- •Á Findings identified in previous traffic studies

Study is comprehensive and yielded strategies that improve safety and traffic flow in an area which has seen significant residential development and accompanying traffic increases.



Other suggestions in the area

•Á Please conduct study in Bayard, Braddon and Norman Streets to assess impact of proposals on surrounding streets.

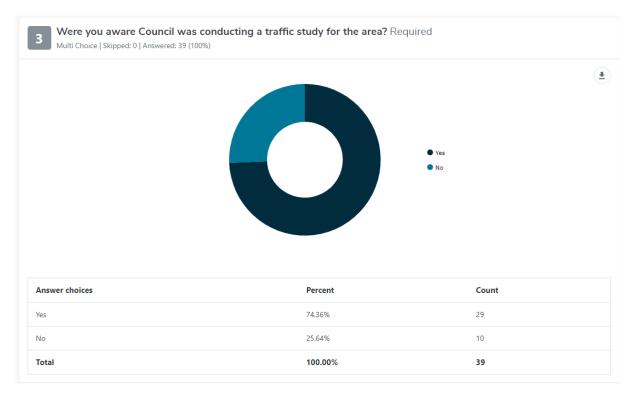
Concerns include stop signs at intersection of Braddon and Kingston Avenue, and Norman St and Majors Bay Road – petition submitted with 36 signatures

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- •Á Boat, trailer and RV parking Mortlake Street, Hilly Street, Tennyson Road, Northcote Street (5)
- •Á Wolfpack Café existing yellow line marking has not been reinstated (3)
- A Suggest a roundabout at intersection of Kendall St and Breakfast Point Boulevarde. Speeding traffic out of Breakfast Point. Kendall St at Cabarita Road - needs to be turned into 90 degree turn into Cabarita Road instead of such a sharp angle.
- • \acute{A} 2 10 Phillip St issues with tree roots. Has tripped on the uneven footpath.
- •Á Majors Bay Road at Wellbank Street a tree between "No U-turn" sign is obscuring views. Trees covering the crossing signs near reception venue.
- •Á Smyth St Speeding through intersection.
- A Parking is too scarce already for any to be removed.
- •Á Consider making both Hilly St and Tennyson Rd one-way north of Bertram St increased traffic due to development.
- •Á Pedestrian crossing on the corner of Brays Rd and Tennyson Rd.
- •Á Turning into Brays Rd from Adams Street poor visibility.
- •Á The study doesn't address Tennyson Road past Admiralty Drive into Breakfast Point
- •Á Investigate expanding punt service
- •Á Peninsula requires better public transport
- •Á Mortlake Junction roundabout is very busy and will get busier can this be made safer?
- A What development is planned which could contribute to this congestion?
- •Á Why no calming devices at Bertram and Bayard Streets intersection?
- •Á Road bridge to Putney, remove punt.

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Project awareness



Appendices

Survey questions

- 1.Á Full name Required
- 2.**Á** Address Required
- 3.Á Were you aware Council was conducting a traffic study for the area? Required a)Á Yes

 - b)Á No
- 4.Á Which proposals would you like to give feedback on? Required

Select as many as you like.

- a)Á Adams Lane (north)
- b)Á Adams Lane (south)
- c)Á Bertram Street
- d)Á Brays Road and Gale Street roundabout
- e)Á Brays Road
- f)Á Gale Street
- g)Á Cabarita Road
- h)Á Majors Bay Road
- i)Á Mortlake Street
- j)Á Tennyson Road
- k)Á The Traffic Study findings overall



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- 5.Á For each proposal selected do you support these proposed changes?
 - a)Á Yes
 - b)Á No
- 6.Á Please select the statement you agree with
 - a)Á This proposal will improve road safety issues here
 - b)Á This proposal will not improve road safety issues here
- 7.Á What suggestions or alternatives do you have for this proposal? (free text)
- 8.Á Which best describes you?

Select all that apply

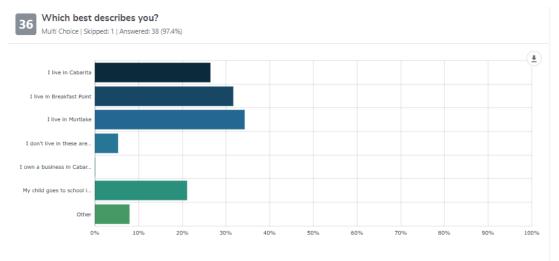
- a)Á I live in Cabarita
- b)Á I live in Breakfast Point
- c)Á I live in Mortlake
- d)ÁI don't live in these areas, but I visit often
- e)ÁI own a business in Cabarita, Breakfast Point or Mortlake
- f)Á My child goes to school in the area
- g)Á Other

Collaborate page traffic

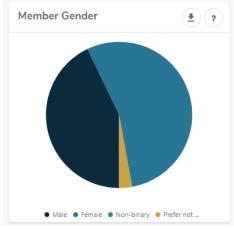


Participant demographics (survey)

- •Á Over 98% of respondents are from 2137 postcode Concord, Breakfast Point, North Strathfield, Mortlake, Cabarita
- •Á 54% of respondent are female
- •Á 47% of Collaborate traffic came from social media links, meaning this project was shared on private groups
- •Á 30% of Collaborate traffic came directly from the notification letter.



Answer choices	Percent	Count
I live in Cabarita	26.32%	10
I live in Breakfast Point	31.58%	12
I live in Mortlake	34.21%	13
I don't live in these areas but I visit often	5.26%	2
I own a business in Cabarita, Breakfast Point or Mortlake	0%	0
My child goes to school in the area	21.05%	8
Other	7.89%	3
Total	100.00%	38







Mortlake Cabarita Peninsula

Traffic Study



City of Canada Bay

2GAugust 2022





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1. Introduction

1.1 Overview

Bitzios Consulting has been engaged by City of Canada Bay (Council) to undertake a traffic study within the Mortlake-Cabarita Peninsula area. The purpose of this study is to address the key traffic, pedestrian, and parking issues raised by the residents of the Mortlake-Cabarita Peninsula area as a result of nearby redevelopments and increasing external traffic accessing the recreational areas.

Consultation undertaken by the community, formed Mortlake, Breakfast Point and Cabarita Traffic Safety Action Group (MBPCTSAG), and separate consultation undertaken by Council, has identified a number of key streets and intersections. As such, the extent of this traffic study includes:

- Key Streets
 - Mortlake Street, between Cabarita Road and Brays Road
 - Gale Street, between Brays Road and Tennyson Road
 - Bertram Street & Hilly Street, between Tennyson Road to Mortlake Ferry
 - Tennyson Road, between Gale Street and Palace Lane
 - Cabarita Road, between Mortlake Street and Cabarita Park
 - Adams Lane, between Tennyson Road and Adams Street
 - Brays Road, between Majors Bay Road and William Street.
- Key Intersections
 - Cabarita Road / Mortlake Street
 - Brays Road / Mortlake Street / Gale Streets
 - Bertram Street / Tennyson Road
 - Bertram Street / Hilly Street
 - Kendall Street / Cabarita Road.

These locations of the key streets and intersections are illustrated in Figure 1.1.





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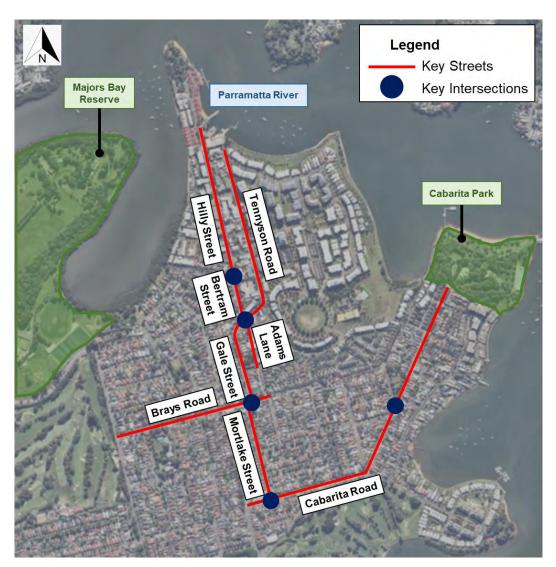


Figure 1.1: Key Street Locations

1.2 Scope of Assessment

Specifically, this traffic study report includes the following:

- Review of the existing road conditions within the Mortlake-Cabarita Peninsula area
- Address issues outlined in the community consultation based on the findings found in this report.
- Analysis of recorded crash data to identify patterns and trends
- Analysis of vehicle volumes and speed with traffic surveys
- Assessing the parking occupancy surveys along the key streets
- Detail issues identified during site investigation and provided recommended treatments.







2. COMMUNITY CONSULTATION

2.1 Overview

The MBPCTSAG was established by a group of concerned residents to find a way to improve road safety. The group letterbox established in the Mortlake, Breakfast Point and Cabarita area to receive feedback on areas of particular concern and suggestions to improve road safety. Feedback and suggestions, collected by the MBPCTSAG, was provided to Council to assist in identifying key issues and the scope of the study.

Council undertook its own community consultation, from late September to middle November 2021, to seek further input from the community. From these consultations, the community identified numerous important issues. These issues include:

- Insufficient pedestrian crossing facilities
- Intersection upgrade to traffic signals or roundabout
- Speeding and insufficient traffic calming treatments
- Poor roadway delineation
- Parking controls.

2.2 Feedback and Responses

A consolidated list of these issues from the community consultation is provided in Table 2.1. These issues are taken into consideration in preparing the recommended treatments along the key roads, addressed in Section 9.





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Table 2.1: Community Consultation Feedback

	able 2.11. Community Consultation I coaback			
Item No.	Description	Response		
Morti	Iortlake Street			
1	A pedestrian crossing is needed here as there is a lot of traffic coming up and down Mortlake Street to and from Cabarita Road and there is no zebra crossing on Mortlake Street between Cabarita Road and Brays Road at all.	Traffic volumes was assessed against TfNSW warrants for a pedestrian crossing. Proposed pedestrian refuge island would improve pedestrian crossing along Mortlake St.		
2	There's always a large truck parked at this bend on Mortlake Street heading towards Cabarita Rd. It blocks view of oncoming traffic and forces you to veer too far right. A 'no parking sign' section at that bend is required.	Noted. To be further reviewed as part of proposed pedestrian refuge upgrade.		
3	Extremely dangerous roundabout that should be redesigned. Possibly Brays Rd (Fish shop end) should be one way only with direction being towards Williams St as drivers coming the other way rarely give way.	Traffic calming has been proposed for this intersection. Refer to Section 9.3.		
4	A pedestrian crossing is needed near the intersection of Mortlake Street and Brays Road. It is a busy roundabout and difficult to cross safely. Many school students walk this way on the way to and from school and it is currently not safe for them to cross.	A number of intersection upgrades have been proposed for this intersection. Refer to Section 9.3.		
5	Inability to safely cross the road at any of these intersecting roads given the quantity of traffic at this round about, especially at school time.	Refer Section to 9.3 for upgrades.		
6	We noticed that many vehicles are speeding up from both directions in Mortlake Street we feel it's dangerous for pedestrians to cross the road especially young children. It would be an ideal if a curved speed hump can be built along Mortlake Street to slow vehicles down. Also there are numerous trucks using this road, it would be good to divert them using another pathway.	Vehicle speed surveys were undertaken as part of this study. Refer to Section 5.		
7	Mortlake St could use a crossing, or at least a refuge island for crossing pedestrians. There is no crossing along Cabarita Rd until Cabarita Jn roundabout, and many people walk along this side of the road to access shops or bus stop. This is compounded by the heavy traffic issue, where you're left waiting a long time if you wait until it's completely safe to cross.	Warrant assessments were undertaken to assess viability of a pedestrian crossing. Refer to Section 9.3 for proposed upgrades.		
8	Vision obscured at Gale Street intersection by fish shop, vehicles, and bushes/low trees.	Noted. Considered as part of improvement measures in Section 9.3.		
9	Distracting illuminated signage at intersection of Mortlake St and Cabarita Rd from Dentist.	Private Issue. Out of Scope.		
10	Request for a roundabout at Mortlake Street/Tennyson Road intersection.	Improvement measures considered installation of roundabouts where appropriate. Refer to Section 9.3.		



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Item No.	Description	Response
11	Request for traffic signals at Mortlake Street/Cabarita Road intersection.	Based on traffic volumes and TfNSW warrants for traffic signals, this was not considered an appropriate treatment for this intersection.
12	Request for pedestrian crossing at Mortlake Street/Brays Road/Gale Street intersection.	Proposed intersection upgrades are available in Section 9.3.
13	Request for pedestrian crossing at Mortlake Street/Cabarita Road intersection.	See response to Item 1
Gale	Street	
14	The overall volume of car traffic on Gale Street has increased beyond capacity limits due to the clearly unrestricted growth of high-density units in what was previously an industrial area. This is further exacerbated by the continued approval of large, 4-bedroom duplex dwellings being built on plots of land where a single level 3-bedroom house previously existed. All owners of these duplexes have 2 cars increasing the volume of traffic.	Planning and development issue. Out of Scope.
15	Speeding Vehicles	Vehicle speed surveys were undertaken as part of this study. Refer to Section 5.
16	Church new electronic sign - very bright at night and dangerous for driving.	Private Issue. Out of Scope.
17	Speeding on Gale Street at bend becoming Tennyson Road.	Vehicle speed surveys were undertaken as part of this study. Refer to Section 5.
18	Request for pedestrian crossing at Gale Street/Bertram Street intersection.	Warrant assessments were undertaken to assess viability of a pedestrian crossing. Refer to Section 9.3 for proposed upgrades.
Hilly	Street & Bertram Street	
19	People park here illegally on the westerly side of the road making a traffic jam while cars are queued waiting for the punt. This means that drivers wanting to continue north to the end of Hilly Street often overtake illegally and dangerously to get to Hilly Street. We need the 'no parking times' to be enforced.	Parking enforcement issue. Out of scope.
20	There are cars often drag racing on Saturday night up and down Bertram Street (from the roundabout down to the foreshore). Also on normal days cars often speed down towards the townhouses/apartments at the end of Bertram St near the foreshore. We need speed humps.	Vehicle speed surveys were undertaken as part of this study. Refer to Section 5. Also refer to upgrades in Section 9.3.
21	Hilly St is impossible to park on for residents on weekends due to the park. It should be metered 1P or 2P and residents should be given parking passes.	Resident parking scheme would not be feasible in this location as the demand for permits from surrounding properties would exceed the number of on-street parking spaces.



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Item No.	Description	Response
22	Make this car park more accessible by increasing accessible parking spaces and improving access from the street to the playground	Demand for accessible parking and pathways at this location is outside the scope of this study, however, can be further investigated by Council staff.
23	Hilly Road and Tennyson Road parking problems from McDonald Street heading north has major parking problems, as do most of the streets in the area. Is it time to introduce residential parking stickers and time limited parking for everyone else? Also around the Mortlake shopping precinct?	See response to Item 21, and refer to Section 6
24	More of a 'pedestrian traffic' issue but initial council plans said that this foreshore would be opened up however I see that there are private fences put up preventing continuous access to the public walkway.	Outside the scope of the study. This issue has been identified in Council's Foreshore Access Strategy and the State Governments plans for a Parramatta to Sydney Foreshore Link
25	Speed humps installed at Hilly St / Bertram Street Roundabout are ineffective, vehicles straddle and do not slow down.	Vehicle speed surveys were undertaken as part of this study. Refer to Section 5.
26	Hilly Street/Edwin Street intersection, alignment issue.	Physical constraint limits options, existing linemarking adequately guides traffic.
27	Hilly Street/Northcote Street existing dish drain need to be relevelled as vehicles scrape.	Out of scope. To be investigated by Council staff.
28	Concerns about speeding vehicles on Hilly Street.	Vehicle speed surveys were undertaken as part of this study. Refer to Section 5.
29	Concerns about speeding vehicles on Bertram Street.	Vehicle speed surveys were undertaken as part of this study. Refer to Section 5.
30	Restricted sight lines at Bertram Street/Tennyson Road intersection due to parked vehicles.	Considered in assessment. Refer to upgrades in Section 9.3.
31	Concerns that tree planting in Bertram Street will increase congestion during peak hour.	Out of scope.
32	Request for intersection traffic island on Hilly Street at Peninsula Drive.	Local traffic conditions did not deem an island here necessary.
33	Request for roundabout at intersection of Bertram Street/Tennyson Road (5)	Roundabout was considered at this location. Refer to upgrades in Section 9.3.
34	Request for pedestrian crossing near Bertram Street/Tennyson Road intersection for school on Adams Lane.	Council has installed a pedestrian crossing on the eastern leg of this intersection outside of this study.



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Item No.	Description	Response
Caba	rita Road	
35	Vehicles wanting to turn right from Mortlake Street onto Cabarita Road face long delays or attempt dangerous turns because of the continuous traffic flow both ways on Cabarita Road.	Review of the crash data and intersection counts at this location does not indicate that the installation of a roundabout is warranted at this time. Refer to upgrades in Section 9.3.
36	Turning right from Kendall Street onto Cabarita Road has poor visibility to the left particularly when boats are parked on Cabarita Road near Kendall Reserve. Extremely dangerous.	Sight lines were considered in this assessment. Signposted 'No Stopping' restrictions are considered appropriate and exceed statutory 10m restrictions that usually apply at intersections
37	Cars turning right from Mortlake St will often fail to give way to traffic on Cabarita Rd as queues become very long if they wait for an appropriate gap.	Noted. Refer to Item 35 and upgrades in Section 9.3.
38	Poor visibility and the large quantity of traffic cause issues at this intersection, especially for traffic pulling out from Mortlake St and turning right. A round-about would be useful here.	Refer to Item 35 and upgrades in Section 9.3.
39	Limited vision at Cabarita Road at Phillips Street roundabout.	Trimming of vegetation to improve sightlines where appropriate.
40	Cabarita Road and Frederick Street roundabout, congestion in afternoon peak.	Noted.
41	Speeding on Cabarita Road.	Vehicle speed surveys were undertaken as part of this study. Refer to Section 5.
42	Heavy vehicles parking between Kendall Street and Moore Street resulting in limited vision.	Noted. Sight distances were not observed to be an issue during the site inspections.
43	Over parking around the Dog Park at Kendall Reserve.	Parking Occupancy Survey shows that on street parking between Kendall St and Medora Ln had been underutilised during peak parking hours.
44	Parking restrictions in Cabarita Park to prevent users of public transport restricting park access.	Out of scope. It is understood that Council's parking restrictions strategy is designed to facilitate and encourage the use of public transport
45	Traffic calming and/or improved signage at intersection of Kendall St/Cabarita Rd	Noted. Refer to upgrades in Section 9.3.



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Item No.	Description	Response
Tenn	yson Road	
46	The intersection of Bertram St and Tennyson Rd is very busy. There have been a number of near misses when cars turn right from Bertram St onto Tennyson Rd. The speed at which some cars take the turn from Gale St into Tennyson Rd compound the problem. Does the traffic volume here warrant a roundabout or even traffic lights?	Traffic volumes do not warrant a signalised intersection. Refer to upgrades in Section 9.3.
47	Extremely dangerous to cross Tennyson Road at this juncture near the Paperboy Cafe. Should be a school crossing or zebra crossing here.	Council has installed a pedestrian crossing on the eastern leg of this intersection outside of this study.
48	Crossing Bertram St at Tennyson Rd is difficult. This is particularly true when pushing a child's stroller. Pedestrian crossings are needed, both on Bertram Stand Tennyson Rd.	Refer to upgrades in Section 9.3.
49	Along this stretch of road parked cars narrow the road space and often drivers heading towards BP move out too far and force drivers leaving BP to give way. Solution would be to limit parking to one side of the road only in that section.	Permitting parking on both sides narrows the roadway which assists in reducing vehicle speeds. Removal of parking is unlikely to be supported by the surrounding community, noting existing parking demand.
50	We desperately need a pedestrian crossing at 15 Tennyson Rd, the road is very busy and it is dangerous to cross especially for children, the elderly and disabled. We also need more parking for patrons of cafes, the medical practice and parents dropping their kids off to school.	Council has installed a pedestrian crossing on the eastern leg of this intersection outside of this study.
51	Parking along here is dangerous - too many cars coming on both lanes causing many near misses.	Noted. Vehicle speed surveys were undertaken as part of this study. Refer to Section 5. This was supported with site inspections to this area.
52	Very dangerous exiting from Bertram Street. Perhaps roundabout required plus pedestrian crossing on Tennyson Road	Council has installed a pedestrian crossing on the eastern leg of this intersection outside of this study.
53	Perceived narrowing of the road which is difficult for traffic to negotiate	Narrowing of the roadway generally assists in reducing vehicle speeds.
54	Long straight road creates lots of opportunities for motorbikes and car with loud exhausts to rev up. We see often that local mechanics leave finish for day - drive to the end of Tennyson Ave in their loud cars and then turn around and rev down the road. Making lots of noise for people	Out of Scope. Vehicles producing excessive noise is a matter for the Environmental Protection Agency (EPA).
55	This is such a dangerous corner. Cars come flying around it speeding and it is near impossible for pedestrians to cross near or around this area. The only safe crossings are further down near the IGA or at the new crossing near St Pat's.	Noted. Vehicle speed surveys were undertaken as part of this study. Refer to Section 5. This was supported with site inspections to this area.



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Item No.	Description	Response
56	I have witnessed so many near misses here with speeding cars almost hitting people crossing or cars coming out of the driveways. I don't think the situation is helped by their not being any white lines marked on this section of road.	Noted. Vehicle speed surveys were undertaken as part of this study. Refer to Section 5. This was supported with site inspections to this area.
57	Line of sight when exiting Orchards Avenue on to Tennyson Road is blocked by cars parked too close to the intersection.	There are existing No Stopping signs in this area. Vehicles parking here would be a compliance issue and out of scope.
58	Miz Tutti - kids play area as part of Miz Tutti out front is dangerous - kids forget there is busy road right next to and parents focused on dining. Kids very noise as well - screaming often causing noise population. NOTE: This restaurant has many noise issues - very loud music played often. Having to ring often to ask for noise to be quieter.	Private Issue. Out of Scope.
59	Vehicles exiting Breakfast Point along Orchards Ave, rarely stop at the STOP sign, particularly when turning left onto Tennyson Rd. A speed bump should be installed at this intersection.	Compliance issue. Vehicle speed surveys were undertaken as part of this study. Refer to Section 5.
60	Cars driving fast along this Tennyson Road corridor - in particular vehicles with loud exhausts that seem to enjoy making noise to the frustration of local residents. We note a suggestion for a SPEED BUMP but we are concerned that just add another opportunity to slow down (revup) and then speed up again with more noise.	Vehicle speed surveys were undertaken as part of this study. Refer to Section 5.
61	Speeding and excessively noisy sports cars that at times fail to stop at the pedestrian crossing.	Vehicle speed surveys were undertaken as part of this study. Refer to Section 5. Vehicles producing excessive noise is a matter for the Environmental Protection Agency (EPA). Vehicles failing to stop at the pedestrian crossing is a Police matter.
62	Tennyson Rd is very congested and with parking on both sides of the street, it is very unsafe when buses hurtle up and down at great speed.	Vehicle speed surveys were undertaken as part of this study. Refer to Section 5.
63	There needs to be a roundabout here as visibility is poor taking a right hand turn from Bertram Street onto Tennyson Road due to parked cars. A pedestrian crossing is also needed slightly east of the roundabout to enable pedestrians to cross Tennyson Rd safely.	Council has installed a pedestrian crossing on the eastern leg of this intersection outside of this study. This may improve right turns out of Bertram Street.
64	Consider a roundabout at the intersection of Bertram Street and Tennyson Road	Refer to upgrades in Section 9.3.
65	Tennyson Road speeding vehicles and request for multiple speed humps.	Vehicle speed surveys were undertaken as part of this study. Refer to Section 5.





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Item No.	Description	Response
66	Parking on both sides of road makes passing difficult.	Parking is an issue in this precinct and widespread removal of parking would further impact the issue. Narrowing of the roadway generally assists in reducing vehicle speeds.
67	Centrelines full length of Tennyson Road from Stable Lane to Peninsula Drive.	The width of the road does not permit the installation of a centreline in accordance with relevant standards. Existing narrow roadway generally assists in reducing vehicle speeds.
68	Narrow section of Tennyson Road between Herbert Street and Bertram Street, request to remove parking on one side.	This would have been considered as part of Council's recent implementation of a pedestrian crossing. Road width was not determined to be an issue at this location through speed surveys and site inspections



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3. EXISTING CONDITIONS

3.1 Road Network

The key streets within the Mortlake-Cabarita Peninsula area road network are all local roads with available kerbside parking along one or both sides (except Adams Lane). Characteristics and features of the key streets are summarised in Table 3.1. These were confirmed during a site visit on Tuesday 5th April and Tuesday 21 June 2022.

Table 3.1: Existing Road Characteristics

Road Name	Number of Lanes (Bidirectional)	Speed Limit (km/h)	Features
Hilly Street	2	50	 Provides access to the Mortlake Ferry Comprised mostly high-density residential development Roundabout at Bertram Street intersection
Tennyson Road	2	50	 Comprised mostly commercial and retail development Raised pedestrian crossing south of McDonald Steet
Bertram Street	2	50	 Kerb blisters at Tennyson Road Café at the northwest of Tennyson Road intersection Roundabout at Hilly Street intersection
Gale Street	2	50	 Raised pedestrian crossing in front of the church Comprised mostly low-density residential development Roundabout at Mortlake Street and Brays Road intersection, including retail developments in this area
Mortlake Street	2	50	 Roundabout at Gale Street and Brays Road intersection, including retail developments in this area Pedestrian refuge on the southern leg of Gale Street and Brays Road intersection Flat top thresholds, kerb blisters, and traffic island are present along this road
Cabarita Road	2	50	 Provides access to Cabarita Park Roundabouts at Frederick Street, Phillips Street, Medora Lane, and Edgewood Crescent Flat top thresholds, and kerb blisters are present between Phillips Street and Cabarita Park Raised pedestrian crossing on the eastern leg of Frederick Street intersection Wide straight road between Frederick Street and Phillips Street







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Road Name	Number of Lanes (Bidirectional)	Speed Limit (km/h)	Features
Adams Lane	2*	50**	 Provides access to St Patricks Catholic Primary School and property garages Narrow road profile typical of laneway Connects Brays Road and Tennyson Road via Adams Street
Brays Road	2	50**	 Wide, straight, east-west collector road Roundabouts at Majors Bay Road and Mortlake Street Raised pedestrian crossing outside Mortlake Public School (between Noble Street and Lancelot Street) Cafes and shops surrounding intersection with Mortlake Street

3.2 **Public Transport**

The Mortlake-Cabarita Peninsula area is serviced by three bus routes and one ferry route. Public transport routes are summarised in Table 3.2 and illustrated in Figure 3.1.

Table 3.2: Public Transport Services

Route No.	Route
464	Mortlake to Ashfield
502	Cabarita Wharf to Drummoyne and City Town Hall
466	Cabarita to Burwood
F3	Parramatta River





^{*}Narrow road profile
**Includes sections of 40km/h School Zone



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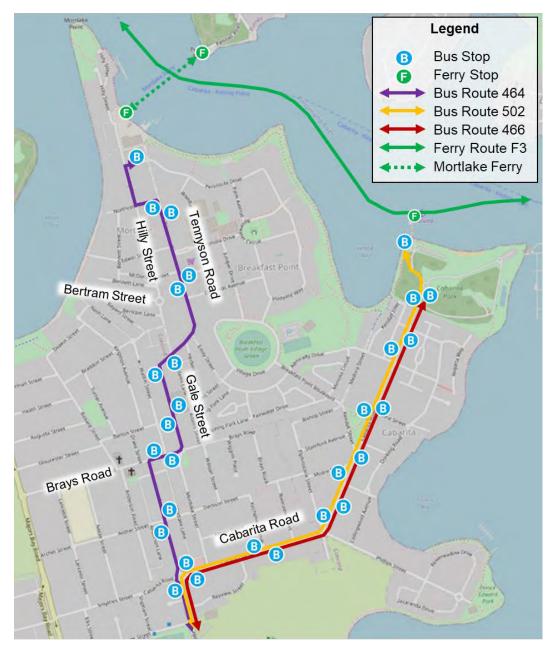


Figure 3.1: Public Transport Facilities







3.3 Active Transport

3.3.1 Walking

During site visits, high level of pedestrian activity was identified at the following locations (also shown Figure 3.2):

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- Cabarita Road, between Frederick Street and Mortlake Street, with retail and dining premises located north along the road
- Mortlake Street / Gale Street / Brays Road bordered by retail and dining premises, and a childcare centre
- Tennyson Road / Bertram Street with a café located on the northwest corner of the intersection
- Tennyson Road, between Northcote Street and Orchard Avenue, bordered by retail and dining
 premises on both sides of the street. Raised pedestrian crossing, south of McDonalds Street,
 was frequently used by pedestrians.



Figure 3.2: High Pedestrian Traffic Areas (Observed)





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3.3.2 Cycle Network

The cycling network and facilities within the Mortlake-Cabarita Peninsula area includes:

- One (1) off-road cycle path along Parramatta River, between Cabarita Park and Tennyson Road
- On-road cycle route along Majors Bay Road and local streets and on to Norman Street
- The on-road route along Norman Street provides a cycle connection onwards to Concord and Concord West
- Draft potential future cycle paths and routes, identified through separate studies, are primarily east-west across the Peninsula joining the two existing routes / paths.

The existing and planned future cycle paths are shown in Figure 3.3.

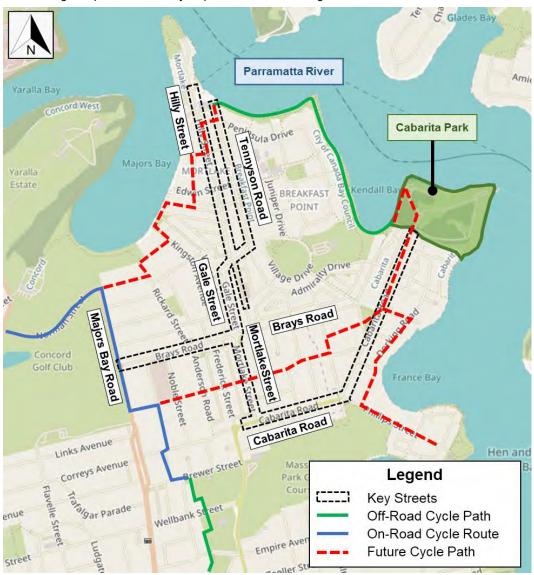


Figure 3.3: Cycle Network





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4. CRASH ANALYSIS

4.1 Crash History Data

The NSW Speed Zoning Guidelines recommend a minimum of three years of crash data for a statistical crash analysis. For this assessment, crash data of a 5-year period between 2016 and 2020 was sourced from Council, representing five years of data.

Twenty-eight (28) crashes were recorded within the study area.

4.2 Crash Statistics

4.2.1 Crash History

Figure 4.1 presents the number of crashes within the 5-year period, between 2016 and 2020, along the key streets within the Mortlake-Cabarita Peninsula area.

From 2017, there is an increasing trend in the number of crashes, peaking in 2019 with 8 crashes. However, by 2020, there was a significant decrease of 3 crashes. This is likely due to the COVID-19 lockdown reducing vehicular activity in the area. As a result, on average there have been 5.6 crashes per year within the 5-year recorded period.

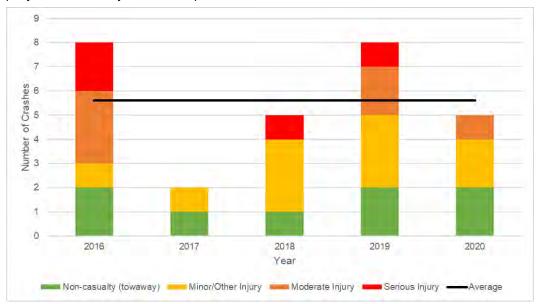


Figure 4.1: Crash History between April 2016 and December 2020

4.2.2 Crash Severity

Figure 4.2 illustrates the location of crashes by severity. Of these 28 crashes:

- 0 (0%) crashes resulted in a fatality
- 20 (71%) crashes resulted in an injury
- 8 (29%) crashes were non-casualty (tow-away)

Details of these crashes are provided in Appendix A.





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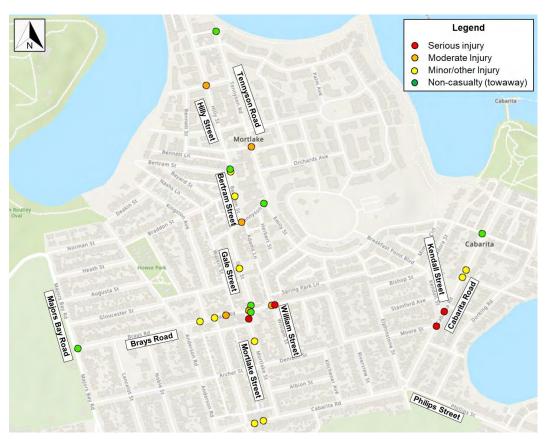


Figure 4.2: Crash Severity







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4.2.3 Casualty Crash Rates

Table 4.1 summarises the number of casualty related crashes per year for each section of road within the study area.

Table 4.1: Crash Summary and Casualty Rate

		Casualties						
Road Name	Length (m)	2016	2017	2018	2019	2020	Total	Crash Rate (Per year)
Hilly Street	650	1			1		2	0.4
Tennyson Road	894	1	1		1	1	4	0.8
Bertram Street	171				2		2	0.4
Gale Street	300	1				1	2	0.4
Mortlake Street	414	1		1		1	3	0.6
Cabarita Road	1,440	2	1	3	2	1	9	1.8
Adams Lane	200							0
Brays Road	640	2		1	1	2	6	1.2
Total		8	2	5	7	6	28	5.6

The table above shows that all streets have a generally low crash rate.







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4.3 Crash Analysis

4.3.1 RUM Code Classification

The recorded 28 crashes were classified into Road User Movement (RUM) codes, shown in Table 4.2.

Table 4.2: Crash Data Classified into RUM Codes

Crash Type	RUM Code	No. of Crashes	Percentage of Total
Crashes involving pedestrians	00 - 09	3	11%
Crashes involving vehicles from adjacent directions	10 - 19	8	29%
Crashes involving vehicles from opposing directions	20 - 29	1	4%
Crashes involving vehicles from the same direction	30 - 39	6	21%
Crashes involving manoeuvring vehicles	40 - 49	4	14%
Crashes involving vehicles overtaking	50 - 59	0	0%
Crashes involving vehicles on path – vehicles hitting parked vehicles or objects on the roadway (e.g. animals, temporary objects)	60 - 69	2	7%
Crashes involving vehicles leaving the roadway on a straight length of road	70 - 79	4	14%
Crashes involving vehicles leaving the roadway on a curve	80 - 89	0	0%
Crashes involving vehicle passengers and miscellaneous crashes	90 - 99	0	0%
Total	28	100%	

The RUM code classification results show the following predominant crash types within the Mortlake-Cabarita Peninsula area:

- Crashes involving vehicles from adjacent directions (29%)
- Crashes involving vehicles from the same direction (21%)
- Crashes involving manoeuvring vehicles (14%)
- Crashes involving vehicle leaving the roadway on a straight length of road (14%).







4.3.2 Lighting Conditions

Figure 4.3 shows the location of crashes occurring during different lighting conditions. From this figure:

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- 43% of all recorded crashes occurred during night and dusk time periods.
- Mortlake Street / Gale Street / Brays Road intersection has the highest recorded number of darkness related crashes

This suggests that there may be insufficient lighting provided at these crash locations, reducing awareness of drivers for oncoming vehicles.

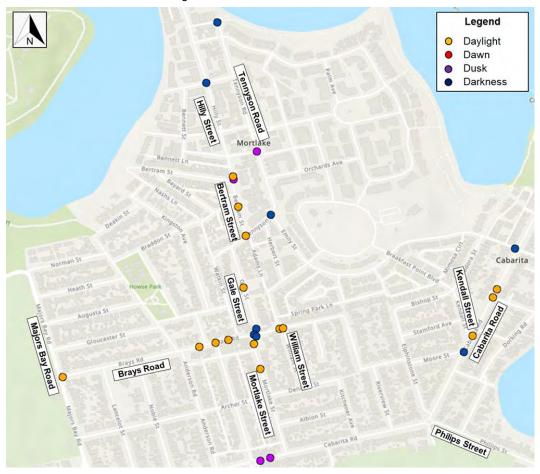


Figure 4.3: Location of Crashes Related to Lighting Conditions







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4.3.3 Pedestrian Crashes

Pedestrian crashes recorded within the study area are summarised in Table 4.3.

Table 4.3: Pedestrian Crashes

Year of Crash	Type of location	RUM- Code	Natural Lighting	Speed Involved	Degree of Crash
2016	T-junction of Cabarita Road / Moore Street	02	Darkness	NO	Serious
2019	2-Way Undivided on Cabarita Road and Frederick Street	02	Dusk	NO	Minor/Other
2019	T-junction of Brays Road / William Street	0	Daylight	NO	Serious

From the RUM codes, both pedestrian related crashes occurred of the far side of the travel lane. Based on site observations, these pedestrian related crashes are possibly due the following:

- At Cabarita Road / Moore Street intersection, there is a lack of a safe crossing point across Cabarita Road
- At Cabarita Road / Frederick Street intersection, the crash occurred at the raised pedestrian crossing, possibly due to vehicles having high approach speed
- At Brays Road / William Street intersection, the staggered intersection makes pedestrian desire lines diagonal rather than straight. Crossing distances here are still relatively short.





5. TRAFFIC VOLUME AND SPEED

5.1 Traffic Survey Locations

Traffic volume and speed surveys were conducted by *Matrix Traffic* along the key streets and intersections to determine vehicle volumes and speeds. Recent traffic count data was also provided by Council. The type of surveys include:

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- Intersection counts: Tuesday 5th April and Thursday 7th April 2022
- Tube counts:
 - From 1st April to 7th April 2022.
 - From 4th February to 11th February 2021, Hilly Street between Whittaker Street & Edwin Street
 - From 12th February to 19th February 2021, Tennyson Road between Northcote Street & Emily Street

The survey locations are illustrated in Figure 5.1.



Figure 5.1: Survey Locations





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5.2 Traffic Volumes

5.2.1 Tube Counts

Tube count locations and survey periods are summarised in Table 5.1.

Table 5.1: Tube Count Survey Locations and Dates

Street	Location	Survey Period	
Mortlake Street	Between Archer Street and Albion Street	1 st April to 7 th April 2022	
Cabarita Road	Between Roberts Road and Phillips Street	1st April to 7th April 2022	
Cabarita Road Between Edgewood Cress and Waine Street		1st April to 7th April 2022	
Bertram Street	Between Bayard Street and Bayard Lane	1 st April to 7 th April 2022	
Tennyson Road	Between Adams Lane and Herbert Street	1st April to 7th April 2022	
Tennyson Road	Between Northcote Street and Edwin Street	12 th February to 19 th February 2021	
Tennyson Road	Between Emily Street and Orchard Avenue	12 th February to 19 th February 2021	
Hilly Street	Between Whittaker Street and Northcote Street	4 th February to 11 th February 2021	
Hilly Street	Between Northcote Street and Edwin Street	4 th February to 11 th February 2021	

The tube count data analysis is shown in Figure 5.2 and detailed in Appendix B.

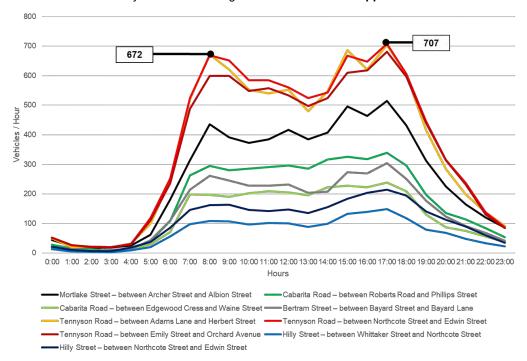


Figure 5.2:7-day week traffic count







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From the above figure, the results are summarised as:

- The peak periods are identified as:
 - AM Peak: 08:00 09:00 AM
 - PM Peak: 17:00 18:00 PM
- Nearly all locations have similar peak periods, except for Cabarita Road, between Edgewood Crescent and Waine Street, depicting a different AM peak
- Tennyson Road has the highest vehicle volumes. Conversely, Hilly Street has the lowest vehicle volumes.

5.2.2 Turning Volumes

From analysing the traffic intersection survey, he peak hour volumes, identified in Section 5.2.1, at the subject locations are illustrated in Figure 5.3 and Figure 5.4. Traffic intersection survey are detailed in **Appendix B**.

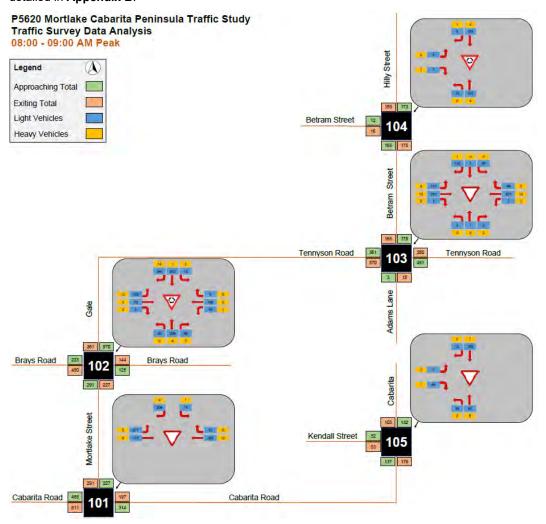


Figure 5.3: AM Peak Traffic Volumes







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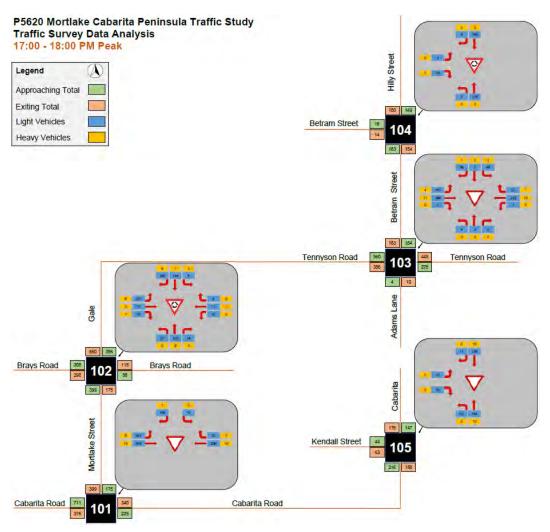


Figure 5.4: PM Peak Traffic Volumes

The traffic survey analysis of the peak periods shows the following results:

- Large north-south movement between Cabarita Road to Tennyson Road.
- Large difference of vehicle traffic along Cabarita Road, between Mortlake Street and Kendall Street. This is due to the large residential catchment area between these two intersections.







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5.3 Traffic Speeds

The 85th percentile (85%ile) vehicle speed in each direction for each tube count were analysed to identify the current operating speed.

For this analysis, surveyed locations with recorded 85%ile speeds of 53 km/h or under indicated that drivers were complying with the 50 km/h posted speed limit. Conversely, surveyed locations with recorded 85%ile speeds greater than 53 km/h indicate that the streets require additional measures to achieve a self regulating 50 km/h road environment.

The 85%ile speed for each surveyed locations is shown in Figure 5.5. This shows the two-way 85%ile vehicle speeds along the 50 km/h posted speed limit environment, and whether the 85%ile speed exceeds 53 km/h.

The result of this analysis shows the following:

- The 85%ile speed at all surveyed locations was below 53 km/h
- Cabarita Road between Edgewood Cress and Waine Street has the highest 85%ile speed
- Mortlake Street has the lowest 85%ile speed. This is possibly due to the traffic calming devices present along Mortlake Street
- Tennyson Road between Adams Lane and Herbert Street, northbound 85%ile speed is lower than southbound 85%ile speed by 5 km/h. This is possibly due to the traffic calming and lane narrowing treatments at Tennyson Road / Gate Street intersection.

Table 5.2: 85%ile Vehicle Speed

Location	Northbound (km/h)	Southbound (km/h)	Speed Limit	Greater than 53 km/h?
Mortlake Street – between Archer Street and Albion Street	34	34.3		No
Cabarita Road – between Roberts Road and Phillips Street	45.4	45.6		No
Cabarita Road – between Edgewood Cress and Waine Street	52.8	51		No
Bertram Street – between Bayard Street and Bayard Lane	50.6	49.1		No
Tennyson Road – between Adams Lane and Herbert Street	39.8	45	50	No
Tennyson Road – between Northcote Street and Edwin Street	46.0	46.0		No
Tennyson Road – between Emily Street and Orchard Avenue	44.0	47.0		No
Hilly Street – between Whittaker Street and Northcote Street	47.0	47.0		No
Hilly Street – between Northcote Street and Edwin Street	46.0	45.0		No







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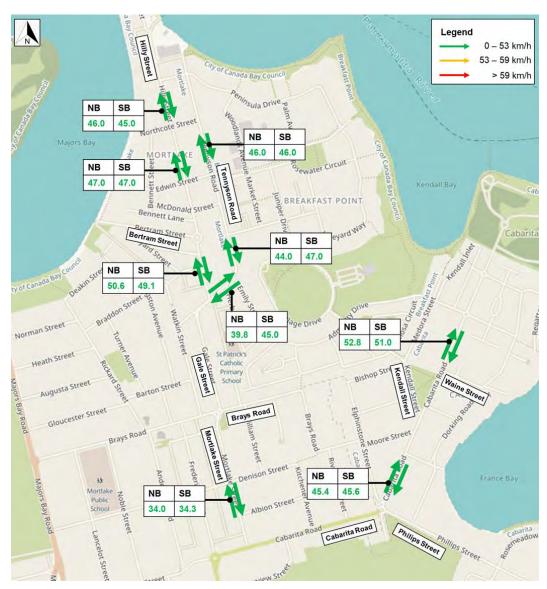


Figure 5.5:85%ile Vehicle Speeds





6. Parking Analysis

6.1 Existing Parking Conditions

Kerbside on-street parking is available on both sides along the key streets (with the exception of Adams Lane). The type of parking controls ranges from unrestricted parking, ¼ and 2-hour parking. In total, the on-street parking has a capacity of 621 parking spaces. The location of these on-street parking spaces and the parking capacity at the key streets are illustrated in Figure 6.1.

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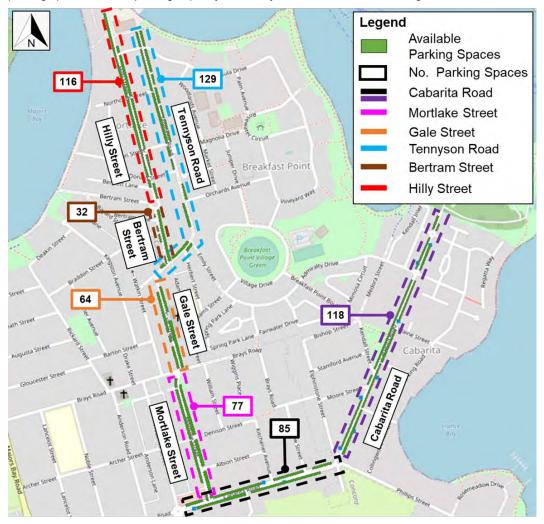


Figure 6.1: Parking Locations and Capacity





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6.2 Parking Occupancy Survey

Parking occupancy surveys were undertaken by *Matrix Traffic* along the key streets between 7:00 AM to 9:00 PM at the following dates:

- Thursday 31st March 2022
- Saturday 2nd April 2022
- Tuesday 5th April 2022

The parking occupancy surveys, and peak occupancy maps are detailed in Appendix C.

6.3 Parking Occupancy Analysis

6.3.1 Hilly Street

The analysis of the parking occupancy survey along Hilly Street is summarised in Figure 6.2 and Table 6.1.

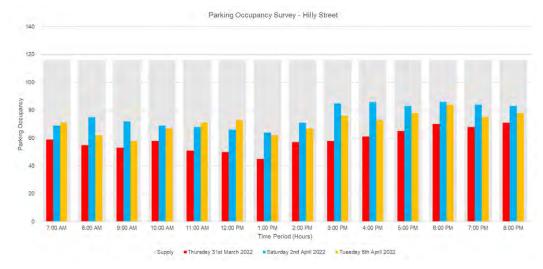


Figure 6.2: Parking Occupancy Summary - Hilly Street

Table 6.1: Maximum and Average Parking Occupancy

Dates	Parking Supply	Average Occupancy	Average Occupancy Rate	Maximum Occupancy	Maximum Occupancy Rate
Thursday 31st March		59	51%	71	61%
Saturday 2 nd April	116	76	65%	86	74%
Tuesday 5th April		71	61%	84	72%

The results show the following:

- Most parking occurred during afternoon and evening periods in all days
- Tuesday parking is more utilised than Thursday parking in all periods
- On average, Saturday has the highest parking rate than weekdays







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6.3.2 Bertram Street

The analysis of the parking occupancy survey along Bertram Street is summarised in Figure 6.3 and Table 6.2.

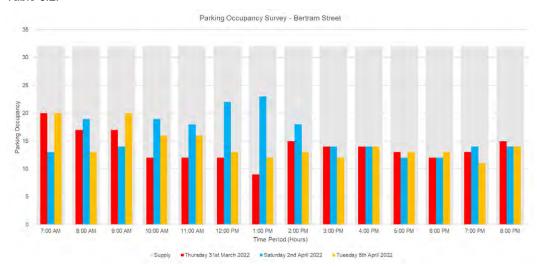


Figure 6.3: Parking Occupancy Summary - Bertram Street

Table 6.2: Maximum and Average Parking Occupancy - Bertram Street

Dates	Parking Supply	Average Occupancy	Average Occupancy Rate	Maximum Occupancy	Maximum Occupancy Rate
Thursday 31st March		14	44%	20	63%
Saturday 2 nd April	32	16	50%	23	72%
Tuesday 5 th April		14	45%	20	63%

The results show the following:

- Weekend parking had significant increased parking occupancy during midday period. This is possibly due to the Café, located at 18 Tennyson Road, functioning as an attractor.
- Weekday parking was mostly utilised during morning period
- Both weekend and weekday have similar parking occupancy during the afternoon and evening periods. Furthermore, the parking occupancy is less than half of the supplied parking spaces This depicts that parking along Bertram Street was underutilised during these periods.







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6.3.3 Tennyson Street

The analysis of the parking occupancy survey along Tennyson Street is summarised in Figure 6.4 and Table 6.3.



Figure 6.4: Parking Occupancy Summary - Tennyson Street

Table 6.3: Maximum and Average Parking Occupancy – Tennyson Street

Dates	Parking Supply	Average Occupancy	Average Occupancy Rate	Maximum Occupancy	Maximum Occupancy Rate
Thursday 31st March		77	60%	91	71%
Saturday 2 nd April	129	79	61%	87	67%
Tuesday 5 th April		82	64%	92	71%

The results show the following:

- Thursday parking was mostly utilised during evening periods
- Saturday parking was mostly utilised during midday period
- Tuesday parking was mostly utilised during morning period
- On all days, there is a large surplus of parking during the afternoon and evening periods. This
 depicts that parking was underutilised during these periods.







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6.3.4 Gale Street

The analysis of the parking occupancy survey along Gale Street is summarised in Figure 6.4 and Table 6.3.

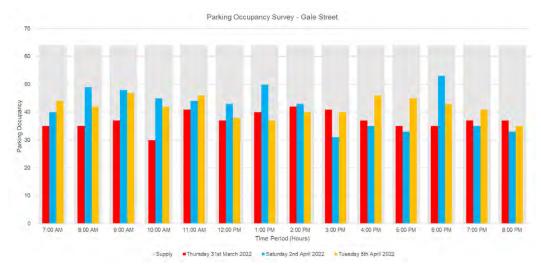


Figure 6.5: Parking Occupancy Summary - Gale Street

Table 6.4: Maximum and Average Parking Occupancy - Gale Street

Dates	Parking Supply	Average Occupancy	Average Occupancy Rate	Maximum Occupancy	Maximum Occupancy Rate
Thursday 31st March		37	58%	42	66%
Saturday 2 nd April	64	42	65%	53	83%
Tuesday 5 th April		42	65%	47	73%

The results show the following:

- Saturday parking was mostly utilised during morning and midday periods. However, there's an
 increased parking occupancy from 6 PM to 7 PM. This is possibly due a religious event held at
 the place of worship, located at 33 Gale Street.
- Thursday parking was mostly utilised during midday period
- Tuesday parking was mostly utilised during morning and afternoon periods.







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6.3.5 Mortlake Street

The analysis of the parking occupancy survey along Mortlake Street is summarised in Figure 6.4 and Table 6.3.



Figure 6.6: Parking Occupancy Summary - Mortlake Street

Table 6.5: Maximum and Average Parking Occupancy – Mortlake Street

Dates	Parking Supply	Average Occupancy	Average Occupancy Rate	Maximum Occupancy	Maximum Occupancy Rate
Thursday 31st March		44	57%	48	62%
Saturday 2 nd April	77	45	59%	53	69%
Tuesday 5 th April		36	46%	40	52%

The results show the following:

- Saturday parking was mostly utilised during morning period
- Thursday parking was more utilised than Tuesday parking in most periods





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6.3.6 Cabarita Road

The analysis of the parking occupancy survey along Cabarita Road is summarised in Figure 6.7 and Table 6.6. Cabarita Road is sectioned into two roadways:

- Between Cabarita Park and Philips Street
- Between Frederick Street and Philips Street.

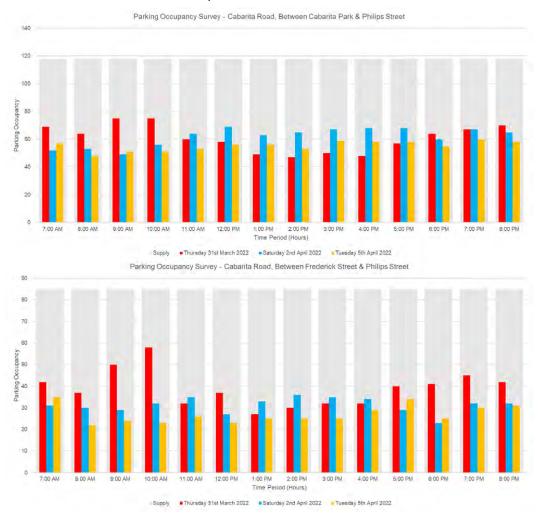


Figure 6.7: Parking Occupancy Summary – Cabarita Road





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Table 6.6: Maximum and Average Parking Occupancy - Cabarita Road

Dates	Parking Supply	Average Occupancy	Average Occupancy Rate	Maximum Occupancy	Maximum Occupancy Rate	
Between Cabarita Pa	rk & Philips S	Street				
Thursday 31st March		61	46%	75	64%	
Saturday 2 nd April	118	62	37%	69	58%	
Tuesday 5 th April		55	32%	60	51%	
Between Frederick Street & Philips Street						
Thursday 31st March		39	52%	58	68%	
Saturday 2 nd April	85	31	52%	36	42%	
Tuesday 5 th April		27	47%	35	41%	

The results of the parking occupancy survey indicate the following:

- Thursday parking was significantly higher than the other dates during the morning period. This
 trend is further followed during the evening period between Frederick Street and Philips Street
- Saturday parking is highest during midday and afternoon period between Cabarita Park and Philips Street. This shows increased parking utilisation of residents and visitors accessing Cabarita Park for recreational activities during this period
- On average, Tuesday has the lowest parking occupancy along Cabarita Road.

6.4 Overall Results

The results from the parking occupancy surveys along the key streets depicts the following:

- On average, the highest occupancy rate for each surveyed date is:
 - Thursday: Tennyson Road (60%)
 - Saturday: Hilly Street, and Gale Street (65%)
 - Tuesday: Gale Street (65%), followed by Tennyson Street (64%)
- Cabarita Road, between Frederick Street and Philips Street, had the lowest occupancy rate of all surveyed key streets, portraying that this surveyed area was the most underutilised amongst all key streets
- Most desirable parking areas around interest points reached capacity, however, alternative parking was generally available nearby
- Highest maximum occupancy rate reached up to 83% on Gale Street during a religious event
- None of the surveyed streets had near peak maximum parking occupancy rate (100%), showing that there is sufficient parking available along the key streets between 6 AM to 9 PM.

The parking analysis of the key streets showed that there is still available parking during peak periods for all three surveyed dates. It should also be noted that the analysis does not include the remaining local streets within the Mortlake-Cabarita Peninsula area. There may be additional parking available nearby the key streets. Therefore, the current parking restrictions and arrangement along the key streets are generally at acceptable levels of occupancy.

It is recommended that ongoing monitoring to be undertaken by Council, especially post-COVID as travel modes are currently overly shifted towards private vehicles.

Detailed parking occupancy maps are provided in Appendix C.





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7. SITE INVESTIGATION

7.1 Overview

Site inspections of the key streets within the Peninsula were undertaken on Tuesday 5th April, and Tuesday 21st June 2022, to gain an understanding of the current road conditions and road environment within the study area. Surrounding land uses, existing traffic management devices and traffic / pedestrian behaviours were observed and recorded. Weather conditions during the site inspection were fine and dry.

7.2 Cabarita Road

Cabarita Road provides an east-west connection from Frederick Street to Cabarita Park and is primarily bordered by low-density residential developments. Retail and dining premises are also located between Frederick Street and Mortlake Street. Kerbside parking and bus stops are present along both sides of the road.

Existing Local Area Traffic Management (LATM) devices along Cabarita Road include:

- Raised pedestrian crossing
- Roundabout at intersection at Frederick Street, Philip Street, Medora Lane, and Edgewood Crescent
- Flat top raised threshold
- Kerb blisters.

Minimal speeding was observed at the flat top raised threshold near Philip Street. This demonstrates that drivers are reducing their travel speed when approaching the flat top raised threshold. A vehicle approaching the flat top raised threshold, located north of Philip Street, is shown in Figure 7.1.



Figure 7.1: Flat Top Raised Threshold along Cabarita Road, North of Philip Street







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7.3 Mortlake Street and Gale Street

Mortlake Street and Gale Street provide a north-south connection between Concord and Mortlake and are primarily bordered by low-density residential developments. Conversely, Mortlake Street / Gale Street / Brays Road intersection mostly comprises retail and dining premises, and a childcare facility. Moreover, there is a religious centre with a raised midblock pedestrian crossing along Gale Street. Kerbside parking and bus stops are present along both sides of the road.

Existing LATM devices along Mortlake Street and Gale Street include:

- Raised pedestrian crossing
- Roundabout at intersection of Mortlake Street / Gale Street / Brays Road
- Pedestrian refuge island
- Flat top raised threshold
- Kerb blisters and traffic islands.

Pedestrians were observed crossing at the legs of the Mortlake Street / Gale Street / Brays Road roundabout, mostly at Mortlake Street and Gale Street. The Mortlake Street / Gale Street / Brays Road roundabout is shown in Figure 7.2.

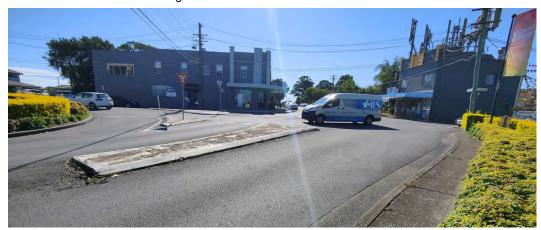


Figure 7.2: Mortlake Street / Gale Street / Brays Road Roundabout





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7.4 Tennyson Road

Tennyson Road provides a north-south connection from Gale Street to the Mortlake urban centre and is primarily bordered by retail and dining premises. There are two corner turns along Tennyson Road at Gale Street, and Emily Street. Kerbside parking and bus stops are present along both sides of the road.

Existing LATM devices along Tennyson Road include:

- Raised median islands
- Raised pedestrian crossing
- Marked kerb extensions.

Pedestrians were observed to cross Tennyson Street at the raised pedestrian crossing, south of McDonald Street. However, at Bertram Street, pedestrians were observed to cross between the bus stop and the café, with no pedestrian crossing facility provided.

The raised pedestrian crossing along Tennyson Road, south of McDonald Street, is shown in 7.3.



Figure 7.3: Raised Pedestrian Crossing along Tennyson Road







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7.5 Hilly Street and Bertram Street

Hilly Street and Bertram Street provide a north-south connection between Mortlake Ferry and Gale Street primarily bordered by high-density residential buildings. The road environment along Bertram Street consists of wide lane widths, in contrast to Hilly Street comprising narrow lane widths. Kerbside parking is available on both sides of the road.

Existing LATM devices along Hilly Street and Bertram Street include:

- Roundabout at Hilly Street / Bertram Street intersection
- Kerb extensions
- Speed cushion.

Most pedestrians were observed crossing Bertram Street at the crossing point towards the café at Tennyson Road / Bertram Street / Adams Lane intersection. The crossing point consists of two kerb ramps facilitated by kerb extensions for pedestrian protection

The roundabout at Hilly Street / Bertram Street intersection is shown in Figure 7.4.



Figure 7.4: Hilly Street / Bertram Street Roundabout







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7.6 Adams Lane

Adams Lane provides a north-south connection between Brays Road and Tennyson Street via Adams Street. The laneway also provides access to property garages and rear vehicle accesses, as well as the rear of St Patricks Catholic School.

The road profile is narrow (typical of a laneway) with no footpaths present. 'No Stopping' restrictions are placed on both sides of the road along its length. No LATM devices were observed along the roadway.

A heavy pedestrian presence was observed towards the southern end near Adams Street and pedestrian accesses to St Patricks Catholic School during school peaks. Some pedestrians (including parents and children) were observed to use the laneway to access the school from Tennyson Road.

Adams Lane near Adams Street is shown in Figure 7.5.

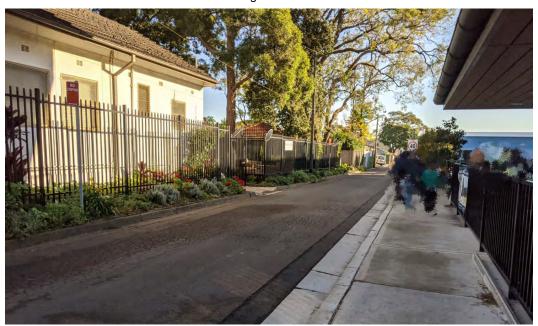


Figure 7.5: Adams Lane outside St Patricks Catholic School





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7.7 Brays Road

Brays Road provides an east-west connection through the local area, connecting Majors Bay Road and Mortlake Street. It features a wide road profile with parking on both sides of the road.

Existing LATM devices Brays Road include:

- Roundabout at Brays Road / Mortlake Street intersection
- Roundabout at Brays Road / Majors Bay Road intersection
- Raised pedestrian crossing outside Mortlake Public School
- Kerb blisters near Rickard Street / Anderson Road, and Lancelot Street
- Various threshold, kerb blister or pedestrian crossing treatments on adjacent side streets.

Narrow footpaths and pedestrian facilities were observed along the roadway. Most pedestrian activity was observed towards Mortlake Street associated with businesses and cafes near the intersection.

The 40km/h school zone associated with Mortlake Public School (near Noble Street) is shown in Figure 7.6.



Figure 7.6: Brays Road at Noble Street – School Zone





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8. Traffic Management Devices

8.1 Relevant Guidelines and Documents

As part of the development of various road treatment, the following documents have been reviewed and referred to for the selection and design of appropriate road treatments across the study area:

- Austroads Guide to Traffic Management: Part 8 Local Area Traffic Management
- Relevant TfNSW Technical Directions
- Australian Standard AS1742 MUTCD Part 2: Traffic Control Devices for General Use
- Australian Standard AS1742 MUTCD Part 4: Speed Controls
- Australian Standard AS1742 MUTCD Part 13: Local Area Traffic Management.

8.2 Existing Infrastructure

As mentioned in Section 7, number of LATM devices are currently available along the key streets. The locations of the existing LATM devices are shown in Figure 8.1. Existing infrastructure adjacent to the key streets is also shown in order to provide further context of traffic calming devices in the local area.

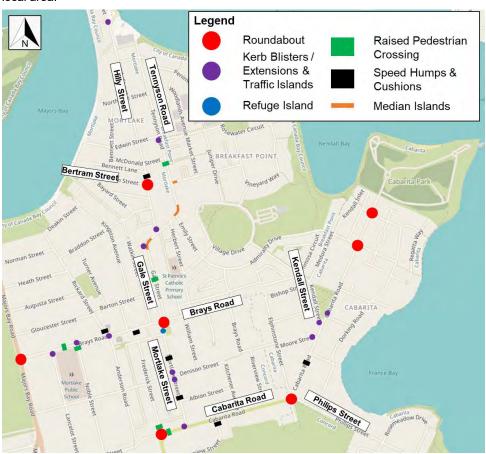


Figure 8.1: Existing LATM Devices







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8.3 Preliminary Investigation

A preliminary investigation was undertaken to determine recommended treatment locations. This was conducted as a high-level analysis and focused on locations which could potentially benefit from additional traffic calming or management infrastructure.

8.3.1 Pedestrian Facilities

Based on observations of the local environment, pedestrian behaviour and pedestrian crossing data at midblock crossing locations, it is recommended to provide pedestrian facilities or facility upgrades to improve pedestrian safety along the key streets, which may include a pedestrian crossing or other pedestrian treatment. The locations for a potential pedestrian facility, or improvements to existing facilities include:

- All legs leg of Mortlake Street / Gale Street / Brays Road intersection
- All legs of Tennyson Road / Bertram Road / Adams Lane intersection
- Northern leg of Cabarita Road / Mortlake Street intersection
- Adams Lane at Adams Street.

8.3.1.1 Pedestrian Crossing Warrant Assessment

TfNSW's Austroads Guide Supplement – Austroads Guide to Traffic Management Part 6 (2013) provides a numerical warrant for a pedestrian crossing which were assessed for the following locations:

- Bertram Street at Tennyson Road / Bertram Street / Adams Lane
- Gale Street at Mortlake Road / Gale Street / Brays Road.
- Mortlake Street at Cabarita Road / Mortlake Street

The numerical warrants are for three separate one-hour periods in a typical day:

- Pedestrian flow per hour (P) ≥ 30
- Vehicular flow per hour (V) ≥ 500
- The product PV ≥ 60,000

The pedestrian crossing warrant assessment is summarised in Table 8.1.

Table 8.1: Pedestrian Crossing Warrant Assessment

Time			Vehicles per hour (V)	Pedestrian per hour (P)	PV	Yes / No
Bertra	m Str	eet				
7:00	to	8:00	286	12	3,432	No
8:00	to	9:00	317	32	10,144	No
16:00	to	17:00	282	15	4,230	No
17:00	to	18:00	328	13	4,264	No
Gale S	treet					
7:00	to	8:00	844	4	3,376	No
8:00	to	9:00	907	10	9,070	No
16:00	to	17:00	768	13	9,984	No
17:00	to	18:00	882	8	7,056	No







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Mortla	ke St	reet				
7:00	to	8:00	381	6	2,286	No
8:00	to	9:00	516	11	5,676	No
16:00	to	17:00	493	8	3,944	No
17:00	to	18:00	550	2	1,100	No

As shown from the above table, the low pedestrian and vehicular volumes do not warrant a pedestrian crossing at these locations. The results are summarised below:

- The low pedestrian numbers at Bertram Street in the morning period are possibly due to the café closure between 3rd April to 8th April which encompasses the survey dates
- Gale Street has significantly high vehicle volumes but low pedestrian volumes.
- Mortlake Street only has two one-hour vehicle numbers that satisfy the vehicle flow numerical warrant.

Although a pedestrian crossing is not warranted at these locations, it would be beneficial to provide or improve pedestrian crossing facilities at these locations.

8.3.1.2 Tennyson Road / Bertram Street / Adams Lane Intersection

Existing kerb blisters

From site observations, the kerb blisters north of Tennyson Road / Bertram Street / Adams Lane intersection, shown in Figure 8.2, obstruct southbound drivers' sightline of westbound pedestrians crossing Bertram Street. Furthermore, the western kerb blister does not provide sufficient pedestrian protection against eastbound vehicles performing a left turn manoeuvre into Bertram Street.

Although a pedestrian crossing is not warranted at this location, it is recommended to upgrade this crossing point with a pedestrian refuge island. The pedestrian refuge island treatment is further detailed in Section 9.3.



Figure 8.2: Existing Kerb Blisters





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8.3.1.3 Mortlake Street / Gale Street / Brays Road intersection

Existing Pedestrian Refuge Island

The existing pedestrian refuge island, south of Mortlake Street / Gale Street / Brays Road intersection, was observed to be in poor condition and of substandard width. Shown in Figure 8.3, issues identified for this existing pedestrian refuge island are:

- Missing bike barrier
- Misaligned kerb ramps.

It is recommended that the existing pedestrian refuge island to be reconstructed into a compliant pedestrian refuge island in accordance with relevant design guidelines. This reconstruction also includes the removal of the existing barrier.

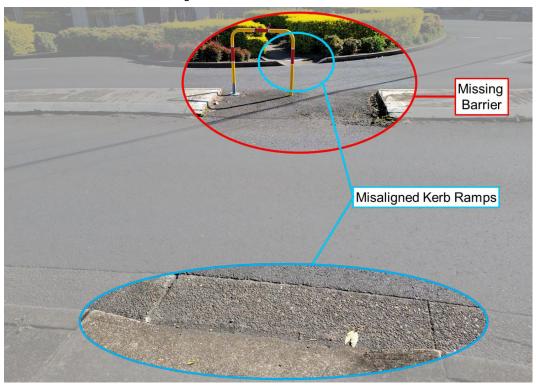


Figure 8.3: Existing Pedestrian Refuge Island







Missing Crossing Point

No pedestrian facilities are provided at the northern and eastern legs of the intersection. On the eastern leg, one kerb ramp is provided north of Brays Road, but no kerb ramp is provided on the other side. Figure 8.4 shows the missing crossing points at these locations.

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Figure 8.4: Missing Crossing Points at the Northern and Eastern Legs of the Intersection Redundant Footpath

A redundant footpath was observed north of the eastern kerb ramp, south of Mortlake Street / Gale Street / Brays Road intersection. Shown in Figure 8.5, the footpath is narrow and terminates at a crash barrier and vegetation. It is noted that this footpath utilised for garden maintenance and not intended as a travel path for pedestrians. Furthermore, another footpath is available that travels parallel, and connects Mortlake Street and Brays Road. As such, it is recommended to install barriers on both sides of the kerb ramp to direct and reduce confusion for pedestrians.



Figure 8.5: Redundant Footpath







Long Crossing Point

The existing pedestrian crossing point over the western leg of the intersection was observed to be unnecessarily long, so that pedestrians must wait for larger gaps in traffic to safely cross the intersection. Additionally, the long crossing time means that pedestrians are exposed to traffic for an increased duration.

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The current road width will allow for the implementation of kerb extensions or kerb blisters to shorten the crossing distance and provide some traffic calming



Figure 8.6: Long Crossing Point – Western Leg







8.3.2 Gale Street

Existing Raised Pedestrian Crossing

Figure 8.7 shows a parked vehicle obscuring northbound vehicle sightlines west of the raised pedestrian crossing, located along Gate Street. This sightline obstruction could increase pedestrian related accidents as approaching vehicles are less aware of eastbound pedestrians approaching the raised pedestrian crossing. Whilst existing restrictions meet minimum standards, it is recommended to relocate the existing No Stopping sign (R5-400) further south to improve northbound vehicle sightlines on eastbound pedestrians.

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Figure 8.7: Parked Vehicle near the Raised Pedestrian Crossing along Gale Street

8.3.3 Tennyson Road

Crossing Point Obstruction

Figure 8.8 shows a rubber median at Tennyson Road / Orchards Avenue utilised as a road divider along Orchards Avenue. This rubber median obstructs the crossing point at Orchards Avenue and is recommended to be shortened such that it does not obstruct the crossing line.



Figure 8.8: Rubber Median along Orchards Avenue at Tennyson Road / Orchards Avenue





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8.3.4 Adams Lane

Pedestrian Desire Lines and Vehicle Issues

A number of traffic and pedestrian related issues were also observed along Adams Lane and at the intersection with Adams Street (shown Figure 8.9):

- There is a strong desire line and pedestrian route across Adams Lane at the intersection with Adams Street and at the St Patricks Catholic School gate (approximately 15m north of Adams Street) associated with school pickup and drop off operations
- The angle of the intersection allows for an inappropriate turning speed for vehicles entering Adams
 Lane from Adams Street (south)
- Some vehicles were observed to turn right into Adams Lane on the blind corner on Adams Street, resulting in near misses with oncoming vehicles
- The laneway does not provide sufficient width to accommodate two-way travel

The presence of pedestrians and the nature of the laneway may lend itself to the provision of traffic calming near Adams Street to improve pedestrian and road safety.

Sight distances

Sight distances for northbound traffic emerging from Adams Lane at Tennyson Road are limited due to roadside objects and fencing, shown Figure 8.10.

Restricting movements out of Adams Lane will assist mitigate any sight line issues at the intersection.



Figure 8.9: Pedestrian Desire Line Across Adams Lane at Adams Street







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Figure 8.10: Limited Sight Lines at Tennyson Road

8.4 Local Proposed Upgrades

Council has constructed a new raised pedestrian crossing east of the Tennyson Road / Bertram Street / Adams Lane intersection (partially shown in Figure 8.10), providing a priority facility at the intersection and improving pedestrian safety. This upgrade has been considered as part of the proposed treatments outlined in Section 9.







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9. Proposed Treatments

9.1 Treatment Selection

9.1.1 LATM Toolkit

The selection of an appropriate LATM is greatly dependent on the overall objective for the roadway, the local context of the road environment and the needs of local road users.

Austroads *Guide to Traffic Management (Part 8 - Local Area Traffic Management) 2016* provides a toolkit and selection system, which outlines the relative use of different LATM devices based on previous research and practice within Australia and New Zealand. The Austroads Toolkit is provided in Table 9.1.

A detailed assessment of the LATM devices outlined in the Austroads Toolkit was undertaken and consideration has also been given to the road environment within the study area to determine potential treatments and locations to address

Appropriate treatment types were initially selected based on their purposes, specifically to:

- Slow traffic and improve traffic safety
- Provide for pedestrian safety and crossing points where necessary.

Attention was also given to existing treatments in the surrounding environment and, when possible, preference was given to devices that were already in place near the area, to ensure greater legibility for drivers.

9.2 Proposed LATM Devices

9.2.1 Selected Treatments

Based on the assessment, the following LATM devices may be appropriate as part of the proposed treatments:

- Road cushions
- Lane narrowing / kerb extensions
- Mid-block median treatments
- Pedestrian refuges.

The advantages and disadvantages of the proposed LATM devices are described in Table 9.2. The recommended locations of proposed traffic management devices are presented in Figure 9.1.

Locations of proposed treatments and existing traffic management devices are presented in Figure 9.2, demonstrating the overall provision and spacing of treatments.

Detailed concept designs are provided in Appendix D.







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Table 9.1: LATM Toolkit

Measure		Reduce speeds	Reduce traffic volume	Reduce crash risk	Increase pedestrian safety	Increase bicycle safety
Vertical deflection	Road humps	1	✓	1	-	-
devices (Section 7.2)	Road cushions	1	*	1	-	1
	Flat-top road humps	1	1	1	-	1
	Wombat crossings	✓	✓	1	1	1
	Raised pavements	1	✓	1	-	✓
Horizontal	Lane narrowings/kerb extensions	1	-	-	1	8
deflection devices (Section 7.3)	Slow points	1	*	-	-	+
	Centre blister islands	1	1	-	1	-
	Driveway links	1	1		1	1
	Mid-block median treatments	1	-	1	1	1
	Roundabouts	1	✓	1	-	-
Diversion devices	Full road closure	-	1	1	1	1
(Section 7.4)	Half road closure	-	1	1	1	1
	Diagonal road closure	-	1	*	1	1
	Modified T-intersection	✓	1	1	1	1
	Left-in/left-out islands	-	✓	✓	1	-
Signs, linemarking	Speed limit signs	1	4	1	✓	1
and other treatments	Prohibited traffic movement signs	-	✓	✓	-	1
(Section 7.5)	One-way (street) signs	-	*	1	✓	-1
	Give-way signs	1	✓	1	1	1
	Stop signs	1	1	1	1	1
	Shared zones	✓.	✓	-	1	1
	School zones	1	-	1	1	1
	Threshold treatments	1	1	1	-	1
	Tactile surface treatments	1				70
	Bicycle facilities	-		¥	14 T	1
	Bus facilities	-	1	-	-	<u>-</u> .

Source: AustRoads Guide to Traffic Management - Part 8







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Table 9.2: Proposed Treatments

Treatments	Advantages	Disadvantages
Pedestrian Refuges	 Provides a staged crossing facility for pedestrians improving crossing safety Assists in reducing road widths and provide a degree of traffic calming Effective at slowing vehicles speeds when used in conjunction with other road narrowing treatments and speed cushions 	 Relatively high implementation cost May impact access to adjacent driveways, and intersections if not located appropriately Maintains traffic priority over pedestrians
Lane narrowing / kerb extensions	 Reduces available road width and slows vehicles down Expands available kerbside area Provides opportunity for landscaping and streetscaping improvements Provides a shorter crossing distance (if combined with a crossing point) Encourages pedestrians to cross at these locations (if combined with crossing point) 	 Relatively high implementation cost Reduces available kerbside parking May impact vehicle movements if placed close to driveways or intersections Bus friendly designs may not be effective at reducing vehicle speeds due to limited lane reduction
Speed Cushion	Effective at slowing vehicles speeds when used in conjunction with a median or kerb side treatment Less likely to be mistaken as a pedestrian facility Bus and cycle route friendly Does not impact kerbside parking Relatively low implementation cost	 Can be less effective at slowing vehicles in isolation Less effective for wide tracked vehicles (i.e trucks and some large cars) Traffic noise level may increase Impact on vehicle passenger comfort
Raised Median Treatment	Reinforces the reduced available road width Assists in reducing traffic speeds when used in conjunction with speed cushions	May impact access to adjacent driveways and parking spaces if not located appropriately
One way	 Defined traffic direction in constrained roadways Reduces traffic volumes May deter rat running 	Impacts local resident access and create unnecessary detours
Continuous footpath	 Provides traffic calming on approach to an intersection / pedestrian desire line Provides desired pedestrian priority where marked crossing is not warranted Contributes to placemaking and reduce car dominant appearance of roadway 	 Only suitable for side streets with low traffic volumes Not as legible as a marked pedestrian crossing





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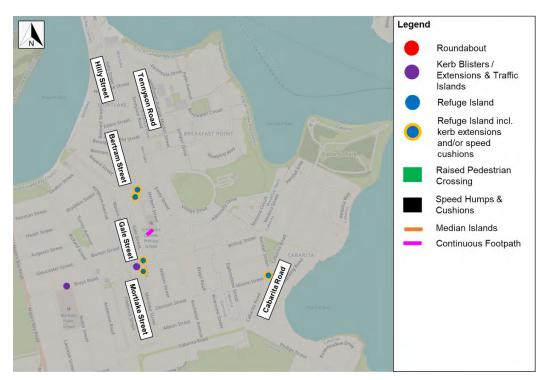


Figure 9.1: Proposed LATM Devices Map

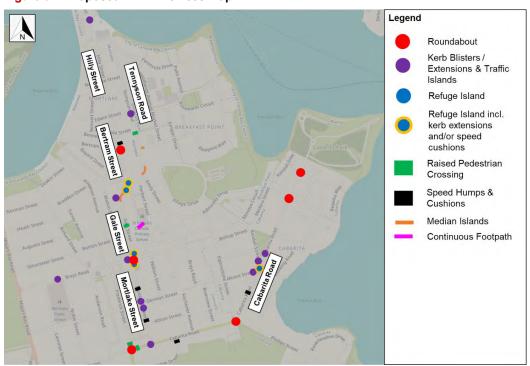


Figure 9.2: Existing and Proposed LATM Devices Map







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9.2.2 Pedestrian Refuge Islands

The pedestrian refuge island consists of the combination of width reduction treatment, including kerb extensions and a median island. A pair of speed cushions are recommended in conjunction with the refuge pedestrian island.

This combination of treatments aims to:

- Reduce vehicle speeds
- Reduce the road width for vehicles and crossing distance for pedestrians
- Provides a crossing point for pedestrians.

The reduction in vehicle speeds on approach to the crossing point will increase pedestrian safety by reducing the likelihood of a serious pedestrian injury in the event of a collision.

Asphalt speed cushions, similar to existing speed cushions in the local area, shown in Figure 7.4, can be implemented for consistency.

To improve the effectiveness of the speed cushion treatment, it is also recommended to implement a short concrete median. This aims to:

- Provides a physical separation of two-way traffic
- Restrict all vehicles to stay on the correct side of the road when navigating the speed cushions (i.e. prevent driving around the speed cushions)
- Provides for a staged pedestrian crossing movement.

The pedestrian refuge island recommended to be installed at the following locations:

- North of Mortlake Street / Gale Street / Brays Road intersection
- North and West of Tennyson Road / Bertram Street / Adams Lane intersection
- North of Cabarita Road / Moore Street Intersection.

9.3 Treatment Locations

Treatments by location are described below, including a brief rationale and description on issues mitigated or addressed.

Detailed concept designs are provided in Appendix D.

9.3.1 Tennyson Road / Bertram Street

9.3.1.1 Pedestrian Refuges

Pedestrian refuges are recommended to be provided on the northern and western legs of the Tennyson Road / Bertram Street intersection, as shown in Figure 9.3 and Figure 9.4. The introduction of pedestrian refuges will greatly improve the crossing point for pedestrians by:

- Providing a staged crossing and shorter crossing distances
- Assist in reducing speeds of turning vehicles
- Reducing the likelihood of a vehicle cutting the corner
- Providing for pedestrian activity near the intersection.

The pedestrian refuge treatment includes:

- Pedestrian refuges with 2m wide pedestrian waiting areas
- Pair of speed cushions on approach (1 speed cushion on approach only at Bertram Street)





- Removal of kerb blisters and installation of kerb extensions on Bertram Street
- Kerb extensions and kerb ramps on Tennyson Road.

The refuges are intended to complement the raised pedestrian crossing located on the eastern leg and further improve pedestrian facilities at the intersection. Given the recent installation of a pedestrian crossing on the eastern leg of the intersection, the proposed western leg refuge would only need to be implemented in the future if it was determined that the pedestrian crossing was not being utilised by pedestrians on the western leg.

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It is expected that one parking space would be lost to accommodate this upgrade.

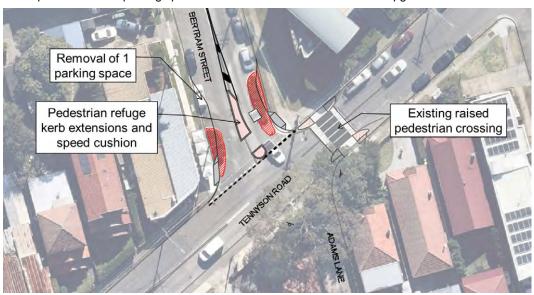


Figure 9.3: Pedestrian Refuges and Speed Cushions - Bertram Street



Figure 9.4: Pedestrian Refuges and Speed Cushions – Tennyson Road







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9.3.1.2 Traffic Calming

An alternative to the pedestrian refuge treatment on Tennyson Road, it is recommended to provide traffic calming treatments along Tennyson Road, shown in Figure 9.5. The traffic calming measures includes the combination of the following:

- Raised median
- Pair of speed cushions on each side laneways
- Kerb blisters on both kerbsides

These traffic calming measures aim to reduce travels speeds along Tennyson Road.

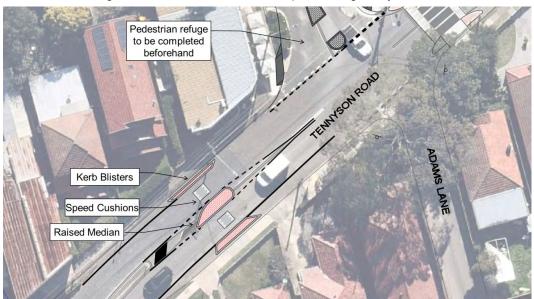


Figure 9.5: Traffic Calming Treatment - Tennyson Road







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9.3.2 Mortlake Street / Brays Road / Gale Street

Improvements at the Mortlake Street / Brays Road / Gale Street intersection primarily include pedestrian facility upgrades to improve pedestrian safety in the area. Recommended treatments are shown Figure 9.6.

9.3.2.1 Existing Pedestrian Refuge Island

The existing pedestrian refuge island on the southern leg is recommended to be reconstructed to include a 2m minimum wide waiting area to:

- Improve the available waiting space for pedestrians
- Meet TfNSW requirements on pedestrian refuge design.

The reconstruction of the pedestrian refuge/splitter island will provide an improved pedestrian crossing point and provide an opportunity to refresh or expand on the streetscape design to improve the sense of place.

9.3.2.2 Redundant Footpath

It is recommended to install barriers at the accesses of the footpath along the eastern kerbside of Mortlake Street to encourage pedestrians to use the existing footpath behind the landscaped buffer and away from the road frontage.

9.3.2.3 Crossing Point- East Leg

It is recommended to provide a pair of kerb ramps east of Mortlake Street / Gales Street / Brays Road intersection. This would provide a pedestrian crossing point to continue the pedestrian route and footpaths along Mortlake Street and Gale Street.

9.3.2.4 Crossing Point - West Leg

To improve the pedestrian crossing point on the western leg of the intersection, kerb extensions can be implemented to:

- Reduce crossing distance for pedestrians
- · Reduce width of road and provide a degree of traffic calming on approach to the intersection
- Expand kerbside area for pedestrians.

It is expected that four parking spaces will be removed to accommodate the upgrades







The kerb extensions will feature new kerb ramps at the same if not similar location. The adjacent bus zone will also be slightly extended westwards.

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It is intended that the design will allow all existing light and heavy vehicle movements currently serviced by the roundabout would continue to be possible in the upgrade arrangement.

A key focus of the proposed refuges changes on the northern and southern legs is that they will be compliant to current design standards.

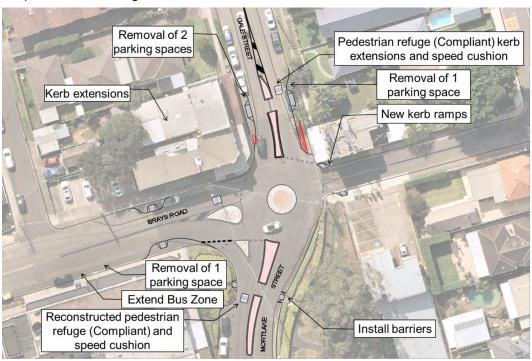


Figure 9.6: Pedestrian Facility Improvements – Mortlake Street / Gale Street / Brays Road





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9.3.3 Cabarita Road, near Moore Street

9.3.3.1 Pedestrian Refuge

To improve pedestrian safety and accommodate pedestrian desire lines between the bus stop pair located on Cabarita Road, near Moore Street, it is recommended to install a pedestrian refuge at this location. The pedestrian refuge will include:

- 2m wide pedestrian waiting area as per TfNSW requirements
- Shorter island designs to maintain access to adjacent driveways and properties
- Kerb extensions to reduce crossing distances and provide a level of traffic calming by narrowing the roadway
- Speed cushions to further reduce vehicle speeds on approach to the crossing point.
- Removal of kerb blisters, and a rebuilt kerb ramp

It is expected that around five parking spaces would be removed to accommodate this upgrade.

The exact placement of the refuge can be modified to best service the area. It can be considered to locate it closer to Kendall Reserve.

The intention of the design is to not impact vehicle manoeuvrability into or out of any properties, and that it is compliant to current design standards.

It is further recommended to integrate the existing kerb blisters, north of Moore Street, into the proposed kerb extensions. This includes the removal of the kerb blisters and a new rebuilt kerb ramp for Moore Street crossing.

The pedestrian refuge island and associated treatments are shown in Figure 9.7.

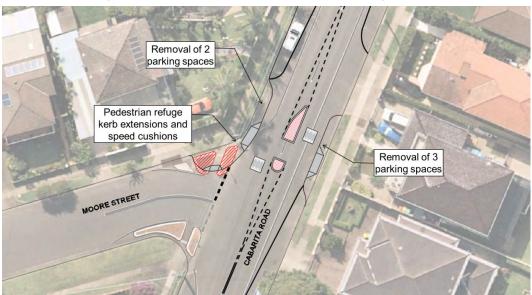


Figure 9.7: Pedestrian Refuge Treatment - Cabarita Road / Moore Street







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9.3.4 Mortlake Street / Cabarita Road

9.3.4.1 Pedestrian Refuge

There are limited crossing opportunities at the intersection of Mortlake Street /Cabarita Road, particularly on the northern leg. Further, the width of the road leads to longer crossing times, and pedestrians having to wait for larger gaps in traffic before crossing. This is additionally more dangerous for people with reduced mobility.

To improve pedestrian safety and accommodate pedestrian desire lines at the intersection, it is recommended to install a pedestrian refuge at this location. The pedestrian refuge will include:

- 2m wide pedestrian waiting area as per TfNSW requirements
- Shorter island designs to allow for larger vehicles (e.g. garbage truck) swept paths turning out of Mortlake Street
- Kerb extensions to reduce crossing distances and provide a level of traffic calming by narrowing the roadway
- Speed cushions to further reduce vehicle speeds on approach to the crossing point.

The intention of the northern leg on Mortlake Street is to be located such that one vehicle can "stack" between the refuge and Cabarita Road when waiting to turn.

It is expected that two parking spaces would need to be removed to accommodate the upgrades.

The proposed pedestrian refuge and associated treatments are shown in Figure 9.8.

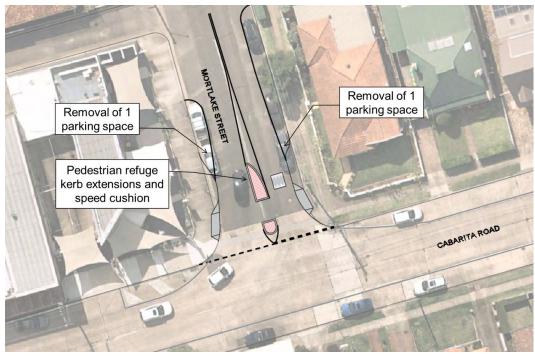


Figure 9.8: Pedestrian Refuge Treatment - Cabarita Road / Mortlake Street







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9.3.5 Adams Lane

9.3.5.1 Continuous Footpath Treatment

The southern end of Adams Lane sees high pedestrian activity at school pick-up and drop-off times. A school access gate is used by parents to take their children into school.

It is proposed that a continuous footpath treatment is implemented on the southern end of Adams Lane, to:

- Define the heavy pedestrian desire line and presence of pedestrian traffic at the intersection
- Provide traffic calming on approach to the intersection
- Improve pedestrian access along Adams Street.

The continuous footpath is to be designed such that it would not impact on vehicle movements along Adams Street.

The continuous footpath will be further supported by the proposed one-way described in Section 9.3.5.2.

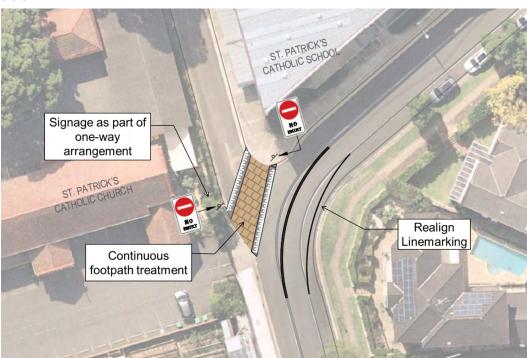


Figure 9.9: Continuous Footpath – Adams Lane at Adams Street







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9.3.5.2 One way southbound

Adams Lane currently functions as two-way road along a narrow road profile. It is recommended to reconfigure Adams Lane as one-way southbound (shown Figure 9.9 and Figure 9.10) to:

- Define travel along the narrow roadway, which does not meet standards for two-way traffic
- Mitigate sight distance issues at the Tennyson Road intersection
- Remove vehicles entering from Adams Street, reducing traffic volumes and potential conflicts with pedestrian traffic
- Remove risky and high-speed turning behaviours at Adams Street.

Local properties will be minimally affected, with suitable alternative routes available via Gale Street or Herbert Street.

The one-way will be implemented via signposting and line marking.

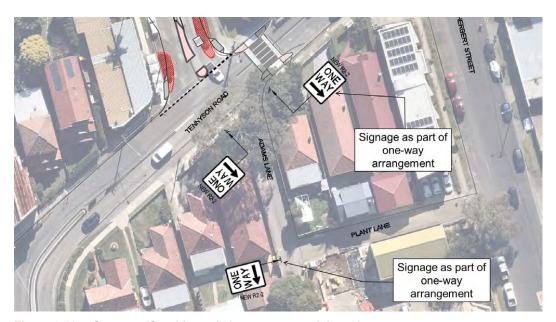


Figure 9.10: One-way (Southbound) Arrangement – Adams Lane





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9.3.6 Gale Street, near St Patrick's Catholic Church

9.3.6.1 No Stopping Zone Extension

To improve pedestrian safety at the existing pedestrian crossing on Gale Street (Near St Patricks Church), the No Stopping sign (R5-400) on the southern approach should be relocated approximately 6m southwards (to the driveway of No. 24 Mortlake Street). The extension of the No Stopping zone will improve sight distances between eastbound crossing users and approaching traffic, improving pedestrian safety. The No Stopping extension is shown in Figure 9.11.

It is noted that the resulting No Stopping zone is greater than the requirement outlined in TfNSW's TDT 2011/01. In addition, one street parking space will be removed.



Figure 9.11: No Stopping Zone Extension – Gale Street near St Patrick's Catholic Church





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9.3.7 Brays Road

9.3.7.1 Pedestrian Crossing Improvements

Site observations and community comments suggest vehicles approaching the pedestrian crossing outside Mortlake Public School at an inappropriate speed for the pedestrian presence and crossing.

It is recommended to improve the crossing location by extending adjacent kerb blisters and median islands (shown in Figure 9.12) to:

- Visually and physically change the road environment at the crossing
- Further reduce roadway area at the crossing
- Reduce perceived roadway width by providing more physical island elements at the crossing
- Restrict illegal parking/stopping near the crossing
- Provide an opportunity for additional landscaping to improve the sense of place.

For future development, potential speed cushions can be implemented on approaches to the pedestrian crossing for additional traffic calming measures. The exact location would be determined upon separate review of the performance of the proposed measures.

It is noted that Brays Road is a bus route, and the existing platform has been designed to accommodate the buses (i.e. 'bus friendly' design).

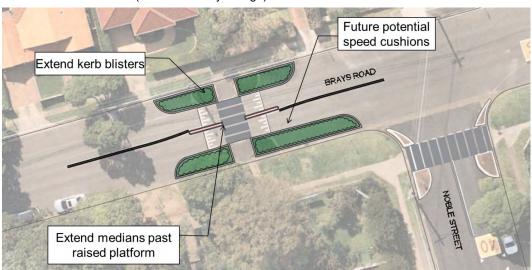


Figure 9.12: Pedestrian Crossing Improvements – Brays Road (Outside Mortlake Public School)





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9.3.8 Brays Road / Majors Bay Road

9.3.8.1 Crossing Point - Southern Leg

A kerb ramp is located on the southern leg of the intersection however, it does not provide any useful pedestrian connection. There is no corresponding footpath on the western side of the road, only a bypass used by northbound cyclists to bypass the roundabout. This kerb ramp may cause confusion to pedestrians and cyclists, and is recommended to be removed, shown Figure 9.13.



Figure 9.13: Kerb Ramp Removal - Brays Road / Majors Bay Road







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9.4 Lighting Improvements

Outlined in Section 4.3.2, 43% of all recorded crashes occurred during dusk or night-time periods. Therefore, it is recommended to improve the lighting conditions at locations with recorded clusters of night-time crashes to reduce the number of crashes outside of daylight periods. The proposed locations for streetlighting reviews and improvements are shown in Figure 9.14.

This may include:

- Upgrade of existing streetlighting
- Provision of new streetlighting or additional luminaires.



Figure 9.14: Proposed Lighting Improvement Locations







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10. CONCLUSION

This traffic study addressed the key traffic issues raised by the residents of the Mortlake-Cabarita Peninsula area. The study considered a number of data inputs, including:

- Community comments Formed the basis of the study, guiding assessment locations and targeting improvement areas
- The existing conditions of the road network, public transport, and active transport
- Crash analysis Indicating hotspots of crash clusters, and crashes involving pedestrians
- Traffic volumes Vehicle volumes, types, and speeds allow specific treatments to be quantified
- Parking Indicates where demand is focused and shows underutilised parking areas.

The above was supported by three site inspections of the study area.

Parking occupancy was reviewed in the precinct, and ongoing monitoring is recommended ahead of making changes to specific areas.

From the above, several locations were identified as being suitable for upgrade. Specifically, these include:

- Tennyson Road / Bertram Street Pedestrian refuges installed at northern and western leg to improve pedestrian safety, and speed cushions to reduce vehicle speeds
- Tennyson Road / Orchard Street Median on the eastern leg to be shortened to not obstruct crossing line
- Mortlake Street / Brays Road / Gale Street Improvements to pedestrian crossing infrastructure at all legs
- Cabarita Road, near Moore Street Pedestrian refuge installed to improve the safety of pedestrian movements when crossing the road
- Mortlake Street / Cabarita Road Pedestrian refuge to allow more safe crossings on the northern leg
- Adams Lane Conversion to one-way southbound to reduce vehicle conflicts, and installation of a continuous footpath to slow vehicles, and improve pedestrian safety
- Gale Street, near St Patrick's Catholic Church Relocation of a No Stopping sign to improve sight lines
- Brays Road / Majors Bay Road Removal of an unused kerb ramp which may confuse pedestrians
- Brays Road, near Mortlake Public School Kerb buildouts and median extensions to narrow the road visually and physically near the raised crossing to reduce vehicle speeds.

It is recommended that each of these options are considered for implementation in the Mortlake-Cabarita Peninsula.



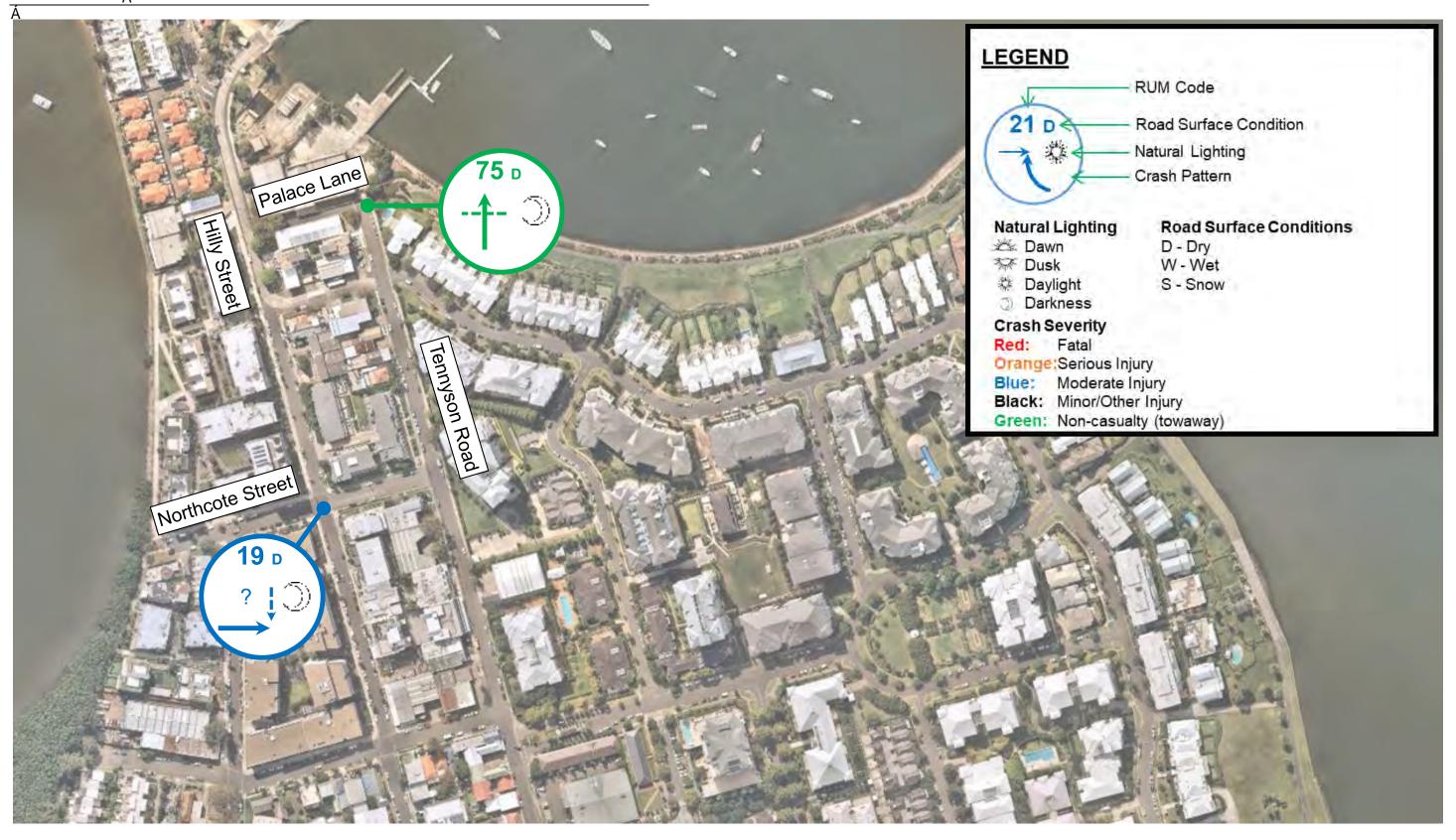






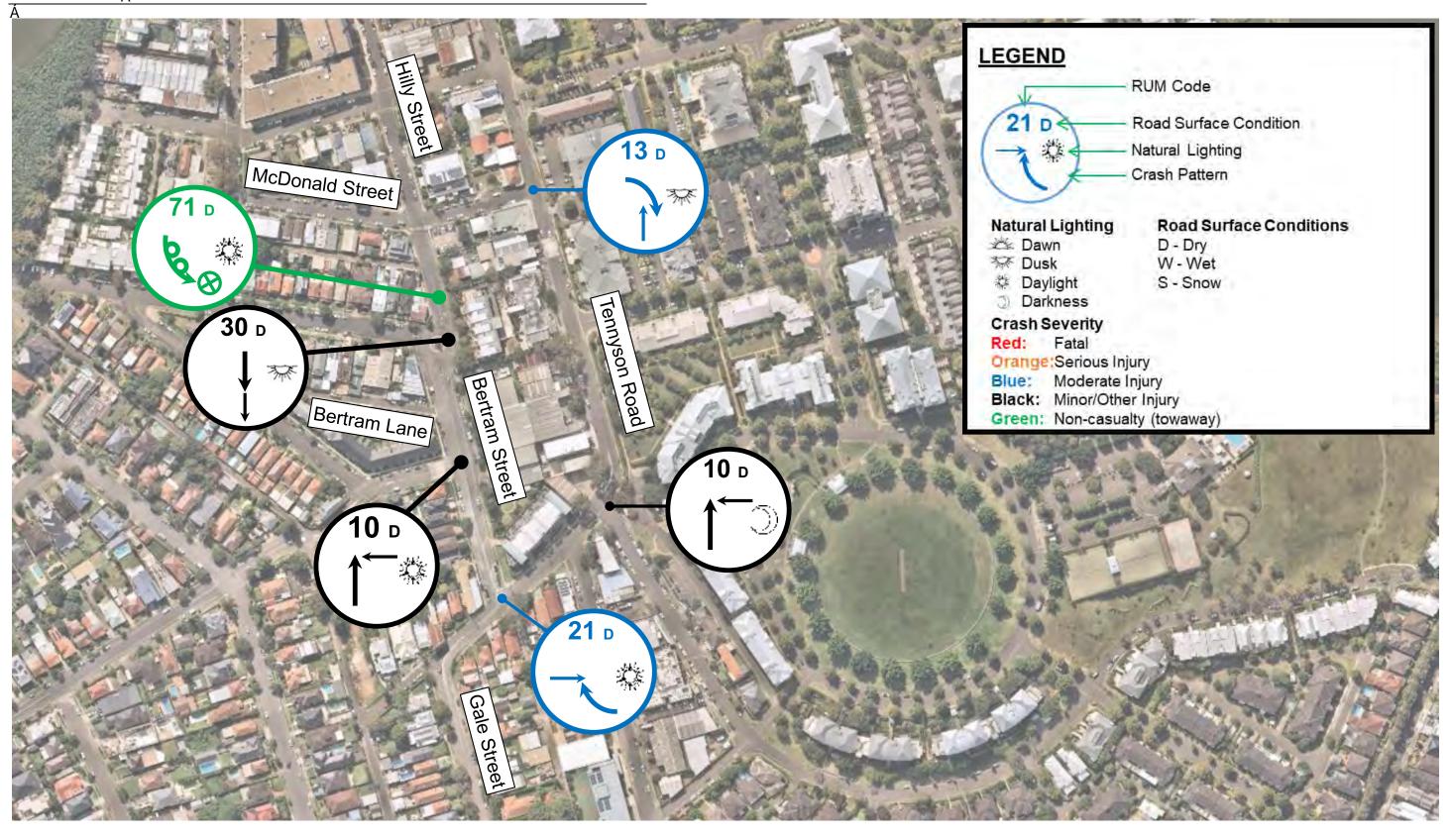
Appendix A: Crash Map



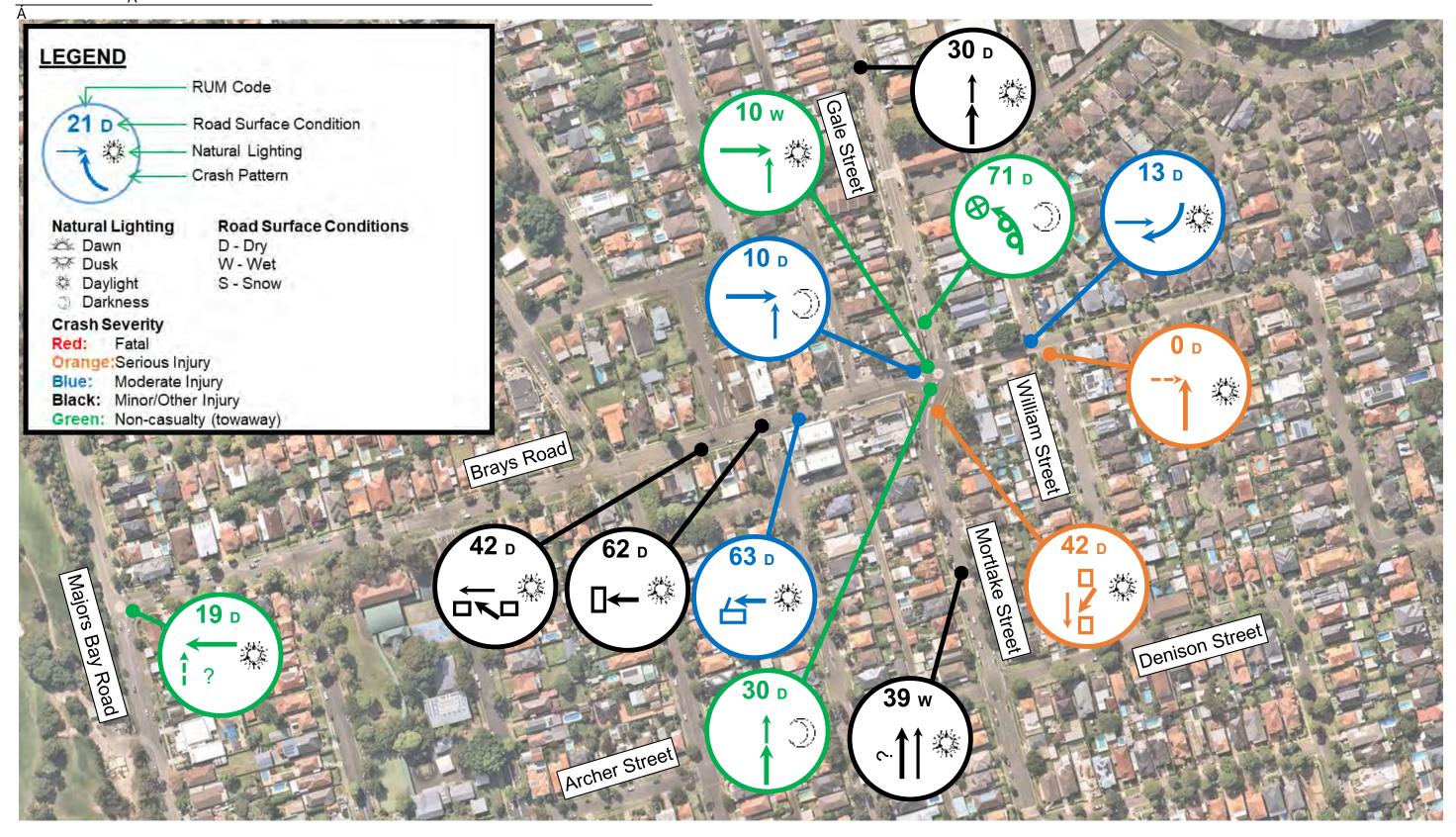


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Appendix B: Traffic Survey

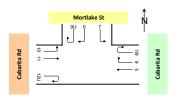


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Job No. : AUNSW2763
Client : Bitzios Consulting
Suburb : Mortlake and Cabarita
Location : 1. Cabarita Rd / Mortlake St

Day/Date : Tue, 5 April 2022
Weather : Fine
Description : Classified Intersection Count
: 15 mins Data

Class 1 Class 2
Classifications
Ughts Heavies



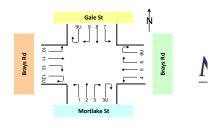
Approach				Cabai	ita Rd					
Direction			irection Through			irection Right Tur			rection 6 (U Turn)	
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:00 to 7:15		73	1	74	2	0	2	0	0	0
7:15 to 7:30		74	4	78	4	1	5	0	0	0
7:30 to 7:45		84	10	94	5	0	5	0	0	0
7:45 to 8:00		87	3	90	1	0	1	0	0	0
8:00 to 8:15		106	2	108	4	0	4	0	0	0
8:15 to 8:30		52	3	55	2	0	2	0	0	0
8:30 to 8:45		60	4	64	5	0	5	0	0	0
8:45 to 9:00		71	1	72	4	0	4	0	0	0
AM Totals		607	28	635	27	1	28	0	0	0
16:00 to 16:15		52	1	53	5	0	5	0	0	0
16:15 to 16:30		46	2	48	3	0	3	0	0	0
16:30 to 16:45		39	1	40	4	1	5	0	0	0
16:45 to 17:00		50	1	51	5	0	5	0	0	0
17:00 to 17:15		47	3	50	2	0	2	0	0	0
17:15 to 17:30		54	1	55	6	0	6	0	0	0
17:30 to 17:45		44	2	46	4	0	4	0	0	0
17:45 to 18:00		61	4	65	0	1	1	0	0	0
PM Totals		393	15	408	29	2	31	0	0	0

Approach				Morti	ake St											Cabai	rita Rd			
Direction		irection Left Turr				irection tight Turi			irection 9 (U Turn)		Direction 10 (Left Turn)				irection : Through				rection 1 (U Turn)	
Time Period	Lights	Heavies	Fotal		Lights	Heavies	Fotal	Lights	Heavies	Fotal	Lights	Heavies	Fotal	Lights	Heavies	[otal		Lights	Heavies	Fotal
7:00 to 7:15	3	0	3		46	2	48	0	0	0	37	1	38	30	6	36		0	0	0
7:15 to 7:30	2	0	2		44	0	44	0	0	0	42	5	47	39	6	45		0	0	0
7:30 to 7:45	3	1	4		43	2	45	0	0	0	42	2	44	47	6	53		0	0	0
7:45 to 8:00	0	0	0		49	5	54	0	0	0	57	0	57	44	3	47		0	0	0
8:00 to 8:15	2	1	3		62	2	64	0	0	0	41	2	43	31	2	33		0	0	0
8:15 to 8:30	2	0	2		48	1	49	0	0	0	64	0	64	45	3	48		0	0	0
8:30 to 8:45	5	0	5		62	0	62	0	0	0	82	2	84	49	1	50		0	0	0
8:45 to 9:00	5	0	5		36	1	37	0	0	0	77	1	78	48	3	51		0	0	0
AM Totals	22	2	24		390	13	403	0	0	0	442	13	455	333	30	363		0	0	0
16:00 to 16:15	4	0	4		40	1	41	0	0	0	75	0	75	80	1	81		0	0	0
16:15 to 16:30	5	0	5		32	2	34	0	0	0	73	0	73	55	2	57		0	0	0
16:30 to 16:45	3	0	3		39	0	39	0	0	0	76	0	76	64	4	68		0	0	0
16:45 to 17:00	5	0	5		30	1	31	0	0	0	94	1	95	73	2	75		0	0	0
17:00 to 17:15	3	0	3		30	1	31	0	0	0	100	1	101	76	2	78		0	0	0
17:15 to 17:30	4	0	4		40	0	40	0	0	0	87	0	87	63	4	67		0	0	0
17:30 to 17:45	4	0	4		45	0	45	0	0	0	92	3	95	87	2	89		0	0	0
17:45 to 18:00	4	0	4		44	0	44	0	0	0	98	1	99	89	2	91		0	0	0
PM Totals	32	0	32		300	5	305	0	0	0	695	6	701	587	19	606		0	0	0



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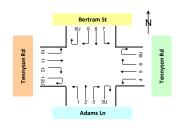
Approach						Morti	ake St											Bray	/s Rd					
Direction		irection	1		Direction	2		Direction	3	Di	irection 3	3U		Direction	4		irection	5		irection	6	D	irection 6	iU
Direction	(Left Turn	1)		Through)	(1	Right Tur	n)		(U Turn)		(Left Turr	1)		Through)	(F	light Tur	n)	(U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:00 to 7:15	3	0	3	33	1	34	2	0	2	0	0	۰	4	0	4	30	0	30	0	0	0	0	0	0
7:15 to 7:30	7	0	7	28	5	33	7	0	7	0	0	۰	1	0	1	21	0	21	1	0	1	0	0	0
7:30 to 7:45	7	0	7	35	2	37	5	0	5	0	0	0	3	0	3	22	2	24	2	0	2	0	0	0
7:45 to 8:00	5	0	5	45	0	45	9	0	9	0	0	0	6	0	6	35	0	35	1	0	1	1	0	1
8:00 to 8:15	6	0	6	32	2	34	7	0	7	0	0	0	4	1	5	28	0	28	1	0	1	0	0	0
8:15 to 8:30	2	0	2	39	0	39	19	0	19	0	0	0	4	0	4	25	0	25	1	0	1	0	0	0
8:30 to 8:45	5	0	5	55	1	56	16	0	16	2	0	2	7	0	7	28	0	28	3	0	3	0	0	0
8:45 to 9:00	6	0	6	64	1	65	14	0	14	0	0	0	1	0	1	25	0	25	0	0	0	0	0	0
AM Totals	41	0	41	331	12	343	79	0	79	2	0	2	30	1	31	214	2	216	9	0	9	1	0	1
16:00 to 16:15	5	0	5	68	1	69	9	0	9	1	0	1	8	0	8	19	0	19	0	0	0	0	0	0
16:15 to 16:30	11	0	11	66	0	66	10	0	10	0	0	۰	7	0	7	35	2	37	0	0	0	0	0	0
16:30 to 16:45	5	0	5	62	0	62	7	0	7	0	0	0	6	0	6	16	0	16	1	0	1	0	0	0
16:45 to 17:00	4	0	4	76	2	78	14	0	14	0	0	0	3	0	3	16	0	16	3	0	3	0	0	0
17:00 to 17:15	7	0	7	83	1	84	9	0	9	2	0	2	2	0	2	22	0	22	1	0	1	1	0	1
17:15 to 17:30	7	0	7	70	0	70	6	0	6	0	0	۰	3	0	3	17	0	17	2	0	2	1	0	1
17:30 to 17:45	5	0	5	74	3	77	8	0	8	0	0	0	4	0	4	14	0	14	0	0	0	0	0	0
17:45 to 18:00	6	0	6	75	2	77	8	0	8	0	0	0	3	0	3	18	1	19	1	0	1	0	0	0
PM Totals	50	0	50	574	9	583	71	0	71	3	0	3	36	0	36	157	3	160	8	0	8	2	0	2

Approach						Gal	e St											Bray	s Rd					
Direction		irection Left Turn			Direction (Through			irection tight Tur			rection 9 (U Turn)	ĐU		irection : Left Turn			irection : Through			irection 1 Right Turi			rection 1 (U Turn)	
Time Period	Lights	Heavies	Lotal	Lights	Heavies	rotal	Lights	Heavies	Fotal	Lights	Heavies	rotal	Lights	Heavies	Fotal	Lights	Heavies	rotal	Lights	Heavies	Fotal	Lights	Heavies	Fotal
7:00 to 7:15	1	0	1	44	1	45	83	3	86	1	0	1	27	5	32	10	1	11	1	0	1	2	0	2
7:15 to 7:30	1	0	1	44	0	44	88	4	92	1	0	1	29	4	33	11	2	13	1	0	1	1	0	1
7:30 to 7:45	1	0	1	38	3	41	79	5	84	5	0	5	22	3	25	8	0	8	2	0	2	0	0	0
7:45 to 8:00	1	1	2	48	5	53	99	5	104	0	0	0	36	4	40	17	1	18	2	0	2	0	0	0
8:00 to 8:15	1	0	1	49	1	50	103	2	105	2	0	2	32	4	36	6	0	6	1	2	3	0	0	0
8:15 to 8:30	2	0	2	48	0	48	71	3	74	0	0	0	23	7	30	16	0	16	1	0	1	0	0	0
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8:45 to 9:00	3	0	3	42	0	42	81	5	86	3	0	3	38	0	38	27	1	28	0	0	0	0	0	0
AM Totals	17	1	18	370	10	380	689	31	720	12	0	12	241	28	269	116	6	122	11	2	13	3	0	3
16:00 to 16:15	0	0	0	35	0	35	40	2	42	0	0	0	48	3	51	13	2	15	3	0	3	0	0	0
16:15 to 16:30	0	0	0	33	2	35	49	1	50	0	0	0	48	2	50	14	0	14	2	0	2	1	0	1
16:30 to 16:45	0	0	0	32	0	32	41	1	42	0	0	0	39	1	40	16	0	16	4	0	4	1	0	1
16:45 to 17:00	2	0	2	20	1	21	38	3	41	0	0	0	46	2	48	22	0	22	10	0	10	1	1	2
17:00 to 17:15	1	0	1	27	1	28	45	2	47	1	0	1	43	2	45	17	1	18	1	0	1	0	0	0
17:15 to 17:30	3	0	3	36	0	36	59	3	62	1	0	1	67	2	69	27	1	28	7	0	7	2	0	2
17:30 to 17:45	2	0	2	36	0	36	37	1	38	2	0	2	55	2	57	18	1	19	2	1	3	1	0	1
17:45 to 18:00	2	0	2	44	0	44	49	3	52	0	0	0	42	2	44	11	0	11	3	0	3	0	0	0
PM Totals	10	0	10	263	4	267	358	16	374	4	0	4	388	16	404	138	5	143	32	1	33	6	1	7



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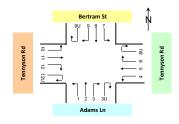
Approach						Adar	ns Ln											Tenny	son Rd					
Direction		Direction Left Turn			Direction (Through			Direction Right Tur			irection : (U Turn)	BU		Direction Left Turn			irection Through			Direction Right Tur			irection ((U Turn)	SU
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:00 to 7:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	96	4	100	1	0	1	0	0	0
7:15 to 7:30	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	93	1	94	5	0	5	0	0	0
7:30 to 7:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	96	7	103	8	0	8	0	0	0
7:45 to 8:00	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	124	8	132	6	0	6	0	0	0
8:00 to 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	3	117	6	0	6	0	0	0
8:15 to 8:30	0	0	0	1	0	1	0	0	0	0	0	0	2	0	2	85	5	90	12	0	12	0	0	0
8:30 to 8:45	1	0	1	0	0	0	0	0	0	0	0	0	3	0	3	114	1	115	10	1	11	0	0	0
8:45 to 9:00	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	83	4	87	14	1	15	0	0	0
AM Totals	3	0	3	4	0	4	1	0	1	0	0	0	8	0	8	805	33	838	62	2	64	0	0	0
16:00 to 16:15	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	58	2	60	6	0	6	0	0	0
16:15 to 16:30	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	47	3	50	3	0	3	0	0	0
16:30 to 16:45	0	0	0	0	0	0	0	0	0	0	0	۰	0	0	0	48	2	50	6	0	6	0	0	0
16:45 to 17:00	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	49	2	51	8	0	8	0	0	0
17:00 to 17:15	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	46	2	48	2	1	3	0	0	0
17:15 to 17:30	2	0	2	0	0	0	0	0	0	0	0	۰	1	0	1	71	3	74	5	0	5	0	0	0
17:30 to 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	2	53	7	0	7	0	0	0
17:45 to 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63	3	66	7	0	7	0	0	0
PM Totals	5	0	5	2	0	2	1	0	1	0	0	0	2	0	2	433	19	452	44	1	45	0	0	0

Approach						Bertr	am St											Tenny	son Rd					
Direction		irection Left Turr			irection (Through			irection Right Tur			irection ! (U Turn)			irection Left Turr			irection : Through			irection : Right Tur			rection 1 (U Turn)	
Time Period	Lights	Heavies	Fotal	Lights	Heavies	Fotal	Lights	Heavies	Fotal	Lights	Heavies	Fotal	Lights	Heavies	Fotal	Lights	Heavies	[otal	Lights	Heavies	Fotal	Lights	Heavies	Fotal
7:00 to 7:15	3	0	3	1	0	1	31	1	32	0	0	0	14	1	15	39	5	44	0	0	0	0	0	0
7:15 to 7:30	9	0	9	0	0	0	40	0	40	0	0	0	15	3	18	39	6	45	0	0	0	0	0	0
7:30 to 7:45	7	1	8	0	0	0	29	2	31	0	0	0	19	0	19	43	5	48	0	0	0	0	0	0
7:45 to 8:00	7	0	7	1	0	1	30	2	32	0	0	0	22	1	23	45	3	48	2	0	2	0	0	0
8:00 to 8:15	10	0	10	0	0	0	34	0	34	0	0	0	20	2	22	45	4	49	1	0	1	0	0	0
8:15 to 8:30	6	0	6	2	0	2	26	0	26	0	0	0	23	2	25	43	5	48	1	0	1	0	0	0
8:30 to 8:45	9	0	9	2	0	2	35	0	35	0	0	0	18	0	18	55	1	56	0	0	0	0	0	0
8:45 to 9:00	11	0	11	1	0	1	31	1	32	0	0	0	28	0	28	69	3	72	1	0	1	0	0	0
AM Totals	62	1	63	7	0	7	256	6	262	0	0	0	159	9	168	378	32	410	5	0	5	0	0	0
16:00 to 16:15	7	0	7	1	0	1	18	0	18	0	0	0	28	1	29	88	2	90	0	0	0	0	0	0
16:15 to 16:30	3	0	3	2	0	2	25	1	26	0	0	0	36	0	36	76	2	78	1	0	1	0	0	0
16:30 to 16:45	12	0	12	0	0	0	27	0	27	0	0	0	30	1	31	71	1	72	0	0	0	0	0	0
16:45 to 17:00	13	0	13	1	0	1	15	1	16	0	0	0	26	1	27	92	3	95	0	0	0	0	0	0
17:00 to 17:15	15	0	15	3	0	3	24	1	25	0	0	0	40	0	40	89	3	92	0	0	0	0	0	0
17:15 to 17:30	12	0	12	0	0	0	22	0	22	0	0	0	40	1	41	104	2	106	0	0	0	0	0	0
17:30 to 17:45	9	0	9	2	0	2	21	0	21	0	0	0	34	0	34	93	4	97	0	0	0	0	0	0
17:45 to 18:00	12	0	12	2	0	2	27	0	27	0	0	0	35	3	38	82	2	84	2	0	2	0	0	0
PM Totals	83	0	83	11	0	11	179	3	182	0	0	0	269	7	276	695	19	714	3	0	3	0	0	0

17:00 to 17:1 17:15 to 17:3 Á

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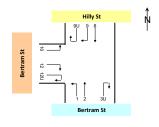
Approach						Adar	ns Ln											Tenny	son Rd				
Direction		irection Left Turr			irection Through			irection Right Tur			irection 3 (U Turn)			Direction Left Turn			irection Through	-		irection Right Turi			irection ((U Turn)
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies
7:00 to 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	7	86	2	0	2	0	0
7:15 to 7:30	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	86	3	89	3	0	3	0	0
7:30 to 7:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	94	2	96	6	0	6	0	0
7:45 to 8:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	106	5	111	9	0	9	0	0
8:00 to 8:15	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	106	4	110	12	0	12	0	0
8:15 to 8:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	103	1	104	10	0	10	0	0
8:30 to 8:45	4	1	5	0	1	1	1	0	1	0	0	0	1	0	1	102	3	105	19	0	19	0	0
8:45 to 9:00	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	118	2	120	13	0	13	0	0
AM Totals	10	1	11	0	1	1	1	0	1	0	0	0	5	0	5	794	27	821	74	0	74	0	0
16:00 to 16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	2	53	4	0	4	0	0
16:15 to 16:30	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	51	1	52	7	0	7	0	0
16:30 to 16:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	46	2	48	2	0	2	0	0

		Bertram St																						
Approach																	Tenny	son Rd						
Direction		irection Left Turr			Direction (Through			irection Right Tur			irection ! (U Turn)			irection : Left Turn			rection : Through			irection : Right Tur			rection 1: (U Turn)	
Time Period	Lights	Heavies	Total	Lights	Heavies	Fotal	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Fotal	Lights	Heavies	Fotal	Lights	Heavies	Total
7:00 to 7:15	4	0	4	0	0	0	25	0	25	0	0	0	14	1	15	24	3	27	1	0	1	0	0	0
7:15 to 7:30	2	0	2	0	0	0	28	0	28	0	0	0	18	4	22	36	3	39	0	0	0	0	0	0
7:30 to 7:45	1	1	2	0	0	0	36	1	37	0	0	0	20	0	20	38	0	38	1	0	1	0	0	0
7:45 to 8:00	7	0	7	0	0	0	33	0	33	0	0	0	25	2	27	45	5	50	0	0	0	0	0	0
8:00 to 8:15	9	0	9	1	0	1	33	1	34	0	0	0	24	0	24	35	3	38	1	0	1	0	0	0
8:15 to 8:30	8	0	8	0	0	0	32	0	32	0	0	0	20	1	21	44	2	46	1	0	1	0	0	0
8:30 to 8:45	9	1	10	1	0	1	24	1	25	0	0	0	22	0	22	53	1	54	0	0	0	0	0	0
8:45 to 9:00	16	0	16	0	0	0	25	1	26	0	0	0	28	1	29	56	3	59	0	0	0	0	0	0
AM Totals	56	2	58	2	0	2	236	4	240	0	0	0	171	9	180	331	20	351	4	0	4	0	0	0
16:00 to 16:15	9	0	9	1	0	1	28	0	28	0	0	0	24	0	24	66	3	69	0	0	0	0	0	0
16:15 to 16:30	10	0	10	0	0	0	34	0	34	0	0	0	37	0	37	75	2	77	1	0	1	0	0	0
16:30 to 16:45	6	1	7	3	0	3	18	0	18	0	0	0	43	1	44	70	2	72	0	0	0	0	0	0
16:45 to 17:00	12	0	12	2	0	2	21	0	21	0	0	0	23	0	23	87	3	90	1	0	1	0	0	0
17:00 to 17:15	10	0	10	1	0	1	20	1	21	0	0	0	30	1	31	91	1	92	0	0	0	0	0	0
17:15 to 17:30	10	0	10	2	0	2	23	0	23	0	0	0	34	2	36	91	2	93	0	0	0	0	0	0
17:30 to 17:45	16	0	16	1	0	1	20	0	20	0	0	0	35	0	35	103	2	105	0	0	0	0	0	0
17:45 to 18:00	11	0	11	0	0	0	19	0	19	0	0	0	39	0	39	102	4	106	2	0	2	0	0	0
PM Totals	84	1	85	10	0	10	183	1	184	0	0	0	265	4	269	685	19	704	4	0	4	0	0	0



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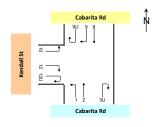
Approach						Bertr	am St			
Direction		Direction Left Turn			irection Through				irection 3 (U Turn)	
Time Period	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total
7:00 to 7:15	0	0	0	22	2	24		1	0	1
7:15 to 7:30	1	1	2	23	5	28		0	0	0
7:30 to 7:45	1	0	1	38	1	39		0	0	0
7:45 to 8:00	1	0	1	40	2	42		3	0	3
8:00 to 8:15	1	0	1	48	1	49		0	0	0
8:15 to 8:30	2	0	2	30	2	32		1	0	1
8:30 to 8:45	5	0	5	40	0	40		0	0	0
8:45 to 9:00	4	0	4	51	1	52		0	1	1
AM Totals	15	1	16	292	14	306		5	1	6
16:00 to 16:15	3	0	3	47	0	47		0	0	0
16:15 to 16:30	2	0	2	63	0	63		1	0	1
16:30 to 16:45	3	0	3	73	1	74		0	0	0
16:45 to 17:00	2	0	2	51	0	51		1	0	1
17:00 to 17:15	2	0	2	55	1	56		2	0	2
17:15 to 17:30	3	0	3	62	1	63		0	0	0
17:30 to 17:45	1	0	1	72	0	72		1	1	2
17:45 to 18:00	1	0	1	72	0	72		0	0	0
PM Totals	17	0	17	495	3	498		5	1	6

Approach			Hill	y St									Bert	ram St					
Direction		Direction (Through			irection tight Turi			rection 9 (U Turn)	U		irection : Left Turn				irection : Right Tur			ection 1 (U Turn)	
Time Period	Lights	leavies	otal	ights	leavies	otal	ights	leavies	otal	ights	leavies	otal	·	ights	leavies	otal	ights	leavies	
7:00 to 7:15	53	0	53	0	0	0	0	0	0	1	0	1		1	0	1	0	0	
7:15 to 7:30	56	0	56	1	0	1	0	0	0	1	0	1		4	0	4	0	0	
7:30 to 7:45	58	0	58	2	0	2	0	0	0	0	0	0		3	1	4	0	0	
7:45 to 8:00	75	2	77	0	0	0	0	0	0	2	0	2		2	0	2	0	0	
3:00 to 8:15	55	1	56	2	0	2	1	0	1	1	0	1		5	0	5	0	0	
:15 to 8:30	62	0	62	1	0	1	0	0	0	1	0	1		2	0	2	0	0	
:30 to 8:45	56	2	58	0	1	1	0	0	0	1	0	1		3	1	4	0	0	Г
:45 to 9:00	50	1	51	2	0	2	0	0	0	1	0	1		2	0	2	0	0	
AM Totals	465	6	471	8	1	9	1	0	1	8	0	8		22	2	24	0	0	
6:00 to 16:15	50	0	50	1	0	1	0	0	0	0	0	0	Ĭ	2	0	2	0	0	
6:15 to 16:30	49	0	49	0	0	0	0	0	0	0	0	0		0	0	0	0	0	Г
6:30 to 16:45	39	0	39	0	0	0	0	0	0	2	0	2		2	0	2	0	0	Г
6:45 to 17:00	44	0	44	2	0	2	1	0	1	1	0	1		2	0	2	0	0	
7:00 to 17:15	47	0	47	4	0	4	1	0	1	1	0	1		3	0	3	0	0	
7:15 to 17:30	36	0	36	3	0	3	2	0	2	0	0	0		3	0	3	0	0	ľ
7:30 to 17:45	45	0	45	0	0	0	1	0	1	1	0	1		4	0	4	0	0	ľ
7:45 to 18:00	41	0	41	2	0	2	1	0	1	0	0	0		4	0	4	0	0	
PM Totals	351	0	351	12	0	12	6	0	6	5	0	5		20	0	20	0	0	Γ



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Approach						Cabar	ita Rd			
Direction		irection Left Turn			Direction (Through				rection 3 (U Turn)	
Time Period	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total
7:00 to 7:15	4	0	4	20	5	25		0	0	0
7:15 to 7:30	3	1	4	29	3	32		0	0	0
7:30 to 7:45	5	1	6	42	5	47		0	0	0
7:45 to 8:00	6	0	6	32	4	36		0	0	0
8:00 to 8:15	3	2	5	21	1	22		0	0	0
8:15 to 8:30	17	0	17	19	3	22		0	0	0
8:30 to 8:45	8	0	8	24	0	24		0	0	0
8:45 to 9:00	11	0	11	26	2	28		0	0	0
AM Totals	57	4	61	213	23	236		0	0	0
16:00 to 16:15	14	0	14	32	2	34		0	0	0
16:15 to 16:30	6	0	6	20	1	21		0	0	0
16:30 to 16:45	5	1	6	34	2	36		0	0	0
16:45 to 17:00	15	0	15	35	2	37		0	0	0
17:00 to 17:15	15	0	15	32	2	34		0	0	0
17:15 to 17:30	10	0	10	34	1	35		0	0	0
17:30 to 17:45	13	0	13	42	4	46		0	0	0
17:45 to 18:00	14	0	14	46	3	49		0	0	0
PM Totals	92	1	93	275	17	292		0	0	0

Approach			Cabar	ita Rd									Ke	ndall St					
Direction		Direction (Through			irection ight Tur			rection 9 (U Turn)			irection : Left Turn				irection : Right Tur			rection 1 (U Turn)	
Time Period	ights	leavies	otal	ights	leavies	otal	ights	leavies	otal	ights	leavies	otal		ights	leavies	otal	ights	leavies	
7:00 to 7:15	36	1	37	0	0	0	0	0	0	3	0	3		9	0	9	0	0	T
7:15 to 7:30	37	4	41	1	0	1	0	0	0	4	0	4		12	0	12	0	0	Ī
:30 to 7:45	45	6	51	3	0	3	0	0	0	3	0	3		9	1	10	0	0	Ī
:45 to 8:00	43	3	46	3	0	3	0	0	0	2	0	2		16	0	16	0	0	
00 to 8:15	48	2	50	4	0	4	0	0	0	2	0	2		13	1	14	0	0	Г
15 to 8:30	27	3	30	3	0	3	0	0	0	2	0	2		4	0	4	0	0	Г
30 to 8:45	24	2	26	5	0	5	0	0	0	2	0	2		14	0	14	0	0	Г
45 to 9:00	24	0	24	0	0	0	0	0	0	1	0	1		13	0	13	0	0	
AM Totals	284	21	305	19	0	19	0	0	0	19	0	19		90	2	92	0	0	Г
:00 to 16:15	32	1	33	3	0	3	0	0	0	2	0	2	Ĭ	8	0	8	0	0	Γ
:15 to 16:30	20	3	23	2	0	2	0	0	0	2	0	2		7	0	7	0	0	
:30 to 16:45	18	0	18	3	0	3	0	0	0	1	0	1		5	0	5	0	0	
:45 to 17:00	26	1	27	5	0	5	0	0	0	5	0	5		6	0	6	0	0	
7:00 to 17:15	29	3	32	1	0	1	0	0	0	5	0	5		7	0	7	0	0	Ĺ
:15 to 17:30	29	2	31	2	0	2	1	0	1	1	0	1		8	0	8	0	0	
7:30 to 17:45	31	1	32	4	0	4	0	0	0	3	0	3		6	0	6	0	0	
7:45 to 18:00	37	4	41	4	0	4	0	0	0	3	0	3		11	0	11	0	0	L
PM Totals	222	15	237	24	ō	24	1	0	1	22	0	22		58	0	58	0	0	Ι



P5620 Mortlake Cabarita Peninsula Traffic Study **Traffic Survey Data Analysis** 08:00 - 09:00 AM Peak Hilly Street Legend Approaching Total Exiting Total Light Vehicles Betram Street 104 Heavy Vehicles Street Betram Tennyson Road Tennyson Road 103 Adams Lane Gale Brays Road Brays Road 102 Cabarita Mortlake Street Kendall Street 105

Cabarita Road

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Cabarita Road 458

101



P5620 Mortlake Cabarita Peninsula Traffic Study **Traffic Survey Data Analysis** 17:00 - 18:00 PM Peak Hilly Street Legend Approaching Total Exiting Total Light Vehicles Betram Street 104 Heavy Vehicles Street Betram Tennyson Road Tennyson Road 103 Adams Lane Gale Brays Road Brays Road 102 Cabarita Mortlake Street Kendall Street 105

Cabarita Road

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Cabarita Road

101

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Job No AUNSW2763 Client **Bitzios Consulting**

Site Mortlake St

Location btw Archer St & Albion St

Site No ATC 1 Start Date 1-Apr-22

Description Volume Summary

Direction Combined



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	511	516	524	495	503	443	425	Ave	Ave
PM Peak	564	550	574	550	534	522	511	6466	6293
0:00	31	11	27	30	32	73	108	26	45
1:00	7	13	20	12	14	49	54	13	24
2:00	10	15	7	9	11	29	41	10	17
3:00	17	8	17	16	20	26	26	16	19
4:00	24	32	28	38	20	22	9	28	25
5:00	79	91	67	65	66	37	25	74	61
6:00	244	259	209	209	189	96	62	222	181
7:00	392	381	375	382	358	170	138	378	314
8:00	511	516	524	495	503	257	242	510	435
9:00	428	334	384	407	417	386	384	394	391
10:00	337	404	355	331	349	432	398	355	372
11:00	397	336	345	371	379	443	425	366	385
12:00	384	358	350	383	407	522	511	376	416
13:00	346	348	338	366	396	488	412	359	385
14:00	407	443	390	388	438	416	373	413	408
15:00	530	512	529	550	529	447	374	530	496
16:00	453	493	480	484	486	444	406	479	464
17:00	564	550	574	523	534	448	412	549	515
18:00	439	502	446	444	457	421	307	458	431
19:00	274	319	337	325	369	353	211	325	313
20:00	187	223	224	243	279	220	197	231	225
21:00	106	179	164	171	193	202	133	163	164
22:00	68	82	107	101	210	176	101	114	121
23:00	35	48	55	95	158	155	56	78	86
Total	6270	6457	6352	6438	6814	6312	5405	6466	6293
7-19 6-22	5188 5999	5177 6157	5090 6024	5124 6072	5253 6283	4874 5745	4382 4985	5166 6107	5013 5895
6-24	6102	6287	6186	6268	6651	6076	5142	6299	6102

7-19	5188	5177	5090	5124	5253	4874	4382	5166	5013
6-22	5999	6157	6024	6072	6283	5745	4985	6107	5895
6-24	6102	6287	6186	6268	6651	6076	5142	6299	6102
0-24	6270	6457	6352	6438	6814	6312	5405	6466	6293

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Job No AUNSW2763

Client Bitzios Consulting

Site Mortlake St

Location btw Archer St & Albion St

Site No ATC 1
Start Date 1-Apr-22

Description Volume Summary

Direction NB



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	294	287	297	272	277	242	233	Ave	Ave
PM Peak	375	376	367	363	367	303	272	3897	3750
0:00	17	7	17	17	22	46	62	16	27
1:00	5	7	13	8	11	31	35	9	16
2:00	6	10	5	7	7	17	25	7	11
3:00	8	5	9	8	9	13	18	8	10
4:00	7	12	10	14	9	12	3	10	10
5:00	24	26	22	24	25	19	5	24	21
6:00	89	91	60	71	73	31	25	77	63
7:00	196	186	177	186	169	82	69	183	152
8:00	294	287	297	272	277	126	143	285	242
9:00	246	178	207	233	250	183	196	223	213
10:00	186	227	199	177	182	242	204	194	202
11:00	220	200	189	219	216	231	233	209	215
12:00	232	237	221	234	243	303	272	233	249
13:00	209	216	209	223	227	296	250	217	233
14:00	251	281	234	234	273	265	229	255	252
15:00	340	330	350	350	326	276	231	339	315
16:00	326	330	333	328	349	282	254	333	315
17:00	375	376	367	363	367	274	250	370	339
18:00	319	342	287	302	303	259	183	311	285
19:00	188	216	216	229	236	196	131	217	202
20:00	123	150	146	164	162	129	124	149	143
21:00	74	127	106	104	105	117	83	103	102
22:00	49	64	70	62	130	110	63	75	78
23:00	25	30	37	62	100	95	40	51	56
Total	3809	3935	3781	3891	4071	3635	3128	3897	3750
7-19	3194	3190	3070	3121	3182	2819	2514	3151	3013

6-24 0-24

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Job No AUNSW2763

Client Bitzios Consulting

Site Mortlake St

Location btw Archer St & Albion St

Site No ATC 1
Start Date 1-Apr-22

Description Volume Summary

Direction SB



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	217	229	227	223	226	212	194	Ave	Ave
PM Peak	190	182	207	200	203	219	239	2569	2543
0:00	14	4	10	13	10	27	46	10	18
1:00	2	6	7	4	3	18	19	4	8
2:00	4	5	2	2	4	12	16	3	6
3:00	9	3	8	8	11	13	8	8	9
4:00	17	20	18	24	11	10	6	18	15
5:00	55	65	45	41	41	18	20	49	41
6:00	155	168	149	138	116	65	37	145	118
7:00	196	195	198	196	189	88	69	195	162
8:00	217	229	227	223	226	131	99	224	193
9:00	182	156	177	174	167	203	188	171	178
10:00	151	177	156	154	167	190	194	161	170
11:00	177	136	156	152	163	212	192	157	170
12:00	152	121	129	149	164	219	239	143	168
13:00	137	132	129	143	169	192	162	142	152
14:00	156	162	156	154	165	151	144	159	155
15:00	190	182	179	200	203	171	143	191	181
16:00	127	163	147	156	137	162	152	146	149
17:00	189	174	207	160	167	174	162	179	176
18:00	120	160	159	142	154	162	124	147	146
19:00	86	103	121	96	133	157	80	108	111
20:00	64	73	78	79	117	91	73	82	82
21:00	32	52	58	67	88	85	50	59	62
22:00	19	18	37	39	80	66	38	39	42
23:00	10	18	18	33	58	60	16	27	30
Total	2461	2522	2571	2547	2743	2677	2277	2569	2543
7-19 6-22	1994	1987	2020	2003	2071	2055	1868	2015	2000
0-22	2331	2383	2426	2383	2525	2453	2108	2410	2373

7-19	1994	1987	2020	2003	2071	2055	1868	2015	2000
6-22	2331	2383	2426	2383	2525	2453	2108	2410	2373
6-24	2360	2419	2481	2455	2663	2579	2162	2476	2446
0-24	2461	2522	2571	2547	2743	2677	2277	2569	2543



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Job No AUNSW2763 Client **Bitzios Consulting** Site Cabarita Rd

Location btw Roberts Rd & Phillips St

Site No ATC 2 Start Date 1-Apr-22

Description Volume Summary

Direction Combined



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	351	371	359	328	333	306	394	Ave	Ave
PM Peak	355	367	329	297	377	391	447	4334	4400
0:00	16	7	10	17	19	60	65	14	28
1:00	14	9	7	7	12	32	28	10	16
2:00	3	7	10	4	14	21	35	8	13
3:00	9	8	3	4	2	8	12	5	7
4:00	10	12	17	14	13	31	12	13	16
5:00	44	59	48	47	41	28	13	48	40
6:00	143	149	130	108	119	56	57	130	109
7:00	324	371	324	328	265	118	112	322	263
8:00	351	327	359	281	333	206	206	330	295
9:00	322	280	283	251	257	275	292	279	280
10:00	280	306	229	264	267	292	361	269	286
11:00	293	319	220	207	292	306	394	266	290
12:00	305	293	206	242	289	292	447	267	296
13:00	289	281	204	249	298	305	373	264	286
14:00	323	321	224	266	305	391	384	288	316
15:00	321	339	270	275	299	375	404	301	326
16:00	331	312	274	273	307	359	364	299	317
17:00	355	367	301	297	377	351	326	339	339
18:00	275	360	329	267	294	317	227	305	296
19:00	176	268	189	181	218	213	132	206	197
20:00	136	146	131	120	134	142	137	133	135
21:00	81	132	128	97	140	133	82	116	113
22:00	57	59	68	90	111	139	65	77	84
23:00	23	36	32	46	86	125	27	45	54
Total	4481	4768	3996	3935	4492	4575	4555	4334	4400
7.10	2760	2076	2222	2222	2502	2507	2000	2522	2500
7-19 6-22	3769 4305	3876 4571	3223 3801	3200 3706	3583 4194	3587 4131	3890 4298	3530 4115	3590 4144
6-24	4303	4571	3901	3842	4194	4131	4290	4113	4144

7-19	3769	3876	3223	3200	3583	3587	3890	3530	3590
6-22	4305	4571	3801	3706	4194	4131	4298	4115	4144
6-24	4385	4666	3901	3842	4391	4395	4390	4237	4281
0-24	4481	4768	3996	3935	4492	4575	4555	4334	4400



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Job No AUNSW2763

Client Bitzios Consulting

Site Cabarita Rd

Location btw Roberts Rd & Phillips St

Site No ATC 2
Start Date 1-Apr-22

Description Volume Summary

Direction NB



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	149	162	147	126	128	160	211	Ave	Ave
PM Peak	211	211	204	174	211	234	243	2196	2232
0:00	10	3	5	9	10	32	36	7	15
1:00	7	7	3	4	6	15	16	5	8
2:00	2	2	6	3	7	11	20	4	7
3:00	5	2	1	2	1	5	5	2	3
4:00	3	3	5	4	3	14	6	4	5
5:00	14	25	14	17	14	14	5	17	15
6:00	54	55	43	36	45	25	24	47	40
7:00	129	155	122	126	106	44	52	128	105
8:00	145	139	147	113	128	86	88	134	121
9:00	129	114	117	124	104	105	134	118	118
10:00	143	153	106	112	126	128	187	128	136
11:00	149	162	100	97	126	160	211	127	144
12:00	168	161	114	131	159	157	243	147	162
13:00	137	131	102	129	163	163	197	132	146
14:00	135	161	111	135	156	234	207	140	163
15:00	189	186	162	162	165	183	198	173	178
16:00	199	177	168	158	178	210	165	176	179
17:00	211	211	176	174	211	193	140	197	188
18:00	159	194	204	150	161	156	116	174	163
19:00	92	157	116	108	111	115	79	117	111
20:00	91	80	83	76	87	79	71	83	81
21:00	49	76	65	57	77	73	52	65	64
22:00	38	34	42	52	63	76	35	46	49
23:00	13	22	21	29	53	64	14	28	31
Total	2271	2410	2033	2008	2260	2342	2301	2196	2232
		1	1	1	1	1	1		
7-19	1893	1944	1629	1611	1783	1819	1938	1772	1802

7-19	1893	1944	1629	1611	1783	1819	1938	1772	1802
6-22	2179	2312	1936	1888	2103	2111	2164	2084	2099
6-24	2230	2368	1999	1969	2219	2251	2213	2157	2178
0-24	2271	2410	2033	2008	2260	2342	2301	2196	2232



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Job No AUNSW2763

Client Bitzios Consulting

Site Cabarita Rd

Location btw Roberts Rd & Phillips St

Site No ATC 2 Start Date 1-Apr-22

Description Volume Summary

Direction SB



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	206	216	212	202	205	170	183	Ave	Ave
PM Peak	188	166	125	131	166	192	206	2138	2168
0:00	6	4	5	8	9	28	29	6	13
1:00	7	2	4	3	6	17	12	4	7
2:00	1	5	4	1	7	10	15	4	6
3:00	4	6	2	2	1	3	7	3	4
4:00	7	9	12	10	10	17	6	10	10
5:00	30	34	34	30	27	14	8	31	25
6:00	89	94	87	72	74	31	33	83	69
7:00	195	216	202	202	159	74	60	195	158
8:00	206	188	212	168	205	120	118	196	174
9:00	193	166	166	127	153	170	158	161	162
10:00	137	153	123	152	141	164	174	141	149
11:00	144	157	120	110	166	146	183	139	147
12:00	137	132	92	111	130	135	204	120	134
13:00	152	150	102	120	135	142	176	132	140
14:00	188	160	113	131	149	157	177	148	154
15:00	132	153	108	113	134	192	206	128	148
16:00	132	135	106	115	129	149	199	123	138
17:00	144	156	125	123	166	158	186	143	151
18:00	116	166	125	117	133	161	111	131	133
19:00	84	111	73	73	107	98	53	90	86
20:00	45	66	48	44	47	63	66	50	54
21:00	32	56	63	40	63	60	30	51	49
22:00	19	25	26	38	48	63	30	31	36
23:00	10	14	11	17	33	61	13	17	23
Total	2210	2358	1963	1927	2232	2233	2254	2138	2168
7-19 6-22	1876 2126	1932 2259	1594 1865	1589 1818	1800 2091	1768 2020	1952 2134	1758 2032	1787 2045
6-24	2126	2259	1865	1818	2091	2020	2134	2032	2045

2155 2298 1902 2080 2103 6-24 1873 2172 2144 2177 0-24 2138 2210 2358 1963 1927 2232 2233 2254 2168



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Job No AUNSW2763
Client Bitzios Consulting
Site Cabarita Rd

Location btw Edgewood Cres & Waine St

Site No ATC 3
Start Date 1-Apr-22
Description Volume St

Description Volume Summary

Direction Combined



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	244	300	245	245	207	222	309	Ave	Ave
PM Peak	260	286	230	195	227	292	362	2961	3057
0:00	11	3	9	12	18	38	38	11	18
1:00	6	7	4	7	4	25	16	6	10
2:00	2	7	4	2	12	17	22	5	9
3:00	6	4	3	5	1	1	8	4	4
4:00	10	9	13	10	11	26	10	11	13
5:00	28	42	37	32	35	21	8	35	29
6:00	107	90	82	68	71	40	40	84	71
7:00	241	300	245	245	204	71	85	247	199
8:00	244	207	243	178	207	132	164	216	196
9:00	214	187	180	172	176	181	218	186	190
10:00	224	200	156	162	180	211	285	184	203
11:00	212	251	143	142	187	222	309	187	209
12:00	221	200	125	159	175	194	362	176	205
13:00	215	194	126	162	184	190	295	176	195
14:00	244	220	152	168	192	292	292	195	223
15:00	228	239	161	179	180	270	334	197	227
16:00	219	217	186	184	205	264	284	202	223
17:00	260	286	211	195	227	244	243	236	238
18:00	211	258	230	168	207	221	169	215	209
19:00	125	182	120	115	148	127	89	138	129
20:00	87	98	79	83	92	77	90	88	87
21:00	53	88	98	65	87	79	55	78	75
22:00	35	43	43	73	72	90	40	53	57
23:00	17	29	20	34	58	92	14	32	38
Total	3220	3361	2670	2620	2933	3125	3470	2961	3057
7-19 6-22	2733	2759	2158	2114	2324 2722	2492	3040	2418	2517
6-24	3105 3157	3217 3289	2537 2600	2445 2552	2852	2815 2997	3314 3368	2805 2890	2879 2974
<u> </u>	313,	3203	2000	2332	2002	233,	3300	2000	237 1

AUNSW2763 ATC Report Volume Summary 24/06/2022

3361

2670

2620

2933

3125

3470

2961

3057

3220

0-24



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Job No AUNSW2763

Client **Bitzios Consulting**

Site Cabarita Rd

Location btw Edgewood Cres & Waine St

Site No ATC 3 Start Date 1-Apr-22

Description Volume Summary

Direction



			D	ay of We	⊇k				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	120	143	105	109	94	113	164	Ave	Ave
PM Peak	145	157	143	103	129	181	206	1478	1527
0:00	7	1	5	5	9	16	18	5	9
1:00	1	5	1	3	1	11	8	2	4
2:00	2	2	3	1	6	9	12	3	5
3:00	4	1	1	3	0	1	6	2	2
4:00	4	4	6	4	4	12	4	4	5
5:00	11	21	13	14	19	12	5	16	14
6:00	48	41	33	28	29	16	16	36	30
7:00	110	143	103	109	94	31	43	112	90
8:00	109	91	105	67	80	56	77	90	84
9:00	89	77	71	86	74	76	109	79	83
10:00	117	102	75	72	84	90	152	90	99
11:00	120	123	66	69	79	113	164	91	105
12:00	115	105	64	81	93	109	206	92	110
13:00	100	94	65	86	89	107	156	87	100
14:00	104	107	67	84	93	181	141	91	111
15:00	110	121	92	100	94	117	150	103	112
16:00	124	120	108	98	119	145	123	114	120
17:00	145	157	114	103	129	120	97	130	124
18:00	117	138	143	92	119	113	82	122	115
19:00	60	99	65	68	70	66	49	72	68
20:00	53	49	47	47	60	40	45	51	49
21:00	30	46	38	36	46	42	34	39	39
22:00	20	21	24	39	36	47	21	28	30
23:00	9	17	14	20	33	42	6	19	20
Total	1609	1685	1323	1315	1460	1572	1724	1478	1527
7-19	1360	1378	1073	1047	1147	1258	1500	1201	1252
6-22	1551	1613	1256	1047	1352	1422	1644	1400	1438
6-24	1580	1651	1294	1285	1421	1511	1671	1446	1488

0-24 1323 1609 1685 1315 1460 1572 1724 1478 1527



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Job No AUNSW2763
Client Bitzios Consulting
Site Cabarita Rd

Location btw Edgewood Cres & Waine St

Site No ATC 3
Start Date 1-Apr-22

Description Volume Summary

Direction SB



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	135	157	142	136	127	121	145	Ave	Ave
PM Peak	140	129	97	92	99	153	184	1482	1530
0:00	4	2	4	7	9	22	20	5	10
1:00	5	2	3	4	3	14	8	3	6
2:00	0	5	1	1	6	8	10	3	4
3:00	2	3	2	2	1	0	2	2	2
4:00	6	5	7	6	7	14	6	6	7
5:00	17	21	24	18	16	9	3	19	15
6:00	59	49	49	40	42	24	24	48	41
7:00	131	157	142	136	110	40	42	135	108
8:00	135	116	138	111	127	76	87	125	113
9:00	125	110	109	86	102	105	109	106	107
10:00	107	98	81	90	96	121	133	94	104
11:00	92	128	77	73	108	109	145	96	105
12:00	106	95	61	78	82	85	156	84	95
13:00	115	100	61	76	95	83	139	89	96
14:00	140	113	85	84	99	111	151	104	112
15:00	118	118	69	79	86	153	184	94	115
16:00	95	97	78	86	86	119	161	88	103
17:00	115	129	97	92	98	124	146	106	114
18:00	94	120	87	76	88	108	87	93	94
19:00	65	83	55	47	78	61	40	66	61
20:00	34	49	32	36	32	37	45	37	38
21:00	23	42	60	29	41	37	21	39	36
22:00	15	22	19	34	36	43	19	25	27
23:00	8	12	6	14	25	50	8	13	18
Total	1611	1676	1347	1305	1473	1553	1746	1482	1530
7-19	1373	1381	1085	1067	1177	1234	1540	1217	1265
6-22	1554	1604	1281	1219	1370	1393	1670	1406	1442

7-19	1373	1381	1085	1067	1177	1234	1540	1217	1265
6-22	1554	1604	1281	1219	1370	1393	1670	1406	1442
6-24	1577	1638	1306	1267	1431	1486	1697	1444	1486
0-24	1611	1676	1347	1305	1473	1553	1746	1482	1530

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Job No AUNSW2763 Client Bitzios Consulting

Site Bertram St

Location btw Bayard St & Bayard Ln

Site No ATC 4
Start Date 1-Apr-22

Description Volume Summary

Direction Combined



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	260	322	317	320	303	318	275	Ave	Ave
PM Peak	332	328	349	315	323	284	250	3737	3633
0:00	20	9	9	13	19	27	40	14	20
1:00	4	7	11	9	7	28	33	8	14
2:00	2	3	2	8	5	19	15	4	8
3:00	12	8	11	11	4	17	13	9	11
4:00	10	16	19	23	12	5	7	16	13
5:00	51	61	55	57	44	18	16	54	43
6:00	143	174	152	135	75	55	32	136	109
7:00	258	286	268	249	244	122	77	261	215
8:00	260	322	317	320	303	172	138	304	262
9:00	231	207	252	252	277	244	253	244	245
10:00	196	205	204	189	218	302	275	202	227
11:00	212	206	175	191	224	318	272	202	228
12:00	203	191	208	208	273	284	250	217	231
13:00	172	189	168	171	221	258	244	184	203
14:00	171	223	184	208	219	240	208	201	208
15:00	263	273	304	315	298	255	204	291	273
16:00	304	282	293	293	252	223	236	285	269
17:00	332	328	349	306	323	256	235	328	304
18:00	297	290	264	256	248	246	153	271	251
19:00	163	174	178	188	238	176	123	188	177
20:00	95	137	125	134	151	119	97	128	123
21:00	76	87	92	99	93	122	70	89	91
22:00	50	49	49	56	101	108	59	61	67
23:00	23	29	25	47	78	59	26	40	41
Total	3548	3756	3714	3738	3927	3673	3076	3737	3633
7-19	2899	3002	2986	2958	3100	2920	2545	2989	2916

7-19	2899	3002	2986	2958	3100	2920	2545	2989	2916
6-22	3376	3574	3533	3514	3657	3392	2867	3531	3416
6-24	3449	3652	3607	3617	3836	3559	2952	3632	3525
0-24	3548	3756	3714	3738	3927	3673	3076	3737	3633

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Job No AUNSW2763

Client Bitzios Consulting

Site Bertram St

Location btw Bayard St & Bayard Ln

Site No ATC 4
Start Date 1-Apr-22

Description Volume Summary

Direction NB



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	124	156	161	159	159	149	128	Ave	Ave
PM Peak	192	174	185	185	174	141	134	1895	1818
0:00	8	2	5	5	11	15	22	6	10
1:00	2	5	6	6	4	17	21	5	9
2:00	0	3	2	4	2	7	8	2	4
3:00	5	3	6	5	1	8	8	4	5
4:00	4	7	7	12	4	2	1	7	5
5:00	17	25	21	23	22	12	4	22	18
6:00	47	57	45	39	29	17	12	43	35
7:00	106	123	115	114	95	41	29	111	89
8:00	124	156	161	159	159	68	57	152	126
9:00	124	101	134	121	139	109	103	124	119
10:00	88	89	93	82	100	139	109	90	100
11:00	95	104	75	98	103	149	128	95	107
12:00	111	101	97	96	126	132	115	106	111
13:00	92	93	84	83	104	141	116	91	102
14:00	80	114	78	100	96	121	114	94	100
15:00	147	157	185	185	174	129	109	170	155
16:00	178	155	151	149	136	123	134	154	147
17:00	192	174	176	167	170	132	110	176	160
18:00	178	170	152	133	140	118	81	155	139
19:00	92	98	99	115	120	66	66	105	94
20:00	57	80	80	84	74	66	53	75	71
21:00	49	52	55	53	43	48	41	50	49
22:00	33	34	27	32	55	66	33	36	40
23:00	13	15	14	30	45	37	14	23	24
Total	1842	1918	1868	1895	1952	1763	1488	1895	1818
7-19	1515	1537	1501	1487	1542	1402	1205	1516	1456
6-22 6-24	1760 1806	1824 1873	1780 1821	1778 1840	1808 1908	1599 1702	1377 1424	1790 1850	1704 1768
0-24	1000	10/3	1071	1040	1300	1/02	1424	1000	1/00

AUNSW2763 ATC Report Volume Summary 24/06/2022

1918

1868

1895

1952

1763

1488

1895

1818

1842

0-24



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Job No AUNSW2763

Client **Bitzios Consulting**

Site Bertram St

Location btw Bayard St & Bayard Ln

Site No ATC 4 Start Date 1-Apr-22

Description Volume Summary

Direction SB



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	152	166	156	161	149	169	166	Ave	Ave
PM Peak	140	154	173	144	153	152	135	1842	1815
0:00	12	7	4	8	8	12	18	8	10
1:00	2	2	5	3	3	11	12	3	5
2:00	2	0	0	4	3	12	7	2	4
3:00	7	5	5	6	3	9	5	5	6
4:00	6	9	12	11	8	3	6	9	8
5:00	34	36	34	34	22	6	12	32	25
6:00	96	117	107	96	46	38	20	92	74
7:00	152	163	153	135	149	81	48	150	126
8:00	136	166	156	161	144	104	81	153	135
9:00	107	106	118	131	138	135	150	120	126
10:00	108	116	111	107	118	163	166	112	127
11:00	117	102	100	93	121	169	144	107	121
12:00	92	90	111	112	147	152	135	110	120
13:00	80	96	84	88	117	117	128	93	101
14:00	91	109	106	108	123	119	94	107	107
15:00	116	116	119	130	124	126	95	121	118
16:00	126	127	142	144	116	100	102	131	122
17:00	140	154	173	139	153	124	125	152	144
18:00	119	120	112	123	108	128	72	116	112
19:00	71	76	79	73	118	110	57	83	83
20:00	38	57	45	50	77	53	44	53	52
21:00	27	35	37	46	50	74	29	39	43
22:00	17	15	22	24	46	42	26	25	27
23:00	10	14	11	17	33	22	12	17	17
Total	1706	1838	1846	1843	1975	1910	1588	1842	1815
7.10	1221	1.165	1.105	4.474	4550	4540	1210	4.470	1160
7-19 6-22	1384 1616	1465 1750	1485 1753	1471 1736	1558 1849	1518 1793	1340 1490	1473 1741	1460 1712
6-24	1643	1779	1786	1777	1928	1857	1528	1783	1757

7-19	1384	1465	1485	1471	1558	1518	1340	1473	1460
6-22	1616	1750	1753	1736	1849	1793	1490	1741	1712
6-24	1643	1779	1786	1777	1928	1857	1528	1783	1757
0-24	1706	1838	1846	1843	1975	1910	1588	1842	1815

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Job No AUNSW2763
Client Bitzios Consulting
Site Tennyson Rd

Location btw Adams Ln Herbert St

Site No ATC 5
Start Date 1-Apr-22

Description Volume Summary

Direction Combined



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	745	742	874	813	738	658	650	Ave	Ave
PM Peak	741	740	832	772	745	653	615	9025	8707
0:00	24	22	36	39	29	72	122	30	49
1:00	10	6	21	15	13	40	36	13	20
2:00	14	21	17	9	12	25	47	15	21
3:00	19	23	21	10	25	28	16	20	20
4:00	32	43	40	46	27	27	6	38	32
5:00	124	142	118	107	112	54	33	121	99
6:00	320	327	310	294	256	125	82	301	245
7:00	633	700	660	610	573	263	197	635	519
8:00	745	742	874	813	738	430	360	782	672
9:00	638	568	661	691	651	581	550	642	620
10:00	530	527	514	535	481	646	635	517	553
11:00	528	420	522	489	511	658	650	494	540
12:00	477	510	544	543	527	653	615	520	553
13:00	464	438	485	460	347	633	530	439	480
14:00	519	547	544	550	579	556	530	548	546
15:00	724	682	803	772	741	577	504	744	686
16:00	611	610	697	619	641	589	578	636	621
17:00	741	740	832	759	745	620	488	763	704
18:00	624	638	655	641	636	577	448	639	603
19:00	373	425	416	447	456	492	299	423	415
20:00	267	280	286	305	325	280	241	293	283
21:00	152	214	210	227	193	222	168	199	198
22:00	107	90	130	126	208	209	99	132	138
23:00	37	60	67	79	162	174	61	81	91
Total	8713	8775	9463	9186	8988	8531	7295	9025	8707
		1	1	1			1		
7-19	7234	7122	7791	7482	7170	6783	6085	7360	7095
6-22	8346	8368	9013	8755	8400	7902	6875	8576	8237

7-19	7234	7122	7791	7482	7170	6783	6085	7360	7095
6-22	8346	8368	9013	8755	8400	7902	6875	8576	8237
6-24	8490	8518	9210	8960	8770	8285	7035	8790	8467
0-24	8713	8775	9463	9186	8988	8531	7295	9025	8707

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Job No AUNSW2763
Client Bitzios Consulting
Site Tennyson Rd

Location btw Adams Ln Herbert St

Site No ATC 5
Start Date 1-Apr-22

Description Volume Summary

Direction NB



			D	ay of Wee	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	292	260	297	324	298	294	301	Ave	Ave
PM Peak	427	437	473	449	442	356	329	4418	4316
0:00	13	9	20	21	16	46	70	16	28
1:00	7	2	12	11	9	24	24	8	13
2:00	9	10	7	6	8	16	24	8	11
3:00	8	10	8	4	12	17	11	8	10
4:00	13	19	17	21	15	12	4	17	14
5:00	43	40	34	31	41	23	10	38	32
6:00	90	101	85	91	78	51	29	89	75
7:00	205	242	207	190	210	112	96	211	180
8:00	250	260	297	278	258	169	129	269	234
9:00	292	259	280	324	298	213	253	291	274
10:00	228	244	226	235	210	294	278	229	245
11:00	262	202	232	225	254	286	301	235	252
12:00	256	280	284	276	273	334	329	274	290
13:00	233	220	256	241	185	356	274	227	252
14:00	280	285	258	250	299	312	280	274	281
15:00	353	356	394	361	384	320	270	370	348
16:00	355	364	414	354	406	335	305	379	362
17:00	427	437	473	449	442	354	271	446	408
18:00	357	365	356	362	365	336	251	361	342
19:00	219	256	232	245	280	300	168	246	243
20:00	154	166	165	189	200	161	126	175	166
21:00	87	144	120	129	112	126	90	118	115
22:00	62	60	81	71	126	126	63	80	84
23:00	24	33	38	52	104	107	40	50	57
Total	4227	4364	4496	4416	4585	4430	3696	4418	4316
7-19 6-22	3498	3514	3677	3545 4199	3584 4254	3421	3037	3564	3468
6-24	4048 4134	4181 4274	4279 4398	4199	4254	4059 4292	3450 3553	4192 4322	4067 4208
0-24	4227	4364	4496	4416	4585	4430	3696	4418	4316

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Job No AUNSW2763
Client Bitzios Consulting

Site Tennyson Rd

Location btw Adams Ln Herbert St

Site No ATC 5
Start Date 1-Apr-22

Description Volume Summary

Direction SB



			D	ay of We	ek				
Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	4-Apr	5-Apr	6-Apr	7-Apr	1-Apr	2-Apr	3-Apr	W'Day	7 Day
AM Peak	495	482	577	535	480	372	357	Ave	Ave
PM Peak	371	326	409	411	357	319	286	4607	4391
0:00	11	13	16	18	13	26	52	14	21
1:00	3	4	9	4	4	16	12	5	7
2:00	5	11	10	3	4	9	23	7	9
3:00	11	13	13	6	13	11	5	11	10
4:00	19	24	23	25	12	15	2	21	17
5:00	81	102	84	76	71	31	23	83	67
6:00	230	226	225	203	178	74	53	212	170
7:00	428	458	453	420	363	151	101	424	339
8:00	495	482	577	535	480	261	231	514	437
9:00	346	309	381	367	353	368	297	351	346
10:00	302	283	288	300	271	352	357	289	308
11:00	266	218	290	264	257	372	349	259	288
12:00	221	230	260	267	254	319	286	246	262
13:00	231	218	229	219	162	277	256	212	227
14:00	239	262	286	300	280	244	250	273	266
15:00	371	326	409	411	357	257	234	375	338
16:00	256	246	283	265	235	254	273	257	259
17:00	314	303	359	310	303	266	217	318	296
18:00	267	273	299	279	271	241	197	278	261
19:00	154	169	184	202	176	192	131	177	173
20:00	113	114	121	116	125	119	115	118	118
21:00	65	70	90	98	81	96	78	81	83
22:00	45	30	49	55	82	83	36	52	54
23:00	13	27	29	27	58	67	21	31	35
Total	4486	4411	4967	4770	4403	4101	3599	4607	4391
7-19	3736	3608	4114	3937	3586	3362	3048	3796	3627
6-22	4298	4187	4734	4556	4146	3843	3425	4384	4170

7-19	3736	3608	4114	3937	3586	3362	3048	3796	3627
6-22	4298	4187	4734	4556	4146	3843	3425	4384	4170
6-24	4356	4244	4812	4638	4286	3993	3482	4467	4259
0-24	4486	4411	4967	4770	4403	4101	3599	4607	4391



CfeIT bob.white@cfeit.com (02) 9740 8600 One Page Summary Lat/Long: S33 50.386 / E151 06.362 Count Number 9648 HILLY STREET, MORTLAKE: Between WHITTAKER STREET & NORTHCOTE STREET (bidirectional) Street Location Midblock House No.12 on ELP GL65254 SOUTH **NORTH** COMBINED Speed Limit 04-FEB-21 Start Date 1600 37 Start Time Weekly 50th Percentile Speed 37 37 7 DAYS Duration 47 47 Weekly 85th Percentile Speed 47 1 HOUR Interval **Five Day AADT** 945 761 1706 930 Seven Day AADT 764 1694 09-FEB-21 THU 04-FEB-21 05-FEB-21 SUN 07-FEB-21 MON 08-FEB-21 TUE WED SAT SEVENDAY AVERAGE SOUTH NORTH BIDIR SOUTHNORTH BIDIT SOUTHNORTH BIDIT SOUTH NORTH BIDIr SOUTHNORTH BIDIR OUTHNORTH BIDIR SOUTH NORTH BIDIr 47.1 37.2 5.571 6.286 .5714 .8571 80 60 SOUTH 40 20 0 :12pm Fri :6pm .6pm :6am 12pm 12pm 12pm Wed 12pm Thu 6pm 12pm Sun 12pm Sat Mon 80 60 NORTH 40 20 0 :12pm . 6pm :12pm Wed :6pm :12pm Mon 6pm :12pm Thu :12pm :12pm Tue opm 6pm 6pm Sat Sun 90.3 9.5 .2 89.5 10.5 95.9 3.8 .3 145 166 1330 1713 62 81 122 135 146 176 62 65 64 105 123 182 57 102 117 152 143 165 72 69 147 155 71 98 729 930 32 783 2 110 135 162 566 709 776 989 595 755 612 794 719 948 594 736 1334 1694 643 805 676 859 1397 1750 735 958 29 800 2 124 0 1 1 1 0 0 0 0 757 971 1328 1736 1409 1756 65 1572 4 114 0 0 0 0 0 0 671 836 1242 1568 62 1480 5 161 0 2 1 65 1480 20: 708: 0: 129: 0: 0: 0: 0: 0: 0: 0: 0: 35 721 1 31 4 1 0 33 777 2 130 3 2 1 0 0 0 0 30 829 3 88 0 1 0 0 0 0 44 1364 0 156 0 3 1 0 0 0 0 0 29 705 0 26 1 0 0 0 0 0 29 839 0 120 0 1 0 0 0 0 0 58 1544 0 146 1 0 0 0 0 0 33 680 3 37 0 1 0 0 0 38 801 30 711 0 42 4 1 0 0 0 0 0 63 1488 2 172 7 3 1 0 0 0 0 35 743 1 26 0 0 0 0 0 0 45 660 1 23 0 5 0 44 730 2 57 1 2 0 0 0 0 0 2 125 0 3 0 0 0 1 0 141 60 SOUTH :12pm :12pm :12pm .6pm :6pm :6am 12pm Tue :12pm Wed . Gpm :12pm Sun 150 100 NORTH 50 :6pm :6am 12pm Tue 12pm Wed 6am 12pm 6am 12pm Sun Mon 쿨

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Classification Data

Count Number Street Location		8 LY STREI block Hou			: Betw			R STRE	ET & NC		ng : S33 TE STR					: arriagewa	У	
MON	08-F	EB-2	1			Star	t Date t Time ation		04-F 1600 7 DA 1 HO	YS		s	ive Day even Da /eekend	у	ADT 1706 1694 1664	Short cls 1-2 90.4 91.3 93.8	Med cls 3-5 9.6 8.6 6.1	Long cls 6+ .1 .1 %
Time.	00	04	00	00				07			40			40		7	0.1	
Time	00	01	02	03	04	05	06	07	80	09	10	11	12	13	Total			
Midnight - 1am	0	3	0	1	0	0	0	0	0	0	0	0	0	0	4	100 -		
lam - 2am	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	200 -		
2am - 3am	0	5	0	1	0	0	0	0	0	0	0	0	0	0	6	300 - 400 -		
Bam - 4am	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	500	\	
lam - 5am	0	6	0	1	0	0	0	0	0	0	0	0	0	0	7	600 -		
5am - 6am	0	19	0	4	0	0	0	0	0	0	0	0	0	0	23	700 -		
6am - 7am	2	56	0	8	0	1	0	0	0	0	0	0	0	0	67	800 -		
7am - 8am	6	103	0	13	0	0	0	0	0	0	0	0	0	0	122	900 -		
Bam - 9am	3	84	0	11	0	1	0	0	0	0	0	0	0	0	99	1000 -		
9am - 10am	5	88	0	8	0	1	0	0	0	0	0	0	0	0	102	1100 -		
10am - 11am	0	74	0	7	0	0	0	0	0	0	0	0	0	0	81	1200 -		\longrightarrow
11am - Midday	1	79	0	10	0	0	0	0	0	0	0	0	0	0	90	Hour 1300 -		$ \downarrow$ \downarrow \downarrow
Midday - 1pm	0	74	0	11	0	0	0	0	0	0	0	0	0	0	85	1400 -		\leftarrow
1pm - 2pm	4	59	0	5	0	0	0	0	0	0	0	0	0	0	68	1500 -		\rightarrow
2pm - 3pm	3	76	0	7	0	0	0	0	0	0	0	0	0	0	86	1600 -		+
3pm - 4pm	2	114	0	8	0	0	0	0	0	0	0	0	0	0	124	1700 -		
4pm - 5pm	4	112	0	16	0	0	1	0	0	0	0	0	0	0	133	1800 -		
5pm - 6pm	5	115	0	15	0	0	0	0	0	0	0	0	0	0	135	1900 -		
Spm - 7pm	1	107	0	9	0	0	0	0	0	0	0	0	0	0	117	2000 -		
7pm - 8pm	5	71	0	9	0	0	0	0	0	0	0	0	0	0	85	2100 -		
3pm - 9pm	0	38	0	4	0	0	0	0	0	0	0	0	0	0	42	2200 -		
9pm - 10pm	2	39	0	3	0	0	0	0	0	0	0	0	0	0	44	2300 -		
10pm - 11pm	1	19	0	2	0	0	0	0	0	0	0	0	0	0	22	2400 -	 	• • • • • •
11pm - Midnight	0	14	0	3	0	0	0	0	0	0	0	0	0	0	17	e	8 5 8	80 100 100
otal	44	1364	0	156	0	3	1	0	0	0	0	0	0	0	1568		Ve	ehicles
of Total	3	87		10														

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Page: 1

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Classification Data

Count Number	964	8			Ref	: CB	AY			Lat/Lo	ng : S33	3 50.386	/ E151	06.362				
Street	HIL	LY STRE	ET, MO	RTLAKE	: Betw	een WH	ITTAKE	R STRE	ET & NC	RTHCC	TE STR	EET (bid	direction	nal) :				
Location	Mid	block Hou	ıse No.1	2 on EL	P GL652	254									C	arriagewa	У	
							rt Date		04-F 1600	EB-21			ive Day		ADT 1706	Short cls 1-2 90.4	Med cls 3-5 9.6	Long cls 6+
TUE	09-F	EB-2	1				ation		7 DA 1 HC	YS		s	even Da leekend		1694 1664	91.3 93.8	8.6 6.1	.1 .1 % .1
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	2	0	2	0	0	0	0	0	0	0	0	0	0	4	100 -		
lam - 2am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		200 -		++++
2am - 3am	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	300 -		
Bam - 4am	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	400 -		
1am - 5am	0	14	0	1	0	0	0	0	0	0	0	0	0	0	15	500 -	\backslash	
5am - 6am	0	22	0	4	0	0	0	0	0	0	0	0	0	0	26	600 -		
6am - 7am	5	61	0	6	0	0	0	0	0	0	0	0	0	0	72	700 - 800 -		
7am - 8am	2	109	0	12	1	0	0	0	0	0	0	0	0	0	124	900 -		
Bam - 9am	5	127	0	13	0	1	0	0	0	0	0	0	0	0	146	1000 -		
9am - 10am	9	90	0	7	0	0	0	0	0	0	0	0	0	0	106	1100 -		4
10am - 11am	3	67	0	4	0	0	0	0	0	0	0	0	0	0	74	1200 -	\longrightarrow	
11am - Midday	0	80	0	7	0	0	0	0	0	0	0	0	0	0	87	Hour 1300 -		
Midday - 1pm	4	78	0	6	0	0	0	0	0	0	0	0	0	0	88	1400 -		
1pm - 2pm	0	61	0	6	0	0	0	0	0	0	0	0	0	0	67	1500 -		+++
2pm - 3pm	1	82	0	11	0	0	0	0	0	0	0	0	0	0	94	1600 -		+
3pm - 4pm	2	127	0	10	0	0	0	0	0	0	0	0	0	0	139	1700 -		+++
1pm - 5pm	7	158	0	11	0	0	0	0	0	0	0	0	0	0	176	1800 -		++++
5pm - 6pm	3	150	0	16	0	0	0	0	0	0	0	0	0	0	169	1900 -		
6pm - 7pm	4	110	0	13	0	0	0	0	0	0	0	0	0	0	127	2000 -		
7pm - 8pm	5	66	0	6	0	0	0	0	0	0	0	0	0	0	77	2100 -		
3pm - 9pm	6	60	0	4	0	0	0	0	0	0	0	0	0	0	70	2200 -		
9pm - 10pm	0	42	0	4	0	0	0	0	0	0	0	0	0	0	46	2300 -		
10pm - 11pm	2	29	0	1	0	0	0	0	0	0	0	0	0	0	32	2400 -	4-1-1-1	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
11pm - Midnight	0	7	0	2	0	0	0	0	0	0	0	0	0	0	9	e		5 13 15 15 18 ehicles
otal	58	1544	0	146	1	1	0	0	0	0	0	0	0	0	1750		Ve	emoles
6 of Total	3	88		8														

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Classification Data

Street		LY STRE	ET MOI	DTI AKE		: CB		D STDE	ET & NC		ng : S33							
Location		olock Hou					IIIAKEI	K SIKE	EI OLING	КІПСО	IL SIK	EET (DIC	inection	iai) i	C	`arriagewa	ay	
							t Date t Time		04-F 1600	EB-21		Fi	ve Day		ADT 1706	Short cls 1-2 90.4	Med cls 3-5 9.6	Long cls 6+
WED	10-F	EB-2	1			Dura	ation rval		7 DA 1 HC				even Da eekend	у	1694 1664	91.3 93.8	8.6 6.1	.1 [%] .1
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	3	8	0	3	0	0	0	0	0	0	0	0	0	0	14	100 -	17	
1am - 2am	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	200		
2am - 3am	0	0	0	0	0	0	0	0	0	0	0	0	0	0		300 -		
3am - 4am	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	400 -		
4am - 5am	0	11	0	2	0	0	0	0	0	0	0	0	0	0	13	500	1\	
5am - 6am	1	17	0	3	0	0	0	0	0	0	0	0	0	0	21	600 ·		
6am - 7am	2	54	0	7	0	0	0	0	0	0	0	0	0	0	63	800		
7am - 8am	2	105	1	10	0	1	0	0	0	0	0	0	0	0	119	900		
8am - 9am	5	126	0	13	0	0	0	0	0	0	1	0	0	0	145	1000		
9am - 10am	0	104	1	10	0	0	1	0	0	0	0	0	0	0	116	1100 -		
10am - 11am	7	68	0	7	0	0	0	0	0	0	0	0	0	0	82	1200 -	1 (
11am - Midday	2	58	1	9	0	0	0	0	0	0	0	0	0	0	70	Hour 1300 -	 	
Midday - 1pm	5	64	0	11	0	0	0	0	0	0	0	0	0	0	80	1400 -	+	ackslash
1pm - 2pm	3	71	0	9	0	0	0	1	0	0	0	0	0	0	84	1500 -	+	\longrightarrow
2pm - 3pm	5	76	1	11	0	0	0	0	0	0	0	0	0	0	93	1600 -		
3pm - 4pm	3	110	0	11	0	0	0	0	0	0	0	0	0	0	124	1700 -		++
4pm - 5pm	1	132	1	9	0	0	0	0	0	0	0	0	0	0	143	1800 -		
5pm - 6pm	6	145	0	14	0	1	0	0	0	0	0	0	0	0	166	1900 -		
6pm - 7pm	2	96	0	10	0	0	0	0	0	0	0	0	0	0	108	2000 •		
7pm - 8pm	5	73	0	7	0	0	0	0	0	0	0	0	0	0	85	2100 -		
8pm - 9pm	7	69	0	5	0	0	0	0	0	0	0	0	0	0	81	2200 -		
9pm - 10pm	3	43	0	5	0	0	0	0	0	0	0	0	0	0	51	2300 -	1 1/ 1 1	
10pm - 11pm	0	26	0	3	0	0	0	0	0	0	0	0	0	0	29			
11pm - Midnight	0	22	0	2	0	0	0	0	0	0	0	0	0	0	24	•	8 8 8 6 °C	8 8 8 8 ehicles
otal	62	1480	5	161	0	2	1	1	0	0	1	0	0	0	1713		Ve	incles

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Classification Data

Count Number Street Location		3 _Y STRE I block Hou			: Betw			R STRE	ET & NC		ong : S33 OTE STR					arriagewa	у	
						Star Star	t Date		04-F 1600 7 DA				ive Day even Da	w	ADT 1706	Short cls 1-2 90.4 91.3	Med cls 3-5 9.6 8.6	Long cls 6+ .1 .1 %
THU	04-F	EB-2	1			Inte	ation rval		1 HC				even ba	у	1694 1664	93.8	6.1	.1
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	9	0	2	1	0	0	0	0	0	0	0	0	0	12	100]	// 	
1am - 2am	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7	200 -	/ 	
2am - 3am	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	300 -	 	
Bam - 4am	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	400 -		
1am - 5am	0	9	0	2	0	0	0	0	0	0	0	0	0	0	11	500 -	\backslash	
5am - 6am	1	18	0	3	0	0	0	0	0	0	0	0	0	0	22	600 -		
6am - 7am	3	63	0	9	0	1	0	0	0	0	0	0	0	0	76	700 - 800 -		
7am - 8am	5	103	2	12	0	0	0	0	0	0	0	0	0	0	122	900 -		
Bam - 9am	8	107	0	7	0	1	0	0	0	0	0	0	0	0	123	1000 -		
9am - 10am	1	106	0	11	1	0	0	0	0	0	0	0	0	0	119	1100 -		
10am - 11am	9	69	1	6	0	2	0	0	0	0	0	0	1	0	88	1200 -		
11am - Midday	4	76	0	11	0	0	0	0	0	1	0	0	0	0	92	Hour 1300 -		
Midday - 1pm	3	62	0	6	0	0	0	1	0	0	0	0	0	0	72	1400 -	+++++	
lpm - 2pm	1	63	0	9	0	0	0	0	0	0	0	0	0	0	73	1500 -	+++	
2pm - 3pm	3	67	0	8	1	0	0	0	0	0	0	0	0	0	79	1600 -		\longrightarrow
3pm - 4pm	1	114	0	11	0	0	0	0	0	0	0	0	0	0	126	1700 -	++++	++
1pm - 5pm	7	132	0	16	1	0	0	0	0	0	0	0	0	0	156	1800 -	++++	++++>
5pm - 6pm	5	164	0	13	0	0	0	0	0	0	0	0	0	0	182	1900 -		
Spm - 7pm	8	117	0	12	0	0	0	0	0	0	0	0	0	0	137	2000 -	 	
7pm - 8pm	6	74	0	5	0	0	0	0	0	0	0	0	0	0	85	2100 -		
3pm - 9pm	5	66	0	5	0	0	0	0	0	0	0	0	0	0	76	2200 -		
9pm - 10pm	1	47	0	3	0	0	0	0	0	0	0	0	0	0	51	2300 -		
10pm - 11pm	0	34	0	3	0	0	0	0	0	0	0	0	0	0	37		-1	,,,,,,, ,,
11pm - Midnight	2	10	0	2	0	0	0	0	0	0	0	0	0	0	14	0		5 13 15 15 15 Phicles
otal	73	1522	3	156	4	4	0	1	0	1	0	0	1	0	1765		Ve	:iiicies

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Classification Data

Count Number Street Location		8 LY STREI block Hou			: Betw			R STRE	ET & NC		ong : S33 OTE STR					arriagewa	V	
		EB-2°				Star Star	t Date t Time ation		04-F 1600 7 DA				ive Day even Da	v	ADT 1706 1694	Short cls 1-2 90.4 91.3	Med cls 3-5 9.6 8.6	Long cls 6+ .1 .1 %
FRI	U3-F	-CD-2	1			Inte			1 HC				eekend	,	1664	93.8	6.1	.1
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	1	10	0	2	0	0	0	0	0	0	0	0	0	0	13	100	/	
lam - 2am	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	200 -		
2am - 3am	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	300 -		
Bam - 4am	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	400 -		
lam - 5am	1	4	0	2	0	0	0	0	0	0	0	0	0	0	7	500 -		
iam - 6am	1	19	0	4	1	0	0	0	0	0	0	0	0	0	25	600 -		
Sam - 7am	5	59	0	10	2	1	0	0	0	0	0	0	0	0	77	700 -		
7am - 8am	3	89	0	16	1	0	0	0	0	0	0	0	0	0	109	800 - 900 -		
Bam - 9am	7	95	0	14	0	1	0	0	0	0	0	0	0	0	117	1000 -		1
9am - 10am	2	94	0	11	1	0	0	0	0	0	0	0	0	0	108	1100 -		
10am - 11am	2	76	0	7	0	0	1	0	0	0	0	0	0	0	86	1200 -		
11am - Midday	3	73	0	10	0	1	0	0	0	0	0	0	0	0	87	Hour 1300 -	<u> </u>)
Midday - 1pm	1	78	0	13	0	0	0	0	0	0	0	0	0	0	92	1400 -	/	<u> </u>
lpm - 2pm	5	64	0	13	0	0	0	0	0	0	0	0	0	0	82	1500 -		
2pm - 3pm	1	72	1	5	2	0	0	0	0	0	0	0	0	0	81	1600 -		
3pm - 4pm	4	109	0	10	0	0	0	0	0	0	0	0	0	0	123	1700 -		+
lpm - 5pm	1	134	0	16	0	0	0	0	0	0	0	0	0	0	151	1800 -		+
5pm - 6pm	4	139	0	9	0	0	0	0	0	0	0	0	0	0	152	1900 -		+
Spm - 7pm	4	126	0	10	0	0	0	0	0	0	0	0	0	0	140	2000 -		
7pm - 8pm	7	78	0	4	0	0	0	0	0	0	0	0	0	0	89	2100 -		
3pm - 9pm	9	52	1	4	0	0	0	0	0	0	0	0	0	0	66	2200 -		
9pm - 10pm	2	50	0	5	0	0	0	0	0	0	0	0	0	0	57	2300 -		
10pm - 11pm	0	26	0	5	0	0	0	0	0	0	0	0	0	0	31	2400 -		1 ' '
11pm - Midnight	0	33	0	2	0	0	0	0	0	0	0	0	0	0	35	•	8	150
	63	1488	2	172	7	3	1	0	0	0	0	0	0	0	1736		Ve	hicles

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Classification Data

Count Number Street	9648 HILI	B LY STREI	ET, MOI	RTLAKE		: CB een WHI		R STREI	ET & NO		_	3 50.386 EET (bio						
Location	Midl	olock Hou	se No.1	2 on ELI	GL652	254						•		·	C	arriagewa	у	
SAT	06-F	EB-2	1			Star	t Date t Time ation		1600 7 DA	YS		S	ve Day even Da	у	ADT 1706 1694	Short cls 1-2 90.4 91.3	Med cls 3-5 9.6 8.6	Long cls 6+ .1 .1 %
_					$\underline{\hspace{1cm}}$	Inter	rval		1 HC	UR			eekend		1664	93.8	6.1	.1
Time	00	01	02	03	04	05	06	07	80	09	10	11	12	13	Total			
Midnight - 1am	0	22	0	2	0	0	0	0	0	0	0	0	0	0	24	100]		
1am - 2am	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	200 -		
2am - 3am	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	300 -		
3am - 4am	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	400 -		
1am - 5am	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	500 -		
5am - 6am	2	14	0	3	0	0	0	0	0	0	0	0	0	0	19	600 -		
6am - 7am	0	20	0	2	0	0	0	0	0	0	0	0	0	0	22	700 - 800 -		
7am - 8am	3	38	0	3	0	0	0	0	0	0	0	0	0	0	44	900 -		
Bam - 9am	10	57	0	7	0	1	0	0	0	0	0	0	0	0	75	1000 -		
9am - 10am	3	96	1	10	0	0	0	0	0	0	0	0	0	0	110	1100 -		
10am - 11am	7	129	0	7	0	0	0	0	0	0	0	0	0	0	143	1200 -		
11am - Midday	2	124	2	8	0	0	0	0	0	0	0	0	0	0	136	Hour 1300 -		
Midday - 1pm	5	152	0	8	0	0	0	0	0	0	0	0	0	0	165	1400 -		
1pm - 2pm	6	114	1	6	0	0	0	0	0	0	0	0	0	0	127	1500 -		
2pm - 3pm	5	135	0	11	0	0	0	0	0	0	0	0	0	0	151	1600 -		
3pm - 4pm	3	127	0	6	0	0	0	0	0	0	0	0	0	0	136	1700 -		
4pm - 5pm	2	84	0	10	0	0	0	0	0	0	0	0	0	0	96	1800 -		$+ \rightarrow +$
5pm - 6pm	3	111	0	7	0	0	0	0	0	0	0	0	0	0	121	1900 -		
6pm - 7pm	1	99	0	5	0	0	0	0	0	0	0	0	0	0	105	2000 -	+++	
7pm - 8pm	5	50	0	7	0	0	0	0	0	0	0	0	0	0	62	2100 -		
Bpm - 9pm	4	72	0	7	0	0	0	0	0	0	0	0	0	0	83	2200 -		
9pm - 10pm	1	42	0	2	0	0	0	0	0	0	0	0	0	0	45	2300 -		
10pm - 11pm	1	39	0	1	0	0	0	0	0	0	0	0	0	0	41	2400 -	 	, , , , , , , , , , , , , , , , , , ,
11pm - Midnight	2	32	0	2	0	0	0	0	0	0	0	0	0	0	36	•	8 5 8 8	
otal	65	1572	4	114	0	1	0	0	0	0	0	0	0	0	1756		Ve	ehicles
of Total	4	90	-	6	•	-	-	•	-	-	-	-	-	-				

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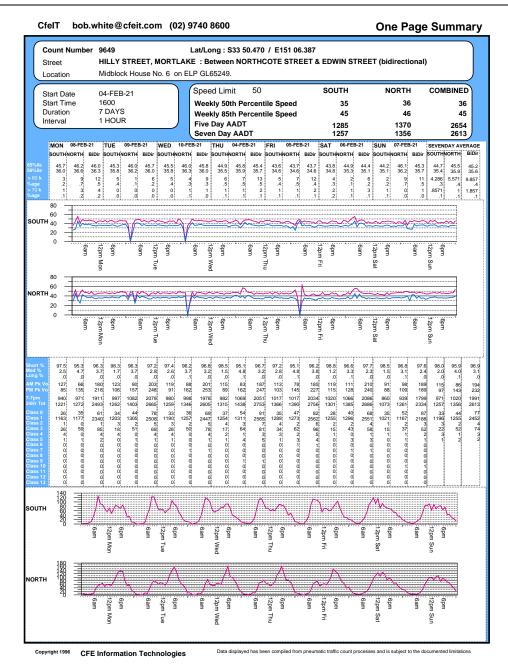
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Classification Data

SUN 07-FEB-21 Start Time 1600 Duration T DAYS Seven Day 1706 90.4 91.3 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 8.6 93.8 93.3 8.6 93.8 93.3 93.8					/ E151 (-					: CB					964	Count Number
Start Date Start Time 1600 Duration Total Total Sam - Sam 0 11 0 0 0 0 0 0 0			•	aı) :	irection	El (bid	IE STRE	RIHCO	= 1 & NC	RSIRE	IIAKE				•			
Start Date O4-FEB-21 Start Time 1600 Duration 7 DAYS Estart Time 1600 Duration 1 HOUR Five Day 1706 90.4 9.6 90.4 9.6	ay	arriageway	Ca									54	P GL652	2 on ELF	se No.12	olock Hou	Midl	Location
SUN O/-FEB-21	cls 3-5 cls 6+ 9.6 .1	cls 1-2			e Day	Fiv												
Midnight - 1am	8.6 .1 [%]			/	•			_							1	EB-2	07-F	SUN
Mindinghr - Tam			Total	13	12	11	10	09	08	07	06	05	04	03	02	01	00	Time
flam - 2am 1 9 0	1/	¹⁰⁰ T	23	0	0	0	0	0	0	0	0	0	1	1	0	20	1	Midnight - 1am
Ram - 3am	1 (200	10	-							-		0	-			1	-
Sam - 4am	1/		12	0		0							0			11	0	2am - 3am
dam - Sam 0 3 0 1 0 0			4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	Bam - 4am
Sam - 6am 0 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1		4	0	0	0	0	0	0	0	0	0	0	1	0	3	0	4am - 5am
Sam - 7am	1\		6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	5am - 6am
7am - 8am			12	0	0	0	0	0	0	0	0	0	0	1	0	9	2	6am - 7am
8am - 9am 6 44 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			39	0	0	0	0	0	0	0	0	1	0	2	0	32	4	7am - 8am
10am - 11am			53	0	0	0	0	0	0	0	0	0	0	3	0	44	6	Bam - 9am
		1100	92	0	0	0	0	0	0	0	0	2	0	3	1	79	7	9am - 10am
Midday - 1pm 7 108 0 4 0 0 0 0 0 0 0 0 0 0 0 0 119 1pm - 2pm 2 109 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 116 2pm - 3pm 8 94 0 9 0 0 0 0 0 0 0 0 0 0 0 0 0 111 3pm - 4pm 9 141 0 4 0 1 0 0 0 0 0 0 0 0 0 155 4pm - 5pm 4 103 0 8 0 0 0 0 0 0 0 0 0 0 0 0 155 5pm - 6pm 0 105 2 7 0 0 0 0 0 0 0 0 0 0 0 0 115 5pm - 6pm 5 77 0 5 0 1 0 0 0 0 0 0 0 0 0 0 114 5pm - 8pm 6 6 62 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 88 7pm - 8pm 6 6 62 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			116	0	0	0	0	1	0	0	0	0	0	5	0	98	12	10am - 11am
1pm - 2pm		Hour 1300	147	0	0	0	0	0	0	1	0	2	0	7	0	130	7	11am - Midday
2pm - 3pm 8 94 0 9 0 0 0 0 0 0 0 0 0 0 0 0 111 3pm - 4pm 9 141 0 4 0 1 0 0 0 0 0 0 0 0 0 155 4pm - 5pm 4 103 0 8 0 0 0 0 0 0 0 0 0 0 0 0 115 5pm - 6pm 0 105 2 7 0 0 0 0 0 0 0 0 0 0 0 114 5pm - 7pm 5 77 0 5 0 1 0 0 0 0 0 0 0 0 0 0 0 88 7pm - 8pm 6 62 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 88 7pm - 8pm 4 56 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1400	119	0	0	0	0	0	0	0	0	0	0	4	0	108	7	Vlidday - 1pm
3pm - 4pm 9 141 0 4 0 1 0 0 0 0 0 0 0 0 0 0 155 4pm - 5pm 4 103 0 8 0 0 0 0 0 0 0 0 0 0 0 0 0 115 5pm - 6pm 0 105 2 7 0 0 0 0 0 0 0 0 0 0 0 0 114 5pm - 7pm 5 77 0 5 0 1 0 0 0 0 0 0 0 0 0 0 0 88 7pm - 8pm 6 62 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 88 7pm - 9pm 4 56 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	1500	116	0	0	0	0	0	0	0	0	0	0	5	0	109	2	1pm - 2pm
Apm - 5pm 4 103 0 8 0 <td< td=""><td>/ </td><td>1600</td><td></td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>9</td><td>0</td><td>94</td><td>8</td><td>2pm - 3pm</td></td<>	/ 	1600		0	0	0	0	0	0	0	0	0	0	9	0	94	8	2pm - 3pm
5pm - 6pm 0 105 2 7 0 <td< td=""><td>,</td><td>1700</td><td>155</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>4</td><td>0</td><td>141</td><td>9</td><td>3pm - 4pm</td></td<>	,	1700	155	0	0	0	0	0	0	0	0	1	0	4	0	141	9	3pm - 4pm
6pm - 7pm 5 77 0 5 0 1 0	· 	1800	115	0	0	0	0	0	0	0	0	0	0	8	0	103	4	1pm - 5pm
7pm - 8pm 6 62 0 4 0 0 0 0 0 0 0 0 0 0 0 72 8pm - 9pm 4 56 0 2 0 0 0 0 0 0 0 0 0 0 0 0 62 9pm - 10pm 2 37 0 2 0 0 0 0 0 0 0 0 0 0 0 0 41 10pm - 11pm 0 39 0 4 0 0 0 0 0 0 0 0 0 0 0 0 43 11pm - Midnight 2 14 0 2 0 0 0 0 0 0 0 0 0 0 0 18	<u>'</u>	1900	114	0	0	0	0	0	0	0	0	0	0	-		105	0	5pm - 6pm
Spm - 9pm	/					-	0	0	-		0	•	0				5	-
Spin - 10pm 2 37 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						-		0			-		0	-			6	•
10pm - 11pm	1 1			0	0	0	0	0	0	0	0	0	0				4	•
11pm - Midnight 2 14 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 8 8				0	0	0	0	0	0	0	0	0	0	2	0		2	•
11pm - wildnight 2 14 0 2 0 0 0 0 0 0 0 0 0 18 8 8 8		•	43		-			-			-		•	-		39		= =
	vehicles	0	18	0	0	0	0	0	0	0	0	0	0	2	0	14	2	11pm - Midnight
otal 89 1390 3 80 1 7 0 1 0 1 0 0 0 1572	veriicies		1572	0	0	0	0	1	0	1	0	7	1	80	3	1390	89	otal

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CfeIT bob.white@cfeit.com (02) 9740 8600

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Classification Data

Count Number	964	9			Ref	: CB	AY			Lat/Lo	ng : S33	3 50.470	/ E151	06.387				
Street	HIL	LY STRE	ET, MOF	RTLAKE	: Betw	een NOF	RTHCOT	E STRE	ET & E	OWIN ST	reet (bidirecti	onal) :					
Location	Mid	block Hou	ıse No. 6	on ELF	GL652	49.									C	arriagewa	У	
					$\overline{}$		t Date		04-F 1600	EB-21		Fi	ve Day		ADT 2654	Short cls 1-2 96.7	Med cls 3-5 3.3	Long cls 6+ .0
MON	08-F	EB-2	1				ation		7 DA 1 HC	YS		S	even Da eekend	-	2613 2511	96.9 97.6	3.1 2.3	.0 % .0
Гіте	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10	100 -		
lam - 2am	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	200 -		
2am - 3am	0	5	0	1	0	0	0	0	0	0	0	0	0	0	6	300 -		
Bam - 4am	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9	400 -	1	
lam - 5am	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17	500 - 600 -		
iam - 6am	0	42	0	2	0	0	0	0	0	0	0	0	0	0	44	700 -		
Sam - 7am	2	102	0	3	0	0	0	0	0	0	0	0	0	0	107	800 -		
7am - 8am	6	164	0	9	1	0	0	0	0	0	0	0	0	0	180	900 -		
Bam - 9am	2	145	0	3	0	0	0	0	0	0	0	0	0	0	150	1000 -		
9am - 10am	5	141	0	6	1	1	0	0	0	0	0	0	0	0	154	1100 -		
10am - 11am	0	114	0	2	0	0	0	0	0	0	0	0	0	0	116	1200 -		$\downarrow \downarrow \downarrow \downarrow \downarrow$
l1am - Midday	2	109	0	4	1	0	0	0	0	0	0	0	0	0	116	Hour 1300 -		$\rightarrow \Box$
Midday - 1pm	2	125	0	2	0	0	0	0	0	0	0	0	0	0	129	1400 -		\longleftrightarrow
lpm - 2pm	5	92	0	6	0	0	0	0	0	0	0	0	0	0	103	1500 -		\longrightarrow
2pm - 3pm	2	135	0	8	0	0	0	0	0	0	0	0	0	0	145	1600 -		++
3pm - 4pm	4	176	0	7	0	0	0	0	0	0	0	0	0	0	187	1700 -		+++
lpm - 5pm	10	184	0	13	0	0	0	0	0	0	0	0	0	0	207	1800 -		++++
ipm - 6pm	7	194	0	4	1	0	0	0	0	0	0	0	0	0	206	1900 -		
6pm - 7pm	3	212	0	3	0	0	0	0	0	0	0	0	0	0	218	2000 -		
'pm - 8pm	6	133	0	6	0	0	0	0	0	0	0	0	0	0	145	2100 -	+++	
3pm - 9pm	3	75	1	4	0	1	0	0	0	0	0	0	0	0	84	2200 -		
)pm - 10pm	2	89	0	1	0	0	0	0	0	0	0	0	0	0	92	2300 -		
10pm - 11pm	0	35	0	0	0	0	0	0	0	0	0	0	0	0	35			-1-1-1-1-1 -
1pm - Midnight	0	24	0	1	0	0	0	0	0	0	0	0	0	0	25	c	20 40 60 80 7	% # 6 8 8 8 ehicles
otal	61	2340	1	85	4	2	0	0	0	0	0	0	0	0	2493		Ve	emoles
of Total	2	94		3														

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Page: 1

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Classification Data

Count Number Street		LY STRE			: Betw			E STRE	ET & EI		ng : S33 [REET (I			06.387				
Location	Midl	olock Hou	ise No. 6	on ELF	GL652	49.										arriagewa	У	
					_		t Date		04-F 1600	EB-21		Fi	ve Day		ADT 2654	Short cls 1-2 96.7	Med cls 3-5 3.3	Long cls 6+ .0
TUE	09-F	EB-2	1				ation		7 DA 1 HC			S	even Da eekend	у	2613 2511	96.9 97.6	3.1 2.3	.0 % .0
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	3	0	2	0	0	0	0	0	0	0	0	0	0	5	100		
1am - 2am	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	200 -		
2am - 3am	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	300 -		
3am - 4am	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	400 -		
4am - 5am	0	19	0	1	1	0	0	0	0	0	0	0	0	0	21	500 -		
5am - 6am	1	48	0	1	0	0	0	0	0	0	0	0	0	0	50	600 - 700 -		
6am - 7am	3	99	1	1	0	0	0	0	0	0	0	0	0	0	104	800 -	/	
7am - 8am	8	168	0	10	1	0	0	0	0	0	0	0	0	0	187	900 -		
8am - 9am	13	179	2	8	0	1	0	0	0	0	0	0	0	0	203	1000 -		
9am - 10am	8	152	1	4	0	0	0	0	0	0	0	0	0	0	165	1100 -		
10am - 11am	2	120	0	3	1	0	0	0	0	0	0	0	0	0	126	1200 -	'	\
11am - Midday	0	133	0	2	0	0	0	0	0	0	0	0	0	0	135	Hour 1300 -	,	
Midday - 1pm	4	124	0	2	0	0	0	0	0	0	0	0	0	0	130	1400 -		
1pm - 2pm	3	101	0	2	0	0	0	0	0	0	0	0	0	0	106	1500 -		
2pm - 3pm	2	127	0	9	0	0	0	0	0	0	0	0	0	0	138	1600 -		$\overline{}$
3pm - 4pm	5	171	0	8	0	0	0	0	0	0	0	0	0	0	184	1700 -		\rightarrow
4pm - 5pm	7	230	0	6	0	0	0	0	0	0	0	0	0	0	243	1800 -		\longrightarrow
5pm - 6pm	6	237	1	4	0	0	0	0	0	0	0	0	0	0	248	1900 -		
6pm - 7pm	3	210	0	1	0	0	0	0	0	0	0	0	0	0	214	2000 -		
7pm - 8pm	7	137	0	2	0	0	0	0	0	0	0	0	0	0	146	2100 -		
Bpm - 9pm	4	98	0	1	0	0	0	0	0	0	0	0	0	0	103	2200 -		
9pm - 10pm	1	72	0	1	0	0	0	0	0	0	0	0	0	0	74	2300 -		
10pm - 11pm	1	51	0	1	0	0	0	0	0	0	0	0	0	0	53	2400 -	' '	' ' '
11pm - Midnight	0	20	0	0	1	0	0	0	0	0	0	0	0	0	21	e	100	ehicles
otal	78	2508	5	69	4	1	0	0	0	0	0	0	0	0	2665		V	enicies
of Total	3	94		3														

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Classification Data

Count Number	964	9			Ref	: CB	ΑY			Lat/Lo	ng : S33	3 50.470	/ E151	06.387				
Street	HIL	LY STRE	ET, MOF	RTLAKE	: Betw	een NOI	RTHCOT	E STRE	ET & EI	OWIN ST	REET (bidirecti	onal) :					
Location	Mid	block Hou	ise No. 6	on ELF	GL652	49.									C	arriagewa	У	
					_		t Date		04-F 1600	EB-21		F	ve Day		ADT 2654	Short cls 1-2 96.7	Med cls 3-5 3.3	Long cls 6+ .0
WED	10-l	EB-2	1				ation		7 DA 1 HC	YS		S	even Da eekend		2613 2511	96.9 97.6	3.1 2.3	.0 % .0
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	2	17	0	1	0	0	0	0	0	0	0	0	0	0	20	100 -	/	
lam - 2am	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	200 -		
2am - 3am	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	300 -		
3am - 4am	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	400 -		
4am - 5am	0	23	0	1	0	0	0	0	0	0	0	0	0	0	24	500 -		
5am - 6am	1	39	0	2	2	0	0	0	0	0	0	0	0	0	44	600 -		
6am - 7am	7	96	0	2	0	0	0	0	0	0	0	0	0	0	105	700 - 800 -		
7am - 8am	3	174	1	6	1	0	0	0	0	0	0	0	0	0	185	900 -		
8am - 9am	1	196	1	3	0	0	0	0	0	0	0	0	0	0	201	1000 -		
9am - 10am	2	149	1	4	1	0	0	0	0	0	0	0	0	0	157	1100 -		
10am - 11am	6	112	0	2	0	0	0	0	0	0	0	0	0	0	120	1200 -		
11am - Midday	3	97	1	5	0	0	0	0	0	0	0	0	0	0	106	Hour 1300 -		
Midday - 1pm	4	118	0	5	0	0	0	0	0	0	0	0	0	0	127	1400 -		
1pm - 2pm	3	123	0	2	0	0	0	1	0	0	0	0	0	0	129	1500 -		
2pm - 3pm	5	121	1	8	0	0	0	0	0	0	0	0	0	0	135	1600 -		
3pm - 4pm	1	163	0	10	0	1	0	0	0	0	0	0	0	0	175	1700 -		
4pm - 5pm	3	206	0	7	0	0	0	0	0	0	0	0	0	0	216	1800 -		\rightarrow
5pm - 6pm	10	238	0	5	0	0	0	0	0	0	0	0	0	0	253	1900 -		
6pm - 7pm	1	168	0	5	0	0	0	0	0	0	0	0	0	0	174	2000 -		
7pm - 8pm	8	127	0	4	0	0	0	0	0	0	0	0	0	0	139	2100 -		
3pm - 9pm	5	110	0	2	0	0	0	0	0	0	0	0	0	0	117	2200 -		
9pm - 10pm	4	79	0	4	0	0	0	0	0	0	0	0	0	0	87	2300 -		
10pm - 11pm	0	51	0	0	0	0	0	0	0	0	0	0	0	0	51	2400 -		· ·
11pm - Midnight	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27	e	8	ehicles
otal	69	2447	5	78	4	1	0	1	0	0	0	0	0	0	2605		V	emilles
of Total	3	94		3														

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Classification Data

Count Number	9649	-				: CB					_	50.470		06.387				
Street		LY STRE					RTHCOT	E STRE	ET & EI	DWIN ST	REET (bidirecti	onal) :					
Location	Midl	olock Hou	ise No. 6	on ELF	GL6524	49.									C	arriagewa	У	
THU	04.5	EB-2	1				t Date t Time		04-F 1600 7 DA				ve Day even Da	v	ADT 2654 2613	Short cls 1-2 96.7 96.9	Med cls 3-5 3.3 3.1	Long cls 6+ .0 .0 %
100	U4-F	-CD-Z	<u> </u>			Inter			1 HC				eekend	•	2511	97.6	2.3	.0
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	10	0	0	1	0	0	0	0	0	0	0	0	0	11	100 -	1	
1am - 2am	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	200 -		
2am - 3am	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	300 -		
Bam - 4am	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	400 -		
1am - 5am	0	23	0	2	0	0	0	0	0	0	0	0	0	0	25	500 -		
5am - 6am	2	40	0	1	0	0	0	0	0	0	0	0	0	0	43	600 -		
6am - 7am	2	99	0	5	0	0	0	0	0	0	0	0	0	0	106	700 - 800 -		
7am - 8am	11	162	2	7	0	0	0	0	0	0	0	0	0	0	182	900 -		1
8am - 9am	6	180	0	1	0	0	0	0	0	0	0	0	0	0	187	1000 -		
9am - 10am	3	169	0	4	0	0	0	0	0	0	0	0	0	0	176	1100 -		
10am - 11am	5	122	1	5	0	4	0	0	0	1	0	0	0	0	138	1200 -		
11am - Midday	4	122	0	8	0	0	0	0	0	0	0	0	0	0	134	Hour 1300 -		
Midday - 1pm	2	103	1	3	1	0	0	0	0	0	0	0	0	0	110	1400 -		
1pm - 2pm	0	121	0	6	0	0	0	0	0	0	0	0	0	0	127	1500 -		
2pm - 3pm	6	123	1	5	0	0	0	0	0	0	0	0	0	0	135	1600 -		\rightarrow
3pm - 4pm	3	178	1	9	0	0	0	0	0	0	0	0	0	0	191	1700 -		
1pm - 5pm	6	202	0	10	1	0	0	0	0	0	0	0	0	0	219	1800 -		\rightarrow
5pm - 6pm	11	233	0	3	0	0	0	0	0	0	0	0	0	0	247	1900 -		$-\!\!\!\!/$
6pm - 7pm	4	200	0	1	0	0	0	0	0	0	0	0	0	0	205	2000 -		
7pm - 8pm	9	139	0	2	0	0	0	0	0	0	0	0	0	0	150	2100 -	1	
3pm - 9pm	5	115	0	3	0	1	0	0	0	0	0	0	0	0	124	2200 -		
9pm - 10pm	10	108	1	2	0	0	0	0	0	0	0	0	0	0	121	2300 -		
10pm - 11pm	0	75	0	3	0	0	0	0	0	0	0	0	0	0	78	2400 -		' '
11pm - Midnight	2	21	0	1	0	0	0	0	0	0	0	0	0	0	24	e	60	ehicles
otal	91	2565	7	81	3	5	0	0	0	1	0	0	0	0	2753		V	ennoies
6 of Total	3	93		3														

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Classification Data

Count Number	964	9			Ref	: CB	ΑY			Lat/Lo	ng : S33	3 50.470	/ E151	06.387				
Street	HIL	LY STRE	ET, MOF	RTLAKE	: Betw	een NOF	RTHCOT	E STRE	ET & EI	OWIN ST	REET (bidirecti	onal) :					
Location	Mid	block Hou	ise No. 6	on ELF	GL652	49.									C	arriagewa	У	
							t Date t Time		04-F 1600	EB-21		Fi	ve Day		ADT 2654	Short cls 1-2 96.7	Med cls 3-5 3.3	Long cls 6+ .0
FRI	05-l	EB-2	1			Dura Inte	ation rval		7 DA 1 HC	_			even Da eekend		2613 2511	96.9 97.6	3.1 2.3	.0 % .0
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	17	0	1	1	0	0	0	0	0	0	0	0	0	19	100 -	7	
lam - 2am	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	200 -	 	
2am - 3am	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	300 -		
Bam - 4am	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	400 -		
1am - 5am	1	16	0	3	0	0	0	0	0	0	0	0	0	0	20	500 -		
5am - 6am	2	36	0	1	1	0	0	0	0	0	0	0	0	0	40	600 - 700 -		
6am - 7am	2	100	0	6	1	0	0	0	0	0	0	0	0	0	109	800 -		
7am - 8am	5	155	1	12	0	0	0	0	0	0	0	0	0	0	173	900 -		\perp
Bam - 9am	6	169	0	7	0	0	0	0	0	0	0	0	0	0	182	1000 -		
9am - 10am	2	174	0	8	0	1	0	0	0	0	0	0	0	0	185	1100 -		
10am - 11am	4	140	0	4	0	1	0	0	0	0	0	0	0	0	149	1200 -	(/
11am - Midday	1	105	0	7	0	0	0	0	0	0	0	0	0	0	113	Hour 1300 -	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \)
Midday - 1pm	2	125	1	7	0	0	0	0	0	0	0	0	0	0	135	1400 -		
1pm - 2pm	5	117	1	4	0	0	0	0	0	0	0	0	0	0	127	1500 -		ackslash
2pm - 3pm	6	125	1	3	2	0	0	0	0	0	0	0	0	0	137	1600 -		
3pm - 4pm	6	146	1	8	0	0	1	0	0	0	0	0	0	0	162	1700 -		
1pm - 5pm	1	211	0	8	0	1	0	0	0	0	0	0	0	0	221	1800 -		
5pm - 6pm	4	214	1	3	0	1	0	0	0	0	0	0	0	0	223	1900 -		
6pm - 7pm	7	217	0	3	0	0	0	0	0	0	0	0	0	0	227	2000 -		
7pm - 8pm	11	156	0	3	0	0	0	0	0	0	0	0	0	0	170	2100 -		
3pm - 9pm	14	107	0	3	0	0	0	0	0	0	0	0	0	0	124	2200 - 2300 -		
9pm - 10pm	2	88	0	3	0	0	0	0	0	0	0	0	0	0	93	2400 -		
10pm - 11pm 11pm - Midnight	1 0	66 64	0 0	2 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0	69 64	2400	100	200
otal	82	2562	6	96	5	4	1	0	0	0	0	0	0	0	2756			ehicles
of Total	3	93	-	3	-	•	•	-	-	-	-	-	-	-				

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Classification Data

Count Number Street	964 HIL	9 LY STREI	ET, MOF	RTLAKE		: CB reen NO		E STRE	ET & EI		ng : S33 [REET (I			06.387				
Location	Mid	olock Hou	ise No. 6	on ELF	GL652	49.									C	arriagewa	У	
					$\overline{}$		t Date		04-F 1600	EB-21		Fi	ve Day		ADT 2654	Short cls 1-2 96.7	Med cls 3-5 3.3	Long cls 6+
SAT	06-F	EB-2	1			Dura	ation rval		7 DA 1 HC				even Da eekend		2613 2511	96.9 97.6	3.1 2.3	.0 % .0
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	42	0	1	0	0	0	0	0	0	0	0	0	0	43	100		
1am - 2am	0	20	0	1	0	0	0	0	0	0	0	0	0	0	21	200 -		
2am - 3am	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11	300 -		
Bam - 4am	0	4	0	2	0	0	0	0	0	0	0	0	0	0	6	400 -		
4am - 5am	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	500 - 600 -		
5am - 6am	0	21	0	2	0	0	0	0	0	0	0	0	0	0	23	700 -		
6am - 7am	0	42	0	0	0	0	0	0	0	0	0	0	0	0	42	800 -		
7am - 8am	1	69	0	0	0	0	0	0	0	0	0	0	0	0	70	900 -		
Bam - 9am	6	114	0	2	0	1	0	0	0	0	0	0	0	0	123	1000 -		
9am - 10am	2	155	1	6	0	0	0	0	0	0	0	0	0	0	164	1100 -		\rightarrow
10am - 11am	3	203	0	4	0	0	0	0	0	0	0	0	0	0	210	1200 -		
11am - Midday	0	197	1	6	0	0	0	0	0	0	0	0	0	0	204	Hour 1300 -		\longrightarrow
Vlidday - 1pm	4	232	0	4	0	0	0	0	0	0	0	0	0	0	240	1400 -		$\overline{}$
lpm - 2pm	7	169	1	1	0	0	0	0	0	0	0	0	0	0	178	1500 -		\longrightarrow
2pm - 3pm	7	206	0	7	0	1	0	0	0	0	0	0	0	0	221	1600 -		
3pm - 4pm	3	190	0	4	0	0	0	0	0	0	0	0	0	0	197	1700 -		
1pm - 5pm	2	152	0	5	0	0	0	0	0	0	0	0	0	0	159	1800 -)
5pm - 6pm	9	155	0	1	0	0	0	0	0	0	0	0	0	0	165	1900 -		
6pm - 7pm	5	148	0	1	1	0	0	0	0	0	0	0	0	0	155	2000 -		
7pm - 8pm	9	106	0	4	0	0	0	1	0	0	0	0	0	0	120	2100 - 2200 -		
Bpm - 9pm	6	112	0	1	0	1	0	0	0	0	0	0	0	0	120	2200 -		
9pm - 10pm	1	84	0	1	0	0	0	0	0	0	0	0	0	0	86	2400 -		
10pm - 11pm	2	67	1	1	0	0	0	0	0	0	0	0	0	0	71			'
11pm - Midnight	1	44	0	4	0	0	0	0	0	0	0	0	0	0	49	6	100	ehicles
otal	68	2551	4	58	1	3	0	1	0	0	0	0	0	0	2686		•	
of Total	3	95		2														

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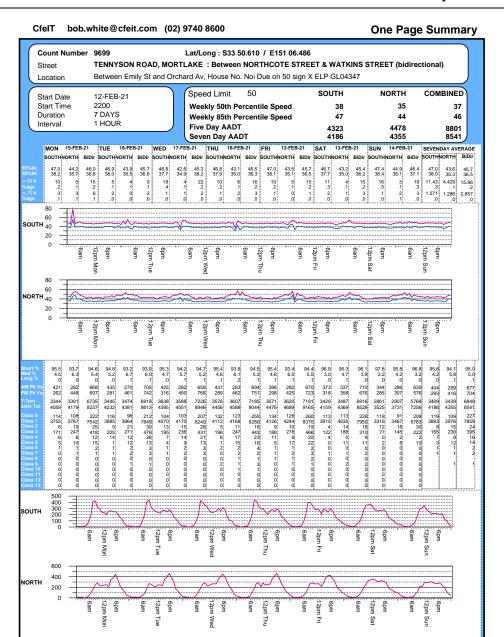
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Classification Data

Count Number	964	9			Ref	: CB	ΑY			Lat/Lo	ng : S33	3 50.470	/ E151	06.387				
Street	HIL	LY STRE	ET, MOF	RTLAKE	: Betw	een NOF	RTHCOT	E STRE	ET & E	OWIN ST	reet (bidirecti	onal) :					
Location	Mid	block Hou	ise No. 6	on ELF	GL652	49.									C	arriagewa	У	
							t Date		04-F 1600	EB-21		Fi	ve Day		ADT 2654	Short cls 1-2 96.7	Med cls 3-5 3.3	Long cls 6+
SUN	07-l	EB-2	1				ation		7 DA 1 HC	YS		S	even Da eekend	у	2613 2511	96.9 97.6	3.1 2.3	.0 % .0
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	1	41	0	0	2	0	0	0	0	0	0	0	0	0	44	100 -		
lam - 2am	1	22	0	0	0	0	0	0	0	0	0	0	0	0	23	200 -		
2am - 3am	0	14	0	1	0	0	0	0	0	0	0	0	0	0	15	300 -	/	+
3am - 4am	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7	400 -		
1am - 5am	0	9	0	1	0	0	0	0	0	0	0	0	0	0	10	500 -		
5am - 6am	0	12	0	1	0	0	0	0	0	0	0	0	0	0	13	600 -		
6am - 7am	0	21	0	2	0	0	0	0	0	0	0	0	0	0	23	700 - 800 -		
7am - 8am	1	38	1	0	0	0	0	0	0	0	0	0	0	0	40	900 -		
Bam - 9am	2	81	0	1	0	0	0	0	0	0	0	0	0	0	84	1000 -		
9am - 10am	4	136	0	3	0	0	0	0	0	0	0	0	0	0	143	1100 -		
10am - 11am	10	151	0	4	0	0	0	0	0	0	1	0	0	0	166	1200 -		\longrightarrow
11am - Midday	4	179	0	5	0	1	0	0	0	0	0	0	0	0	189	Hour 1300 -		-
Midday - 1pm	7	151	0	3	0	0	0	0	0	0	0	0	0	0	161	1400 -		\longrightarrow
1pm - 2pm	4	168	0	1	0	0	0	0	0	0	0	0	0	0	173	1500 -		-+
2pm - 3pm	7	160	0	5	0	0	0	0	0	0	0	0	0	0	172	1600 -		\longrightarrow
3pm - 4pm	6	181	0	2	0	0	0	0	0	0	0	0	0	0	189	1700 -		+
4pm - 5pm	9	143	0	8	0	0	0	0	0	0	0	0	0	0	160	1800 -		+
5pm - 6pm	2	152	1	4	0	0	0	0	0	0	0	0	0	0	159	1900 -		\rightarrow
6pm - 7pm	10	150	0	3	0	0	0	0	0	0	0	0	0	0	163	2000 -		f + +
7pm - 8pm	6	110	0	0	0	0	0	0	0	0	0	0	0	0	116	2100 -		'
8pm - 9pm	4	103	1	2	0	0	0	0	0	0	0	0	0	0	110	2200 -		$\overline{}$
9pm - 10pm	4	72	0	2	0	0	0	0	0	0	0	0	0	0	78	2300 -		
10pm - 11pm	3	58	0	2	0	0	0	0	0	0	0	0	0	0	63	2400 -	 ' ' 	
11pm - Midnight	2	29	0	2	0	0	0	0	0	0	0	0	0	0	33	•	ö 10	향 형 ehicles
otal	87	2188	3	52	2	1	0	0	0	0	1	0	0	0	2334		V	anties
of Total	4	94		2														

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Classification Data

Count Number Street		INYSON	-		KE : B		NORTH			& WATK								
Location	Bet	ween Emi	ly St and	d Orchard	d Av, Ho	use No.	Noi Due	on 50 si	gn X EL	P GL043	347				C	arriagewa	У	
					$\overline{}$		t Date		12-F 2200	EB-21		Fi	ve Day		ADT 8801	Short cls 1-2 94.4	Med cls 3-5 5.5	Long cls 6+ .1
MON	15-F	EB-2	1			Dura	ation rval		7 DA 1 HC	_			even Da eekend	у	8541 7891	95.0 96.4	5.0 3.6	.1 [%] .0
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	33	0	0	0	0	0	0	0	0	0	0	0	0	33	100]	1	
1am - 2am	0	17	0	3	0	0	0	0	0	0	0	0	0	0	20	200 -		
2am - 3am	0	21	0	2	0	0	0	0	0	0	0	0	0	0	23	300 -		
Bam - 4am	0	12	0	1	1	0	0	0	0	0	0	0	0	0	14	400 -	\	
4am - 5am	1	29	0	4	1	0	0	0	0	0	0	0	0	0	35	500 -		
5am - 6am	1	105	0	13	0	2	0	0	0	0	0	0	0	0	121	600 - 700 -		
Sam - 7am	6	245	1	24	1	1	0	0	0	0	0	0	0	0	278	800 -		
7am - 8am	12	548	1	27	0	1	0	0	0	0	0	0	0	0	589	900 -		
Bam - 9am	24	611	2	28	1	2	0	0	0	0	0	0	0	0	668	1000 -		
9am - 10am	16	547	3	30	0	1	0	0	0	0	0	0	0	0	597	1100 -		
10am - 11am	13	474	6	32	0	0	1	0	0	0	0	0	0	0	526	1200 -		+/-
11am - Midday	8	427	2	29	1	1	0	0	0	0	0	0	0	0	468	Hour 1300 -		
Vlidday - 1pm	15	424	2	30	0	1	1	0	0	0	0	0	0	0	473	1400 -		+
lpm - 2pm	19	411	2	22	1	0	0	0	0	0	0	0	0	0	455	1500 -		
2pm - 3pm	17	430	0	19	1	1	0	0	0	0	0	0	0	0	468	1600 -		+
3pm - 4pm	15	567	1	29	1	0	0	0	0	0	0	0	0	0	613	1700 -		
1pm - 5pm	17	557	1	38	0	2	0	0	0	0	0	0	0	0	615	1800 -		
5pm - 6pm	11	659	0	23	3	1	0	0	0	0	0	0	0	0	697	1900 -		
Spm - 7pm	22	517	3	22	1	0	0	1	0	0	0	0	0	0	566	2000 -		
7pm - 8pm	14	365	1	9	0	1	0	0	0	0	0	0	0	0	390	2100 -		
3pm - 9pm	9	263	0	14	0	1	0	0	0	0	0	0	0	0	287	2200 -		
9pm - 10pm	2	167	0	9	0	0	0	0	0	0	0	0	0	0	178	2300 - 2400 -		
10pm - 11pm	0	61	0	5	0	0	0	0	0	0	0	0	0	0	66		-	
11pm - Midnight	0	52	0	5	0	0	0	0	0	0	0	0	0	0	57	0	200	è 8 hicles
otal	222	7542	25	418	12	15	2	1	0	0	0	0	0	0	8237		Ve	incles
of Total	3	92		5														

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Classification Data

Street Location		INYSON				: CB					ng : S33							
Location	Den	ween Emi	•									KEET (bi	directio	nai) :		arriagewa	V	
		ween Ein	ily St and	u Orchard	J AV, HU	use No.	Noi Due	011 50 51	igii A EL	P GL043	047							
							t Date		12-F 2200	EB-21		Fi	ve Day		ADT 8801	Short cls 1-2 94.4	Med cls 3-5 5.5	Long cls 6+ .1
TUE	16-F	EB-2	1				ation		7 DA 1 HC	_		S	even Da eekend	у	8541 7891	95.0 96.4	5.0 3.6	.1 % .0
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	19	0	5	0	0	0	0	0	0	0	0	0	0	24	100 7		
1am - 2am	0	14	0	5	1	0	0	0	0	0	0	0	0	0	20	200 -		
2am - 3am	0	19	0	3	0	0	0	0	0	0	0	0	0	0	22	300 -		
3am - 4am	0	18	0	2	0	1	0	0	0	0	0	0	0	0	21	400 -		
4am - 5am	0	23	0	8	2	1	0	0	0	0	0	0	0	0	34	500 - 600 -		
5am - 6am	1	132	0	11	1	0	0	1	0	0	0	0	0	0	146	700 -		
6am - 7am	0	255	1	21	6	0	0	1	0	1	0	0	0	0	285	800 -		
7am - 8am	7	549	2	28	1	0	0	0	0	0	0	0	0	0	587	900 -		
8am - 9am	29	630	2	39	3	1	1	0	0	0	0	0	0	0	705	1000 -		
9am - 10am	8	535	3	30	1	1	1	0	0	0	0	0	0	0	579	1100 -		+/-
10am - 11am	8	451	0	36	2	0	0	1	0	0	0	0	0	0	498	1200 -		$+\langle$
11am - Midday	6	418	3	31	2	1	1	0	0	0	0	0	0	0	462	Hour 1300 -		+ } -
Vlidday - 1pm	15	445	1	23	0	0	0	0	0	0	0	0	0	0	484	1400 -		$+\langle$
1pm - 2pm	12	422	3	29	2	0	0	0	0	0	0	0	0	0	468	1500 -		+
2pm - 3pm	12	462	2	21	2	0	0	0	0	0	0	0	0	0	499	1600 -		
3pm - 4pm	16	560	5	38	1	1	0	0	0	0	0	0	0	0	621	1700 -		+
4pm - 5pm	17	586	2	33	0	0	0	0	0	0	0	0	0	0	638	1800 -		+
5pm - 6pm	15	694	3	27	0	3	0	0	0	0	0	0	0	0	742	1900 -		
6pm - 7pm	24	580	1	29	0	2	0	0	0	0	0	0	0	0	636	2000 -		
7pm - 8pm	21	431	1	20	1	1	0	0	0	0	0	0	0	0	475	2100 - 2200 -		
Spm - 9pm	14	267	1	14	0	0	0	0	0	0	0	0	0	0	296	2200 -		
9pm - 10pm	5	196	0	11	0	1	0	0	0	0	0	0	0	0	213	2400 -		
10pm - 11pm	2	104	0	7	1	0	0	0	0	0	0	0	0	0	114	2400 7		1 -1 -1
11pm - Midnight	0	39	0	5	0	0	0	0	0	0	0	0	0	0	44		200	è §
otal	212	7849	30	476	26	13	3	3	0	1	0	0	0	0	8613		•	

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Classification Data

Count Number	969	9			Ref	: CB	AY			Lat/Lo	ng : S33	3 50.610	/ E151	06.486				
Street	TEN	INYSON	ROAD,	MORTLA	KE : B	etween	NORTH	COTE S	TREET	& WATK	INS STE	REET (b	idirectio	nal) :				
Location	Bet	ween Emi	ily St and	d Orchard	d Av, Ho	use No.	Noi Due	on 50 s	ign X EL	P GL043	347				C	arriagewa	У	
							t Date		12-F 2200	EB-21			in Dan		ADT	Short cls 1-2	Med cls 3-5	Long cls 6+
WED	17-I	EB-2	1				t Time ation rval		7 DA 1 HC	YS		s	ive Day even Da /eekend	у	8801 8541 7891	94.4 95.0 96.4	5.5 5.0 3.6	.1 .1 % .0
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	31	0	6	0	0	0	0	0	0	0	0	0	0	37	100 -	1	
lam - 2am	0	14	0	1	0	0	0	0	0	0	0	0	0	0	15	200 -		+
am - 3am	0	10	0	1	0	0	0	0	0	0	0	0	0	0	11	300 -		+
am - 4am	0	16	0	1	2	0	0	0	0	0	0	0	0	0	19	400 -		
lam - 5am	1	29	0	3	1	0	0	0	0	0	0	0	0	0	34	500 -		
iam - 6am	1	115	0	14	0	0	0	1	0	0	0	0	0	0	131	600 - 700 -		
Sam - 7am	7	255	1	26	0	0	0	1	0	0	0	0	0	0	290	800 -		
'am - 8am	15	549	2	37	0	4	2	0	0	0	0	0	0	0	609	900 -		\
Bam - 9am	13	603	1	35	5	2	0	0	0	0	0	0	0	0	659	1000 -		
am - 10am	14	588	1	30	2	0	0	0	0	0	0	0	0	0	635	1100 -		
0am - 11am	16	507	1	24	1	0	1	0	0	0	0	0	0	0	550	1200 -		+/+
1am - Midday	6	470	1	21	1	1	0	0	0	0	0	0	0	0	500	Hour 1300 -		+
/lidday - 1pm	15	451	2	28	1	0	0	0	0	0	0	0	0	0	497	1400 -		+
pm - 2pm	9	467	1	25	2	3	0	0	0	0	0	0	0	0	507	1500 -		+
pm - 3pm	13	476	2	27	2	1	0	0	0	0	0	0	0	0	521	1600 -		+
3pm - 4pm	18	607	1	26	3	0	0	0	0	0	0	0	0	0	655	1700 -		+
lpm - 5pm	8	622	3	30	0	1	0	0	0	0	0	0	0	0	664	1800 -		+
ipm - 6pm	38	704	3	20	0	1	0	0	0	0	0	0	0	0	766	1900 -		
ipm - 7pm	18	613	2	28	1	0	0	1	0	0	0	0	0	0	663	2000 -		
'pm - 8pm	11	416	3	17	0	0	0	0	0	0	0	0	0	0	447	2100 -		+ +
3pm - 9pm	2	299	3	11	0	0	0	0	0	0	0	0	0	0	315	2200 -		
)pm - 10pm	2	243	1	9	0	0	0	0	0	0	0	0	0	0	255	2300 -		
10pm - 11pm	0	98	0	7	0	0	0	0	0	0	0	0	0	0	105	2400 -		
11pm - Midnight	0	57	0	4	0	0	0	0	0	0	0	0	0	0	61	c	200	8 8 8
otal	207	8240	28	431	21	13	3	3	0	0	0	0	0	0	8946		Ve	ehicles
of Total	2	92		5														

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Classification Data

Count Number Street	969 TEN	9 INYSON I	ROAD,	MORTLA		: CB etween		COTE S	TREET 8		ng : S33 INS STF							
Location	Betv	ween Emi	ly St and	d Orchard	d Av, Ho	use No.	Noi Due	on 50 si	gn X EL	P GL043	347				C	arriagewa	У	
THU	18-F	EB-2°	1			Star Dura	t Date t Time ation		2200 7 DA	YS		S	ve Day even Da eekend	у	ADT 8801 8541	Short cls 1-2 94.4 95.0	Med cls 3-5 5.5 5.0	Long cls 6+ .1 .1 %
					$\overline{}$	Inte	rval		1 HC	JUR			eekenu		7891	96.4	3.6	.0
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	39	0	4	1	0	0	0	0	0	0	0	0	0	44	100	/	
1am - 2am	0	14	0	0	0	0	0	0	0	0	0	0	0	0	14	200 -		
2am - 3am	0	11	0	2	0	0	0	0	0	0	0	0	0	0	13	300 -		
Bam - 4am	0	21	0	2	0	0	0	0	0	0	0	0	0	0	23	400 -		
4am - 5am	1	26	0	3	2	0	0	0	0	0	0	0	0	0	32	500 - 600 -		
5am - 6am	2	108	0	15	0	0	0	0	0	0	0	0	0	0	125	700 -		
6am - 7am	8	266	0	24	2	0	0	1	0	0	0	0	0	0	301	800 -		
7am - 8am	12	556	1	31	3	1	0	0	0	0	0	0	0	0	604	900 -		
Bam - 9am	17	653	0	21	1	2	0	0	0	0	0	0	0	0	694	1000 -		
9am - 10am	21	556	2	35	2	4	0	0	1	0	0	0	0	0	621	1100 -		$\perp \langle \perp \rangle$
10am - 11am	12	457	0	29	3	1	1	0	0	0	0	0	0	0	503	1200 -		\longrightarrow
11am - Midday	21	513	2	35	4	2	1	0	0	0	0	0	0	0	578	Hour 1300 -		
Midday - 1pm	10	438	2	28	3	1	0	0	0	0	0	0	0	0	482	1400 -		+
1pm - 2pm	10	430	2	22	0	0	0	0	0	0	0	0	0	0	464	1500 -		+
2pm - 3pm	19	470	1	24	0	0	0	0	0	1	0	0	0	0	515	1600 -		
3pm - 4pm	16	593	0	29	0	0	0	0	0	0	0	0	0	0	638	1700 -		+
1pm - 5pm	16	615	2	27	1	2	0	0	0	0	0	0	0	0	663	1800 -		
5pm - 6pm	29	686	2	29	0	2	1	1	0	0	1	0	0	0	751	1900 -		
6pm - 7pm	17	628	1	24	1	0	0	0	0	1	0	0	0	0	672	2000 -		
7pm - 8pm	18	427	0	20	0	0	0	0	0	1	0	0	0	0	466	2100 -		
3pm - 9pm	13	330	1	18	0	1	1	0	0	0	0	0	0	0	364	2200 -		
9pm - 10pm	6	218	0	8	0	0	0	0	0	0	0	0	0	0	232	2300 -		
10pm - 11pm	5	151	0	6	0	0	0	0	0	0	0	0	0	0	162	2400 -	1 '	
11pm - Midnight	2	74	0	7	0	0	0	0	0	0	0	0	0	0	83	G	200	8 8 9
otal	255	8280	16	443	23	16	4	2	1	3	1	0	0	0	9044		Ve	hicles
of Total	3	92		5														

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Classification Data

Start Date 12-FEB-21 Start Time 2200	Count Number Street Location		INYSON	•		KE : B		NORTH			& WATK						arriagewa	v	
Time							Star Star	t Date		12-F 2200	EB-21			•	У	ADT 8801	Short cls 1-2 94.4	Med cls 3-5 5.5	cls 6+ .1
Midnight - 1am	ΓNI	12-1	-CD-Z	<u> </u>						1 HC	DUR			eekend	-			3.6	
Minding Falm	Гime	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
flam - 2am 0 13 0 1 0 <td< td=""><td>Midnight - 1am</td><td>0</td><td>33</td><td>0</td><td>5</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>38</td><td>100 7</td><td>/</td><td></td></td<>	Midnight - 1am	0	33	0	5	0	0	0	0	0	0	0	0	0	0	38	100 7	/	
Ram - 3am																	200 -		+
sam - 4am	2am - 3am	0			1	0		0			0				0	18			
lam - 5am	Bam - 4am	0	14	0	4	1	1	0	0	0	0	0	0	0	0	20		 	
Sam -	lam - 5am	2	26	1	4	1	1	0	0	0	0	0	0	0	0	35			
Sam - 7am 6 253 1 20 4 2 1 1 0 0 0 0 0 0 0 0 288 7am - 8am 14 524 0 24 4 3 0 0 0 0 0 0 0 0 0 0 0 569 8am - 9am 18 613 1 34 3 1 0 0 0 0 0 0 0 0 0 0 0 0 670 8am - 10am 13 586 2 29 1 2 0 0 0 1 0 0 0 0 0 0 0 0 0 550 8am - 10am 11 504 1 32 2 0 0 0 0 0 0 0 0 0 0 0 0 0 550 8am - 10am 11 504 1 32 2 0 0 0 0 0 0 0 0 0 0 0 0 550 8am - 10am 11 504 1 32 2 0 0 0 0 0 0 0 0 0 0 0 0 0 550 8am - 10am 11 504 1 32 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5am - 6am	3	112	0	11	0	0	0	1	0	0	0	0	0	0	127			
Para	Sam - 7am	6	253	1	20	4	2	1	1	0	0	0	0	0	0	288			
Bam - 9am	7am - 8am	14	524	0	24	4	3	0	0	0	0	0	0	0	0	569			
9am - 10am	Bam - 9am	18	613	1	34	3		0	0	0	0	0	0	0	0	670			1 7
10am - 11am	9am - 10am	13	586	2	29	1	2	0	0	1	0	0	0	0	0	634			
Itam - Midday	10am - 11am	11	504			2		0	0	0	0	0	0	0	0	550			
Midday - 1pm	11am - Midday	6	502	0	39	1	1	1	0	0	0	0	0	0	0	550	Hour ·		
	Midday - 1pm	18	498	0	27	0	2	0	0	0	0	0	0	0	0	545			
Apm - 3pm 17 521 3 28 0 0 0 1 0 0 0 0 0 570 3pm - 4pm 12 602 1 41 0 1 0<	lpm - 2pm	17	392	0	20	0		0	0	0	0	0	0	0	0	429			
3pm - 4pm	-					0					0								\perp
Apm - 5pm 20 612 2 29 1 1 0 <	•					-		-	0		-			-	-				+
5pm - 6pm	•	20		2	29	1	1	0		0	0		0	0	0	665	1800 -		+
7pm - 8pm 23 461 1 15 0 1 0 0 0 0 0 0 0 0 0 501 8pm - 9pm 19 297 2 15 0 0 0 0 0 0 0 0 0 0 0 333 8pm - 10pm 10 252 1 11 0 0 0 0 0 0 0 0 0 0 0 274 10pm - 11pm 1 172 0 11 0 2 0 0 0 0 0 0 0 0 0 186 11pm - Midnight 0 128 0 12 0 0 0 0 0 0 0 0 0 0 140		24				1		0			1		0				1900 -		/
7pm - 8pm 23 461 1 15 0 1 0 <	•			2		1		0		0	0						2000 -		
Spm - 9pm 19 297 2 15 0 0 0 0 0 0 0 0 0						0		0			0						2100 -		
Opm - 10pm 10 252 1 11 0	•			2		0	0	0	0		0	0		0			2200 -		+
10pm - 11pm 1 172 0 11 0 2 0 0 0 0 0 0 0 186 11pm - Midnight 0 128 0 12 0 0 0 0 0 0 0 0 0 0 140 2400 2400	•					0		0			0						2300 -		
11pm - Midnight 0 128 0 12 0 0 0 0 0 0 0 0 0 140 8 8 8 8 Vehicles	•			0		0		-	-		0	-	0	-	-	186	2400 -	/	<u> </u>
						0								-			٥	200	
Dtal 200 6570 19 400 20 22 2 5 2 1 0 0 0 9103	otal	260	8370	19	466	20	22	2	3	2	1	0	0	0	0	9165		Ve	hicles

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CfelT bob.white@cfeit.com (02) 9740 8600

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Classification Data

Count Number	969					: CB					ng : S33							
Street		INYSON	-									REET (bi	directio	nal) :	_			
Location	Betv	ween Emi	ly St and	d Orchard	d Av, Ho	use No.	Noi Due	on 50 si	ign X EL	P GL043	347				C	arriagewa	У	
							t Date		12-F 2200	EB-21			D		ADT	Short cls 1-2	Med cls 3-5	Long cls 6+
SAT	13-F	EB-2	1				t Time ation rval		7 DA 1 HC	YS		S	ve Day even Da eekend	у	8801 8541 7891	94.4 95.0 96.4	5.5 5.0 3.6	.1 .1 % .0
Гіте	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	1	71	0	5	0	0	0	0	0	0	0	0	0	0	77	100	/	
lam - 2am	0	44	0	0	0	0	0	0	0	0	0	0	0	0	44	200 -		
2am - 3am	0	29	0	3	0	0	0	0	0	0	0	0	0	0	32	300 -		
Bam - 4am	0	17	0	3	0	0	0	0	0	0	0	0	0	0	20	400 -		
lam - 5am	0	20	0	2	1	0	0	0	0	0	0	0	0	0	23	500 - 600 -		
5am - 6am	0	65	0	10	1	0	0	0	0	0	0	0	0	0	76	700 -		
Sam - 7am	0	128	0	13	1	0	0	0	0	0	0	0	0	0	142	800 -		
7am - 8am	2	266	0	16	0	0	0	0	0	1	0	0	0	0	285	900 -		
Bam - 9am	2	462	2	15	1	0	0	0	0	0	0	0	0	0	482	1000 -		
9am - 10am	14	568	3	20	1	0	0	0	0	0	0	0	0	0	606	1100 -		
10am - 11am	10	658	3	15	2	2	0	0	0	0	0	0	0	0	690	1200 -		\rightarrow
11am - Midday	14	668	1	24	0	2	0	1	0	0	0	0	0	0	710	Hour 1300 -		+
Midday - 1pm	24	628	1	22	0	1	0	0	0	0	0	0	0	0	676	1400 -		/_
lpm - 2pm	20	565	1	25	1	2	0	1	0	1	0	0	0	0	616	1500 -		 (
2pm - 3pm	16	522	0	24	0	1	0	0	0	0	0	0	0	0	563	1600 -		+
3pm - 4pm	18	538	1	19	0	2	0	0	0	0	0	0	0	0	578	1700 -		
lpm - 5pm	14	559	2	17	0	0	0	0	0	0	0	0	0	0	592	1800 -		
5pm - 6pm	27	539	0	27	0	1	0	0	0	0	0	0	0	0	594	1900 -		
Spm - 7pm	29	476	1	18	0	0	0	0	0	0	0	0	0	0	524	2000 -	/	
7pm - 8pm	13	321	2	8	0	0	0	0	0	0	0	0	0	0	344	2100 -		
3pm - 9pm	10	267	0	6	0	0	0	0	0	0	0	0	0	0	283	2200 -		
9pm - 10pm	10	228	1	6	0	0	0	0	0	0	0	0	0	0	245	2300 -		
10pm - 11pm	2	168	0	8	1	0	0	0	0	0	0	0	0	0	179	2400 -	'''	
11pm - Midnight	0	143	0	4	0	0	0	0	0	0	0	0	0	0	147	0	200	80 80 biolog
otal	226	7950	18	310	9	11	0	2	0	2	0	0	0	0	8528		Ve	hicles
of Total	3	93		4														

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CfeIT bob.white@cfeit.com (02) 9740 8600

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Classification Data

Count Number Street	969 TEN	9 INYSON I	ROAD, I	MORTLA		: CB		COTE ST	TREET 8		_	3 50.610 REET (bi						
Location	Bet	ween Emil	ly St and	d Orchard	l Av, Ho	use No. I	Noi Due	on 50 si	gn X EL	P GL043	347	•		,	C	arriagewa	У	
SUN	14-6	EB-2	1				t Date t Time ation		12-F 2200 7 DA			Se	ve Day even Da	у	ADT 8801 8541	Short cls 1-2 94.4 95.0	Med cls 3-5 5.5 5.0	Long cls 6+ .1 .1 %
			•			Inter	val		1 HC	UR			eekend		7891	96.4	3.6	.0
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	103	0	4	0	0	0	0	0	0	0	0	0	0	107	100 7	7	
1am - 2am	0	59	0	0	0	0	0	0	0	0	0	0	0	0	59	200 -		
2am - 3am	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27	300 -	1	
Bam - 4am	0	18	0	2	0	0	0	0	0	0	0	0	0	0	20	400 -		
1am - 5am	0	8	0	1	0	0	0	0	0	0	0	0	0	0	9	500 -		
5am - 6am	2	37	0	1	0	0	0	0	0	0	0	0	0	0	40	600 -		
Sam - 7am	5	57	0	3	0	0	0	0	0	0	0	0	0	0	65	700 -		
7am - 8am	2	156	0	11	0	0	0	0	0	0	0	0	0	0	169	800 - 900 -		
Bam - 9am	5	299	0	11	0	0	0	0	0	0	0	0	0	0	315	1000 -		
9am - 10am	11	488	2	20	0	1	0	0	0	0	0	0	0	0	522	1100 -		
10am - 11am	12	482	3	20	0	3	0	0	0	0	0	0	0	0	520	1200 -		
11am - Midday	17	597	2	13	0	1	0	0	0	0	0	0	0	0	630	Hour 1300 -		
Midday - 1pm	21	534	4	16	0	1	0	0	0	0	0	0	0	0	576	1400 -		\perp
lpm - 2pm	18	510	2	13	0	0	0	0	0	0	0	0	0	0	543	1500 -		
 2pm - 3pm	10	500	3	16	0	0	0	0	0	0	0	0	0	0	529	1600 -		+/+
Bpm - 4pm	11	479	2	10	0	3	0	0	0	0	0	0	0	0	505	1700 -		+
4pm - 5pm	14	453	1	19	1	1	0	0	0	0	0	0	0	0	489	1800 -		
5pm - 6pm	19	454	4	12	0	0	0	0	0	0	0	0	0	0	489	1900 -		+
6pm - 7pm	19	444	3	15	0	0	0	0	0	0	0	0	0	0	481	2000 -		\forall
7pm - 8pm	19	416	3	13	0	0	0	0	0	0	0	0	0	0	451	2100 -		
Bpm - 9pm	12	293	0	11	1	0	0	0	0	0	0	0	0	0	317	2200 -		
9pm - 10pm	10	206	1	6	0	0	0	0	0	0	0	0	0	0	223	2300 -		
10pm - 11pm	2	104	0	3	0	0	0	0	0	0	0	0	0	0	109	2400 -	- 	1 1 1
11pm - Midnight	0	59	0	2	0	0	0	0	0	0	0	0	0	0	61	•	200	400 600
otal	209	6783	30	222	2	10	0	0	0	0	0	0	0	0	7256		Ve	ehicles
of Total	3	93		3	_		-	-	-	-	-	-	-	-	3 4			

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Page: 7

CfeIT bob.white@cfeit.com (02) 9740 8600 **One Page Summary** Lat/Long: S33 50.689 / E151 06.453 Count Number TENNYSON ROAD, MORTLAKE: Between NORTHCOTE STREET & WATKINS STREET (bidirectional) Street Between Northcote and Edwin, just north of House No. 23 on No Stop Sign Speed Limit SOUTH NORTH COMBINED 12-FEB-21 Start Date 2200 7 DAYS 1 HOUR Start Time Duration 36 46 Weekly 50th Percentile Speed 37 37 Weekly 85th Percentile Speed 46 46 Interval Five Day AADT 4704 4646 4442 9350 9006 Seven Day AADT 4564 18-FFB-21 13-FEB-2 14-FFB-2 46.0 36.8 17 .2 4 46.6 37.8 9 .2 0 46.4 37.3 18 .2 2 45.7 36.4 7 .2 1.571 .0 46.1 37.1 5.286 .1 .8571 45.8 36.6 45.6 36.4 45.9 36.7 45.8 36.6 45.8 36.5 45.5 36.2 46.1 37.1 46.2 37.1 46.2 37.2 46.1 36.9 80 60 **SOUTH** 40 20 60 ORTH 40 20 0 95.9 4.0 .1 300 465 3770 4762 124 4428 15 167 13 95.7 4.3 .1 496 363 3867 4761 126 4412 16 180 13 10 0 2 0 0 0 95.6 4.3 .1 491 339 3872 4819 132 4458 19 190 12 4 2 1 1 0 0 0 96.9 3.1 .0 392 317 3479 4206 99 3957 18 119 6 0 0 0 0 97.7 2.3 .1 359 298 2977 3662 135 3431 11 75 4 4 0 0 98.2 1.8 .0 303 321 3068 3919 119 3715 13 63 6 96.1 3.8 .1 462 334 3648 4442 120 4134 17 155 9 96.4 3.5 .1 311 433 3618 4564 129 4257 15 141 11 96.3 3.6 1 751 732 7266 9006 250 8391 32 295 19 14 1 774 761 7697 9736 285 9019 33 356 23 12 3

CFE Information Technologies

Mon

600 400 200

600 400 200

Data displayed has been compiled from pneumatic traffic count processes and is subject to the documented limitation

CfelT bob.white@cfeit.com (02) 9740 8600

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Classification Data

Count Number	970	-	DOAD	MODELA		: CB		OTE 6	TDEET (ng : S33							
Street Location		INYSON ween Nor	•								INS SIF	KEEI (DI	airectio	naı) :	C	arriagewa	У	
						Star	t Date		12-F	EB-21					ADT	Short cls 1-2	Med cls 3-5	Long cls 6+
MON	15-F	EB-2	1				t Time ation rval		2200 7 DA 1 HC	YS		s	ive Day even Da /eekend	у	9350 9006 8146	95.9 96.3 97.5	4.0 3.6 2.5	.1 .1 % .0
Гime	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	32	0	0	0	0	0	0	0	0	0	0	0	0	32	100]	<u> </u>	
lam - 2am	0	18	0	2	0	0	0	0	0	0	0	0	0	0	20	200 -		
2am - 3am	0	22	0	2	0	0	0	0	0	0	0	0	0	0	24	300 -		
Bam - 4am	0	12	0	1	1	0	0	0	0	0	0	0	0	0	14	400 -	\	
lam - 5am	1	29	0	5	1	0	0	0	0	0	0	0	0	0	36	500 -		
5am - 6am	3	117	0	11	1	2	0	0	0	0	0	0	0	0	134	600 - 700 -		
Sam - 7am	8	251	2	22	3	0	0	0	0	0	0	0	0	0	286	800 -		
7am - 8am	11	582	5	26	2	2	0	0	0	0	0	0	0	0	628	900 -		
Bam - 9am	17	686	6	20	1	2	1	0	0	0	0	0	0	0	733	1000 -		
9am - 10am	26	613	5	16	0	3	0	0	1	1	0	0	0	0	665	1100 -		
10am - 11am	8	527	3	27	0	0	1	0	0	0	0	0	0	0	566	1200 -		+/-
l1am - Midday	17	456	2	21	0	2	0	0	0	0	0	0	0	0	498	Hour 1300 -		
Midday - 1pm	13	459	4	20	0	1	1	0	0	0	0	0	0	0	498	1400 -		+
lpm - 2pm	27	436	2	15	0	0	0	0	0	0	0	0	0	0	480	1500 -		+
2pm - 3pm	12	459	4	11	0	1	0	0	0	0	0	0	0	0	487	1600 -		+
3pm - 4pm	18	640	2	20	2	1	0	0	0	0	0	0	0	0	683	1700 -		+
1pm - 5pm	14	606	1	22	0	1	0	0	0	0	0	0	0	0	644	1800 -		+
5pm - 6pm	33	671	4	11	1	0	0	0	0	0	0	0	0	0	720	1900 -		
Spm - 7pm	22	556	4	18	1	0	0	0	0	0	0	0	0	0	601	2000 -		
7pm - 8pm	12	369	1	10	0	0	0	0	0	0	0	0	0	0	392	2100 -		
3pm - 9pm	12	258	0	11	0	0	0	0	0	0	0	0	0	0	281	2200 -		
9pm - 10pm	5	170	0	8	0	0	0	0	0	0	0	0	0	0	183	2300 - 2400 -		
10pm - 11pm	0	63	0	4	0	0	0	0	0	0	0	0	0	0	67	1		
11pm - Midnight	0	52	0	5	0	0	0	0	0	0	0	0	0	0	57	0	200	è 8
otal	259	8084	45	308	13	15	3	0	1	1	0	0	0	0	8729		Ve	3103

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Classification Data

Count Number Street		INYSON	•		KE : B		NORTH			& WATK	ng : S33 INS STF							
Location	Betv	ween Nor	thcote a	nd Edwin	i, just no	rth of Ho	use No.	23 on N	o Stop S	ign					C	arriagewa	У	
					$\overline{}$		rt Date		12-F 2200	EB-21		Fi	ve Day		ADT 9350	Short cls 1-2 95.9	Med cls 3-5 4.0	Long cls 6+
TUE	16-F	EB-2	1			Dura	ation rval		7 DA 1 HC	_			even Da eekend	у	9006 8146	96.3 97.5	3.6 2.5	.1 [%] .0
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	0	19	0	4	0	0	0	0	0	0	0	0	0	0	23	100 -	<u> </u>	
1am - 2am	0	14	0	5	1	0	0	0	0	0	0	0	0	0	20	200 -		++
2am - 3am	0	19	0	3	0	0	0	0	0	0	0	0	0	0	22	300 -		
3am - 4am	0	19	0	1	0	1	0	0	0	0	0	0	0	0	21	400 -		\rightarrow
4am - 5am	0	23	0	8	2	1	0	0	0	0	0	0	0	0	34	500 -		
5am - 6am	4	133	0	10	1	0	0	1	0	0	0	0	0	0	149	600 - 700 -		
6am - 7am	0	271	0	18	6	0	0	1	0	1	0	0	0	0	297	800 -		
7am - 8am	15	588	0	28	1	1	0	0	0	0	0	0	0	0	633	900 -		
8am - 9am	32	765	4	17	2	1	1	0	0	0	0	0	0	0	822	1000 -		-
9am - 10am	15	629	1	18	2	0	0	0	0	0	0	0	0	0	665	1100 -		-/-
10am - 11am	16	499	4	21	1	0	0	0	0	0	0	0	0	0	541	1200 -		+
11am - Midday	7	465	3	18	1	0	1	0	0	0	0	0	0	0	495	Hour 1300 -		\rightarrow
Midday - 1pm	13	477	1	26	0	0	0	0	0	0	0	0	0	0	517	1400 -		
1pm - 2pm	18	448	1	29	1	2	0	0	0	0	0	0	0	0	499	1500 -		\rightarrow
2pm - 3pm	14	500	1	17	2	0	0	0	0	0	0	0	0	0	534	1600 -		\rightarrow
3pm - 4pm	23	637	6	28	0	0	0	0	0	0	0	0	0	0	694	1700 -		+
4pm - 5pm	21	616	2	24	0	0	0	0	0	0	0	0	0	0	663	1800 -		\rightarrow
5pm - 6pm	16	743	3	17	0	2	0	0	0	0	0	0	0	0	781	1900 -		+
6pm - 7pm	34	610	1	21	1	0	0	0	0	0	0	0	0	0	667	2000 -		
7pm - 8pm	13	444	0	13	0	0	0	0	0	0	0	0	0	0	470	2100 -		
8pm - 9pm	5	296	1	9	0	0	0	0	0	0	0	0	0	0	311	2200 -		
9pm - 10pm	6	216	0	9	0	0	0	0	0	0	0	0	0	0	231	2300 - 2400 -		
10pm - 11pm	3	110	0	7	0	0	0	0	0	0	0	0	0	0	120		' ' ' '	
11pm - Midnight	0	43	0	3	0	0	0	0	0	0	0	0	0	0	46	6	200	60 80
otal	255	8584	28	354	21	8	2	2	0	1	0	0	0	0	9255		Ve	ehicles
of Total	3	93		4														

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Classification Data

Count Number	970		DOAD.	MODTL		: CB		COTE C	TDEET (ng : S33							
Street Location		INYSON ween Nor	-								IIIO OIF	KEEI (DI	airectio	naı) :	C	arriagewa	у	
					$\overline{}$		t Date		12-F 2200	EB-21			ive Day		ADT 9350	Short cls 1-2 95.9	Med cls 3-5 4.0	Long cls 6+
WED	17-F	EB-2	1				ation		7 DA 1 HC	YS		s	even Da leekend	у	9006 8146	96.3 97.5	3.6 2.5	.1 % .1 %
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	1	29	0	6	0	0	0	0	0	0	0	0	0	0	36	100]	1	
1am - 2am	0	14	0	1	0	0	0	0	0	0	0	0	0	0	15	200 -		
2am - 3am	0	10	0	1	0	0	0	0	0	0	0	0	0	0	11	300 -		
Bam - 4am	0	15	0	1	2	0	0	0	0	0	0	0	0	0	18	400 -		
4am - 5am	1	27	0	3	1	0	0	0	0	0	0	0	0	0	32	500 -		
5am - 6am	3	124	0	14	0	0	0	1	0	0	0	0	0	0	142	600 - 700 -		
6am - 7am	9	291	0	19	0	0	0	1	0	0	0	0	0	0	320	800 -		
7am - 8am	21	601	3	30	0	4	0	0	0	0	0	0	0	0	659	900 -		
Bam - 9am	26	685	1	26	7	1	0	0	0	0	0	0	0	0	746	1000 -		
9am - 10am	5	637	3	26	2	0	0	1	0	0	0	0	0	0	674	1100 -		
10am - 11am	20	540	1	18	2	1	0	0	0	0	0	0	0	0	582	1200 -		-/
11am - Midday	12	496	1	19	0	1	0	0	0	0	0	0	0	0	529	Hour 1300 -		
Midday - 1pm	14	479	3	20	3	1	0	0	0	0	0	0	0	0	520	1400 -		
1pm - 2pm	17	486	1	17	0	3	0	0	0	0	0	0	0	0	524	1500 -		+
2pm - 3pm	10	485	2	26	3	2	0	1	0	0	0	0	0	0	529	1600 -		\rightarrow
3pm - 4pm	27	710	4	16	0	1	0	0	0	0	0	0	0	0	758	1700 -		+
4pm - 5pm	12	666	2	25	1	1	0	0	0	0	0	0	0	0	707	1800 -		+
5pm - 6pm	26	746	1	17	1	1	0	0	0	0	0	0	0	0	792	1900 -		
6pm - 7pm	11	636	3	21	0	3	0	0	0	0	0	0	0	0	674	2000 -		
7pm - 8pm	6	423	2	12	0	1	0	0	0	0	0	0	0	0	444	2100 -		
8pm - 9pm	2	308	1	10	0	0	0	0	0	0	0	0	0	0	321	2200 -		
9pm - 10pm	0	253	0	8	0	0	0	0	0	0	0	0	0	0	261	2300 -		
10pm - 11pm	0	103	0	5	0	0	0	0	0	0	0	0	0	0	108	2400 -	· · · ·	' '
11pm - Midnight	1	54	0	4	0	0	0	0	0	0	0	0	0	0	59	0	200	800
otal	224	8818	28	345	22	20	0	4	0	0	0	0	0	0	9461		Ve	ehicles

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Page: 3

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Classification Data

Count Number Street Location		0 INYSON ween Nor	•		KE : B		NORTH			& WATK	ng : S33 INS STF					: Carriagewa	y	
THU		EB-2				Star Star	rt Date rt Time ation			EB-21) AYS		S	ive Day even Da leekend	у	ADT 9350 9006 8146	Short cls 1-2 95.9 96.3 97.5	Med cls 3-5 4.0 3.6 2.5	Long cls 6+ .1 .1 %
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total	7		
Midnight - 1am	0	40	0	4	2	0	0	0	0	0	0	0	0	0	46	100 -	/	
1am - 2am	0	12	0	0	0	0	0	0	0	0	0	0	0	0	12	200 -	\leftarrow	++
2am - 3am	0	10	0	2	0	0	0	0	0	0	0	0	0	0	12	300 -		+++
3am - 4am	0	21	0	1	0	0	0	0	0	0	0	0	0	0	22	400 -		+
4am - 5am	1	27	0	3	2	0	0	0	0	0	0	0	0	0	33	500 -		
5am - 6am	2	119	0	12	0	0	0	0	0	0	0	0	0	0	133	600 -		
6am - 7am	6	291	0	21	4	2	0	2	0	1	0	0	0	0	327	700 -		
7am - 8am	22	611	3	23	2	0	0	0	0	0	0	0	0	0	661	800 - 900 -		
8am - 9am	25	732	3	19	2	2	0	0	0	0	0	0	0	0	783	1000 -		
9am - 10am	37	613	5	21	6	4	0	0	0	1	0	0	0	0	687	1100 -		
10am - 11am	16	484	1	23	2	1	0	0	0	1	0	0	0	0	528	1200 -		
11am - Midday	14	540	3	33	4	1	0	0	0	0	0	0	0	0	595	Hour 1300 -		-
Midday - 1pm	14	467	3	24	4	2	0	0	0	1	0	0	0	0	515	1400 -		+
1pm - 2pm	9	467	0	16	0	2	0	0	0	0	0	0	0	0	494	1500 -		\rightarrow
2pm - 3pm	13	494	0	20	0	2	0	0	0	1	0	0	0	0	530	1600 -		\rightarrow
3pm - 4pm	17	677	3	23	0	3	0	0	1	0	0	0	0	0	724	1700 -		+
4pm - 5pm	14	657	2	17	2	0	0	0	0	0	0	0	0	0	692	1800 -		\longrightarrow
5pm - 6pm	25	716	3	22	2	1	0	0	0	1	0	0	0	0	770	1900 -		$\rightarrow \!$
6pm - 7pm	16	639	4	14	0	1	0	0	0	0	0	0	0	0	674	2000 -		+
7pm - 8pm	17	451	1	12	0	0	0	1	0	0	0	0	0	0	482	2100 -		+
8pm - 9pm	10	345	1	12	0	0	0	0	0	0	0	0	0	0	368	2200 -		$\overline{}$
9pm - 10pm	2	225	0	5	0	0	0	0	0	0	0	0	0	0	232	2300 -		
10pm - 11pm	2	157	0	6	0	0	0	0	0	0	0	0	0	0	165	2400 -	1 1	• • • •
11pm - Midnight	3	77	0	4	0	0	0	0	0	0	0	0	0	0	84	6	200 400	60 80
otal	265	8872	32	337	32	21	0	3	1	6	0	0	0	0	9569		Ve	ehicles
6 of Total	3	93		4														

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Classification Data

Count Number Street	970 TEN		ROAD.	MORTLA		: CB		COTE S	TREET 8		ng : S33 INS STR								
Location	TENNYSON ROAD, MORTLAKE: Between NORTHCOTE STREET & WATKINS STREET (bidirectional): Between Northcote and Edwin, just north of House No. 23 on No Stop Sign Can														arriagewa	rriageway			
FRI	12-F	EB-2	1			Star Dura	t Date t Time ation		2200 7 DA	YS		S	ve Day even Da	у	ADT 9350 9006	Short cls 1-2 95.9 96.3	Med cls 3-5 4.0 3.6	Long cls 6+ .1 .1 %	
						Inte	rval	1 HOUR				Weekend			8146	97.5	2.5	.0	
Time	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total				
Midnight - 1am	0	36	0	5	0	0	0	0	0	0	0	0	0	0	41	100	/		
lam - 2am	0	13	0	1	0	0	0	0	0	0	0	0	0	0	14	200 -			
2am - 3am	0	16	0	1	0	0	0	0	0	0	0	0	0	0	17	300 -			
Bam - 4am	0	15	0	4	1	1	0	0	0	0	0	0	0	0	21	400 - 500 -			
lam - 5am	2	30	0	4	1	1	0	0	0	0	0	0	0	0	38	500 - 600 -			
āam - 6am	4	122	0	10	2	0	0	1	0	0	0	0	0	0	139	700 -			
Sam - 7am	7	272	0	18	2	2	0	1	0	0	0	0	0	0	302	800 -			
7am - 8am	8	566	0	23	6	1	0	0	0	0	0	0	0	0	604	900 -			
Bam - 9am	23	725	4	21	1	0	0	0	0	0	0	0	0	0	774	1000 -			
9am - 10am	13	635	2	27	2	1	0	0	1	0	0	0	0	0	681	1100 -			
10am - 11am	18	549	1	21	2	0	1	0	0	1	0	0	0	0	593	1200 -		/_	
l1am - Midday	21	516	2	29	1	2	1	0	0	0	0	0	0	0	572	Hour 1300 -		$+$ \downarrow $-$	
Midday - 1pm	14	530	2	21	0	1	1	0	0	0	0	0	0	0	569	1400 -		$+\leftarrow-$	
lpm - 2pm	12	425	3	19	1	0	0	0	0	0	0	0	0	0	460	1500 -		+	
2pm - 3pm	19	557	6	17	0	1	0	1	0	0	0	0	0	0	601	1600 -			
3pm - 4pm	8	692	1	23	0	0	0	0	0	0	0	0	0	0	724	1700 -			
1pm - 5pm	18	680	0	20	0	1	0	0	0	0	0	0	0	0	719	1800 -			
5pm - 6pm	22	705	4	27	2	1	0	0	0	0	0	0	0	0	761	1900 -			
Spm - 7pm	30	587	2	19	1	0	0	0	0	0	0	0	0	0	639	2000 -			
7pm - 8pm	31	473	2	9	0	0	0	0	0	0	0	0	0	0	515	2100 -			
3pm - 9pm	17	289	3	12	1	0	0	0	0	0	0	0	0	0	322	2200 -			
9pm - 10pm	12	266	0	9	0	0	0	0	0	0	0	0	0	0	287	2300 -			
10pm - 11pm	4	187	1	9	0	0	0	0	0	0	0	0	0	0	201	2400 -			
11pm - Midnight	2	133	0	7	0	0	0	0	0	0	0	0	0	0	142	0	200	8 hicles	
otal	285	9019	33	356	23	12	3	3	1	1	0	0	0	0	9736		VE	micies	

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Classification Data

Count Number Street	970 TEN		ROAD.	MORTLA		: CB		COTE S	TREET &		ng : S33 INS STR								
Location	TENNYSON ROAD, MORTLAKE: Between NORTHCOTE STREET & WATKINS STREET (bidirectional): Between Northcote and Edwin, just north of House No. 23 on No Stop Sign Can														arriagewa	arriageway			
						Star	t Date		2200				ve Day		ADT 9350	Short cls 1-2 95.9	Med cls 3-5 4.0	Long cls 6+ .1	
SAT	13-F	EB-2	1			Inte	ation rval	7 DAYS 1 HOUR				Seven Day Weekend			9006 8146	96.3 97.5	3.6 2.5	.1 ⁷ 0 .0	
Гіте	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total				
Midnight - 1am	0	73	1	7	0	0	0	0	0	0	0	0	0	0	81	100 7	/		
lam - 2am	0	45	0	0	0	0	0	0	0	0	0	0	0	0	45	200 -	/ 		
2am - 3am	0	26	0	3	0	0	0	0	0	0	0	0	0	0	29	300 -			
Bam - 4am	0	20	0	3	0	0	0	0	0	0	0	0	0	0	23	400 -			
lam - 5am	0	27	0	2	1	0	0	0	0	0	0	0	0	0	30	500 -			
iam - 6am	0	76	0	9	1	0	0	0	0	0	0	0	0	0	86	600 -			
Sam - 7am	0	137	0	12	1	0	0	0	0	0	0	0	0	0	150	700 -			
7am - 8am	7	278	1	14	1	0	0	0	0	0	0	0	0	0	301	800 - 900 -			
Bam - 9am	9	474	1	13	1	0	0	0	0	0	0	0	0	0	498	1000 -			
9am - 10am	15	589	0	15	2	1	0	0	0	0	0	0	0	0	622	1100 -			
10am - 11am	12	703	6	10	2	0	0	0	0	0	0	0	0	0	733	1200 -			
11am - Midday	35	683	5	14	1	2	0	0	0	0	0	0	0	0	740	Hour 1300 -		/	
Midday - 1pm	22	643	2	16	0	2	0	0	0	0	0	0	0	0	685	1400 -			
lpm - 2pm	10	616	2	14	1	0	0	0	0	0	0	0	0	0	643	1500 -		+	
2pm - 3pm	14	523	0	15	1	2	0	1	0	0	0	0	0	0	556	1600 -		+	
3pm - 4pm	9	547	7	13	1	0	0	0	0	0	0	0	0	0	577	1700 -		 	
lpm - 5pm	14	569	2	10	1	1	0	0	0	0	0	0	0	0	597	1800 -		+	
5pm - 6pm	10	560	3	16	0	1	0	0	0	0	0	0	0	0	590	1900 -		+/-	
Spm - 7pm	21	478	1	16	0	1	0	0	0	0	0	0	0	0	517	2000 -	 	1	
7pm - 8pm	15	324	2	8	0	1	0	0	0	0	0	0	0	0	350	2100 -			
3pm - 9pm	3	274	0	4	0	1	0	0	0	0	0	0	0	0	282	2200 -	 		
9pm - 10pm	7	227	0	5	0	0	0	0	0	0	0	0	0	0	239	2300 -			
10pm - 11pm	2	174	0	7	1	0	0	0	0	0	0	0	0	0	184	2400 -		+ + + +	
11pm - Midnight	0	151	0	4	0	1	0	0	0	0	0	0	0	0	156	٥	200	80 80 80	
otal	205	8217	33	230	15	13	0	1	0	0	0	0	0	0	8714		Ve	hicles	

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Classification Data

Count Number	970	-		MODEL 4		: CB					-	3 50.689						
Street		INYSON I	•								INS S11	KEET (DI	airectio	naı) :		\f		
Location	Between Northcote and Edwin, just north of House No. 23 on No Stop Sign												arriagewa _.	rriageway				
					_		t Date t Time		12-F 2200	EB-21		Fi	ve Day		ADT 9350	Short cls 1-2 95.9	Med cls 3-5 4.0	Long cls 6+ .1
SUN	14-F	EB-2	1			Dura Inter	ation		7 DA 1 HC	YS		S	even Da eekend	у	9006 8146	96.3 97.5	3.6 2.5	.1 % .0
Гіте	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total			
Midnight - 1am	1	103	0	4	0	0	0	0	0	0	0	0	0	0	108	100]	7	
lam - 2am	0	63	0	0	0	0	0	0	0	0	0	0	0	0	63	200 -	/	
2am - 3am	0	28	0	0	0	0	0	0	0	0	0	0	0	0	28	300 -		
Bam - 4am	0	19	0	2	0	0	0	0	0	0	0	0	0	0	21	400 -		
lam - 5am	0	12	0	1	0	0	0	0	0	0	0	0	0	0	13	500 -	\	
5am - 6am	2	38	0	1	0	0	0	0	0	0	0	0	0	0	41	600 -		
Sam - 7am	6	67	0	4	0	0	0	0	0	0	0	0	0	0	77	700 - 800 -		
7am - 8am	4	164	0	9	1	1	0	0	0	0	0	0	0	0	179	900 -		
Bam - 9am	6	311	0	6	0	0	0	0	0	0	0	0	0	0	323	1000 -		
9am - 10am	15	535	0	9	1	1	0	0	0	0	0	0	0	0	561	1100 -		
10am - 11am	24	519	0	6	1	1	0	0	0	0	0	0	0	0	551	1200 -		
11am - Midday	29	619	5	6	0	2	0	0	1	0	0	0	0	0	662	Hour 1300 -		/_
Midday - 1pm	22	580	1	13	1	0	0	0	0	0	0	0	0	0	617	1400 -		+
lpm - 2pm	28	531	1	7	1	0	0	0	0	0	0	0	0	0	568	1500 -		+ $+$
2pm - 3pm	15	534	1	9	0	0	0	0	0	0	0	0	0	0	559	1600 -		+/-
3pm - 4pm	4	495	4	7	1	0	0	0	0	1	0	0	0	0	512	1700 -		+
lpm - 5pm	11	479	1	13	2	0	0	0	0	0	0	0	0	0	506	1800 -		+
5pm - 6pm	26	494	5	9	1	0	0	0	0	0	0	0	0	0	535	1900 -		+/-
Spm - 7pm	20	440	2	9	0	0	0	0	0	1	0	0	0	0	472	2000 -		\forall
7pm - 8pm	20	427	3	7	1	1	0	0	0	0	0	0	0	0	459	2100 -		
3pm - 9pm	8	303	0	9	0	0	0	0	0	0	0	0	0	0	320	2200 -		
9pm - 10pm	11	211	1	3	0	0	0	0	0	0	0	0	0	0	226	2300 -		
10pm - 11pm	0	113	0	3	0	0	0	0	0	0	0	0	0	0	116	2400 -	'' '	1 ' 1 '
11pm - Midnight	2	61	0	1	0	0	0	0	0	0	0	0	0	0	64	0	200	80 00 00
otal	254	7146	24	138	10	6	0	0	1	2	0	0	0	0	7581		Ve	ehicles
6 of Total	3	94		2														

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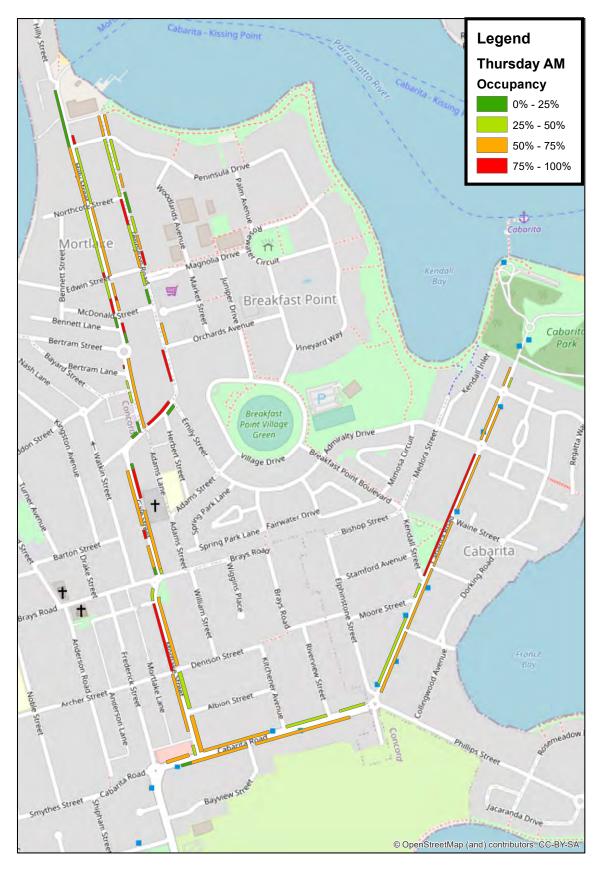
Page: 7



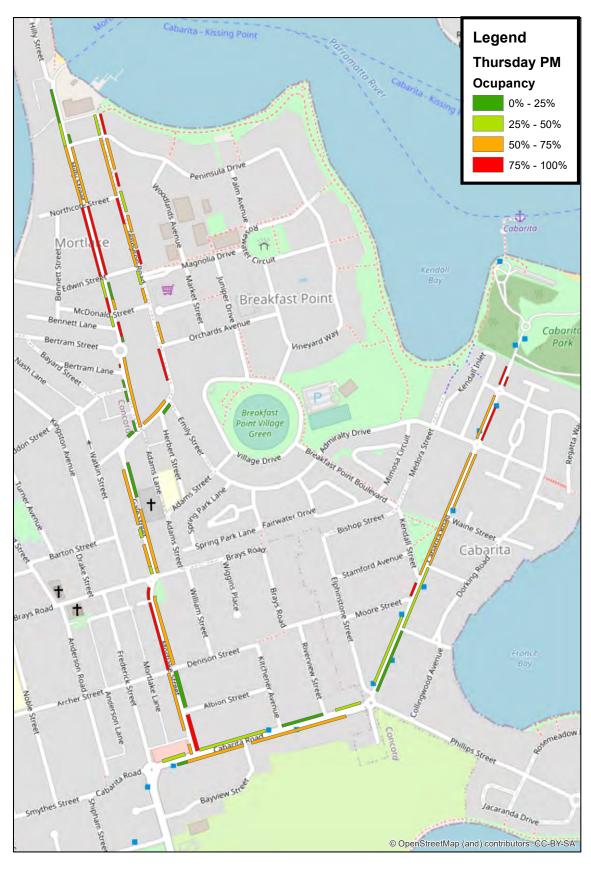


Appendix C: Parking Occupancy Survey

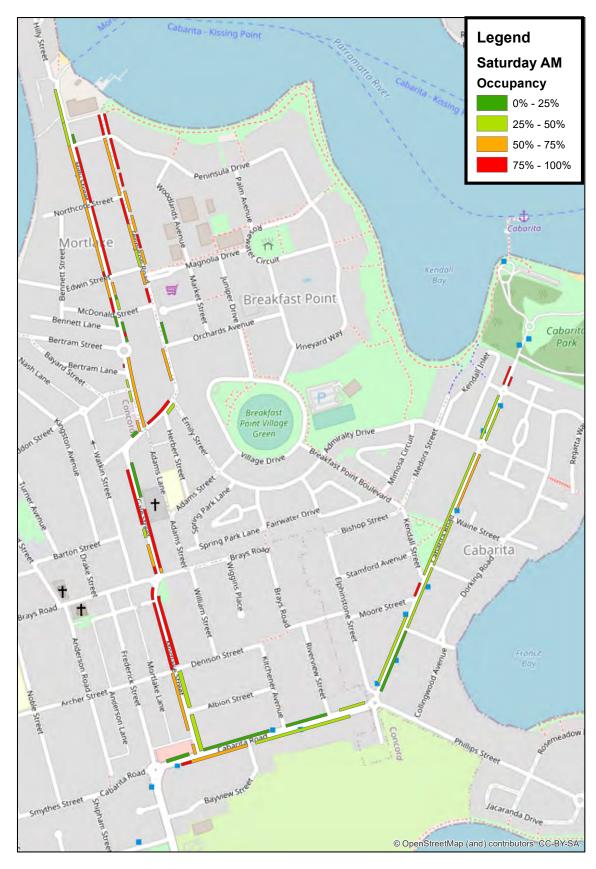




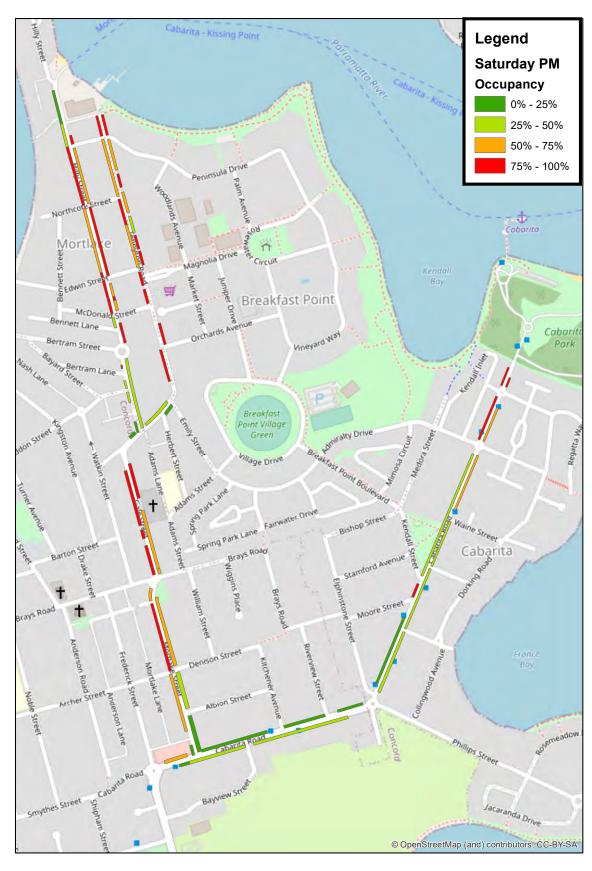




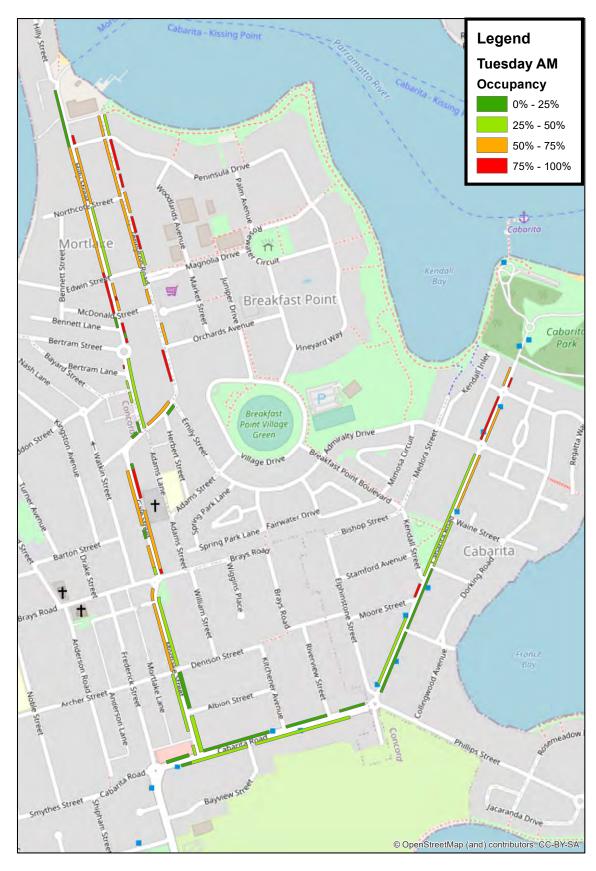




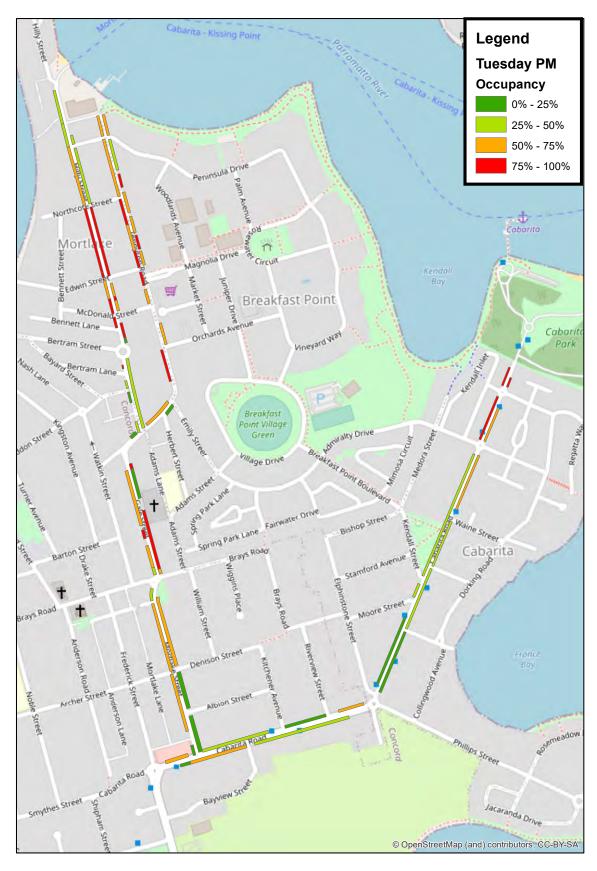










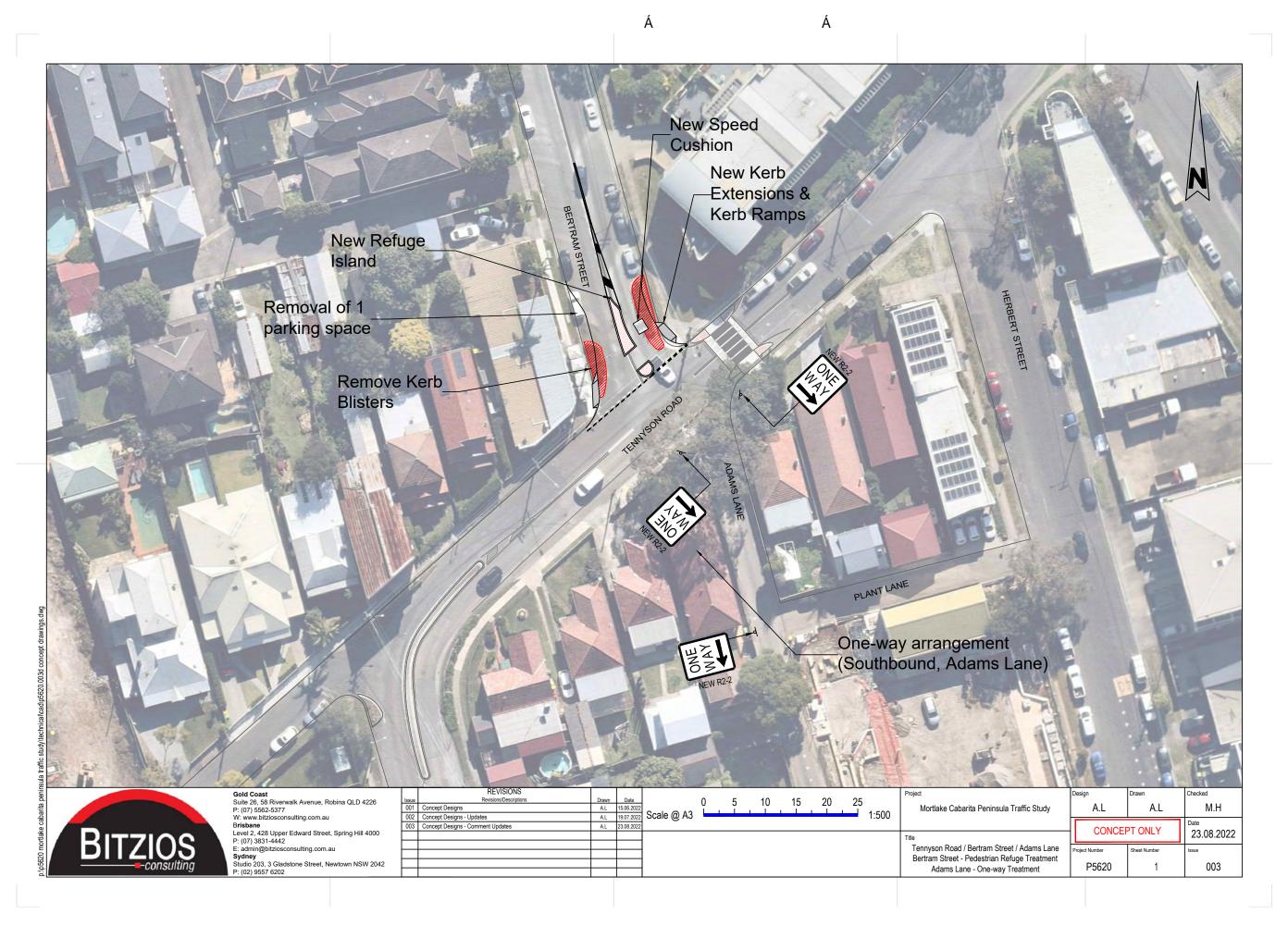






Appendix D: Concept Design





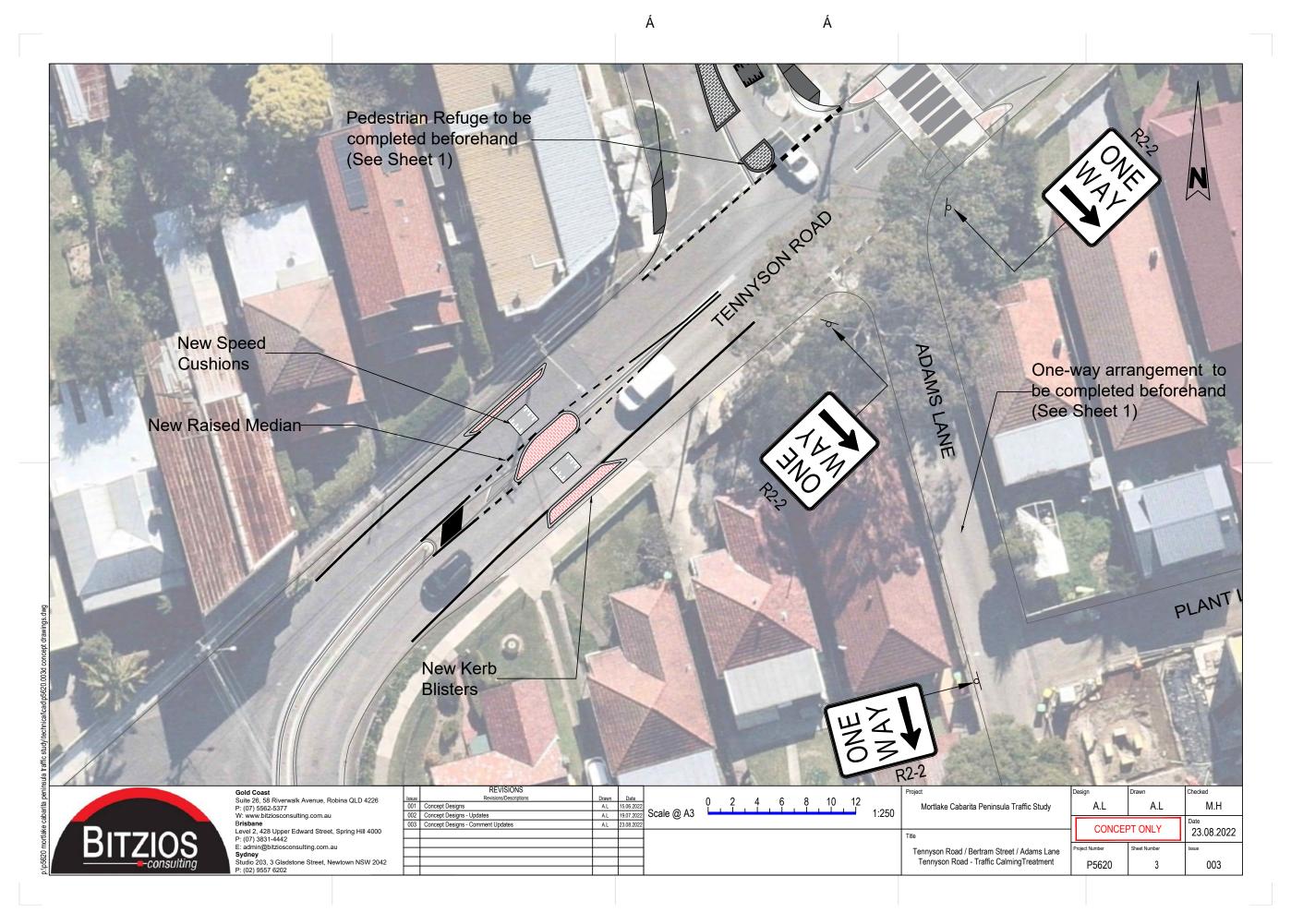
On{ /rF€ÌHÄÄOTicce&@ ^}c/FGÁ





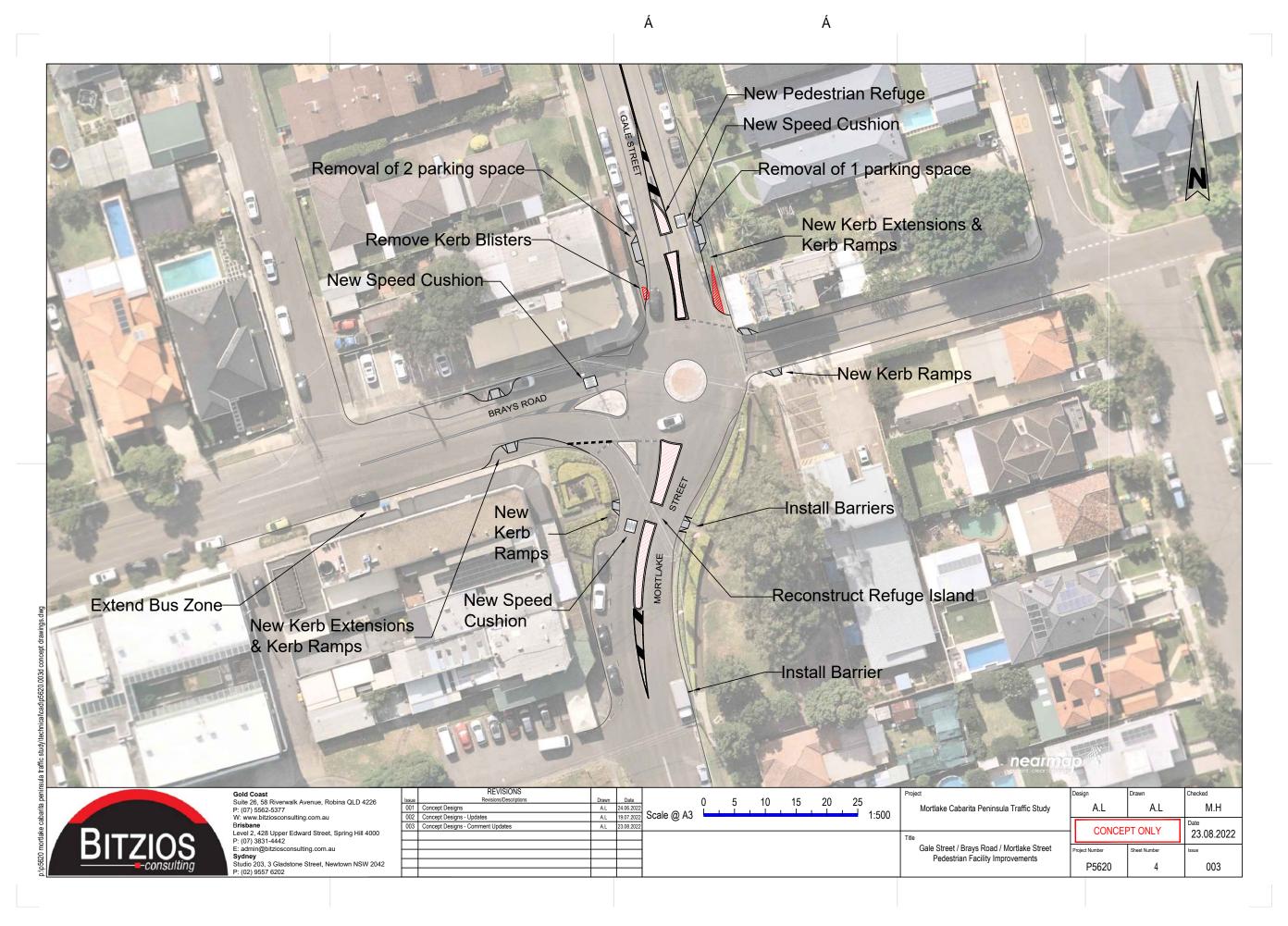
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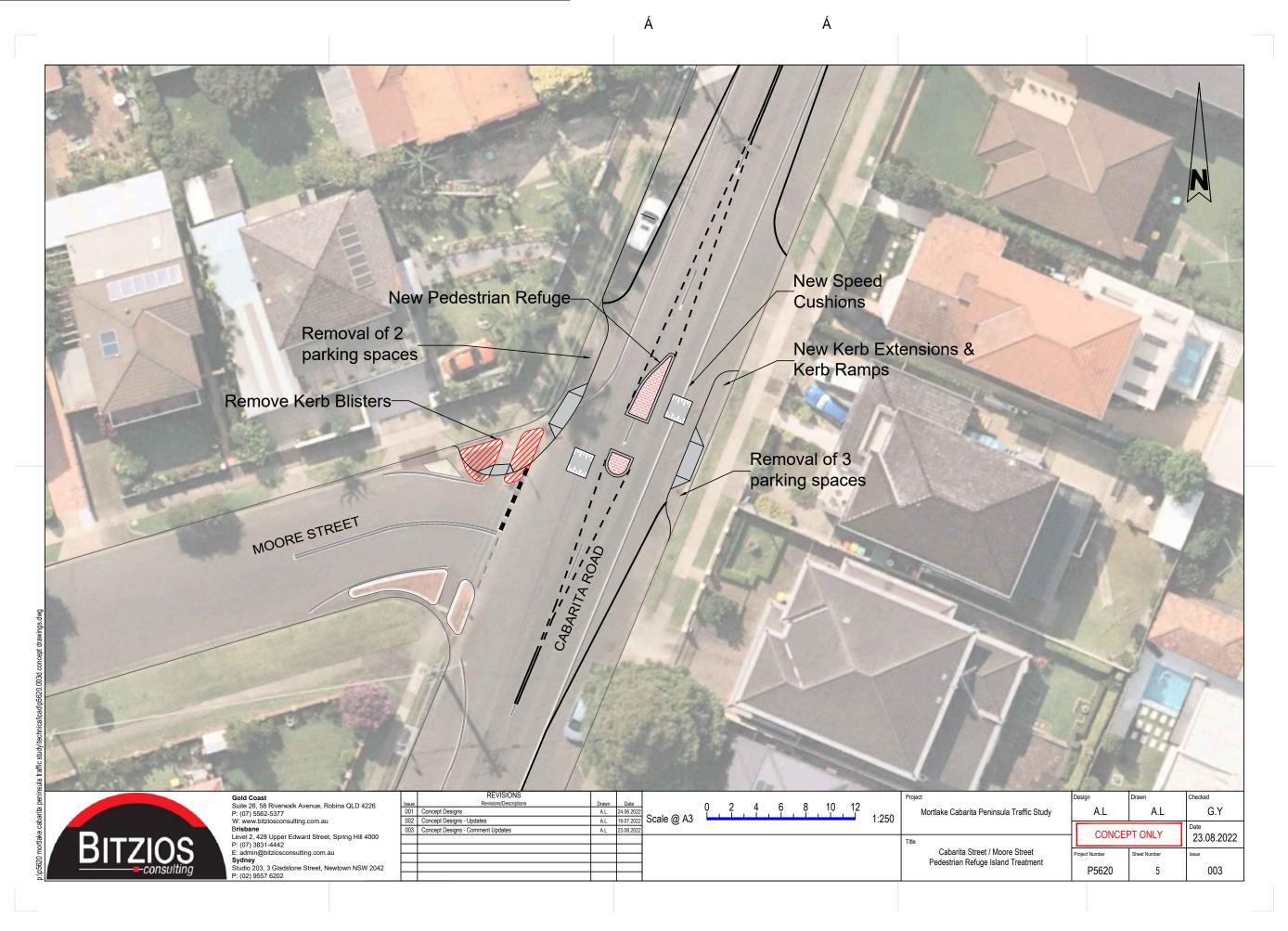
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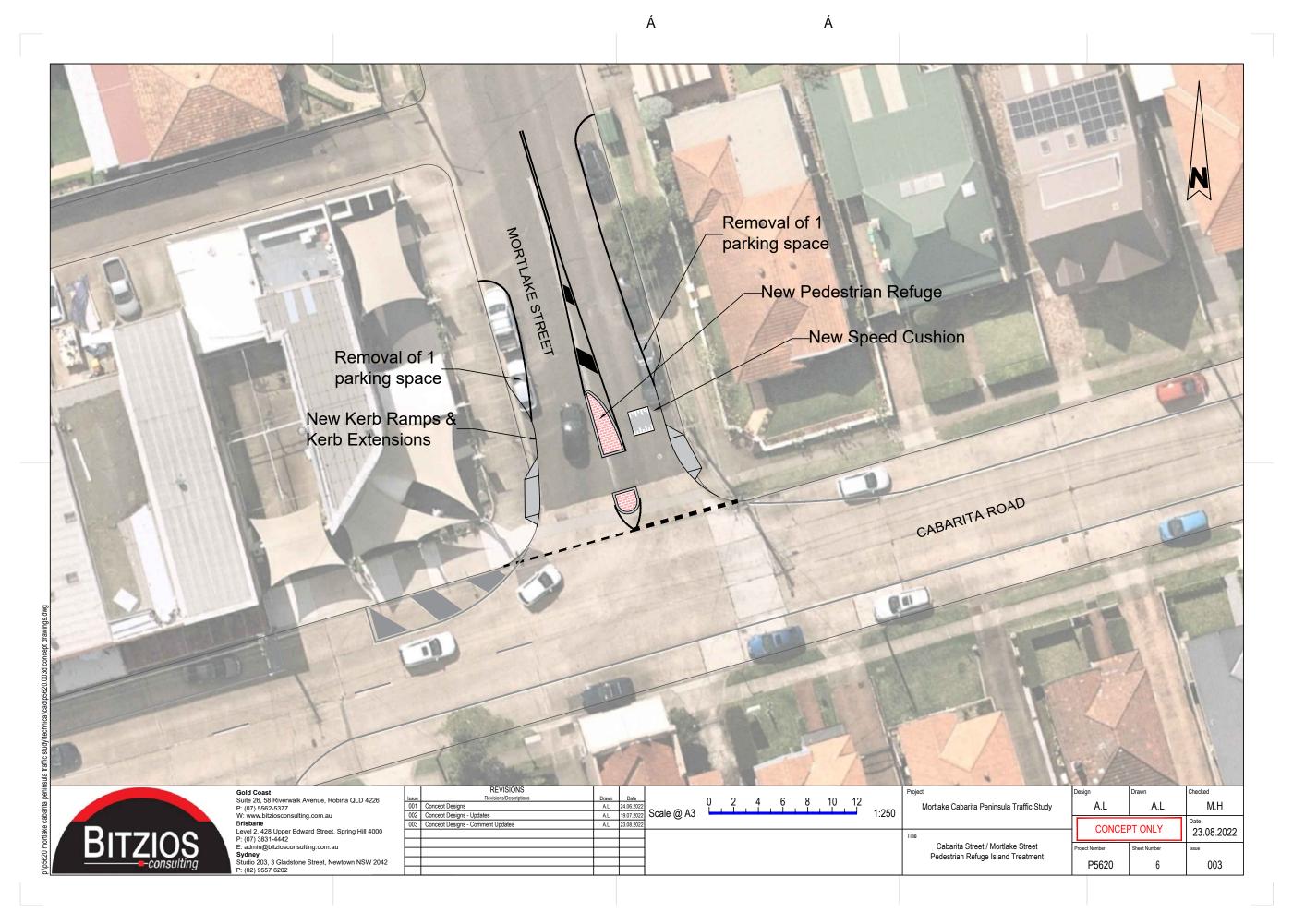
Qn\{Ár€ÌHÁÄAGaza&Qin\}oÁrGÁ





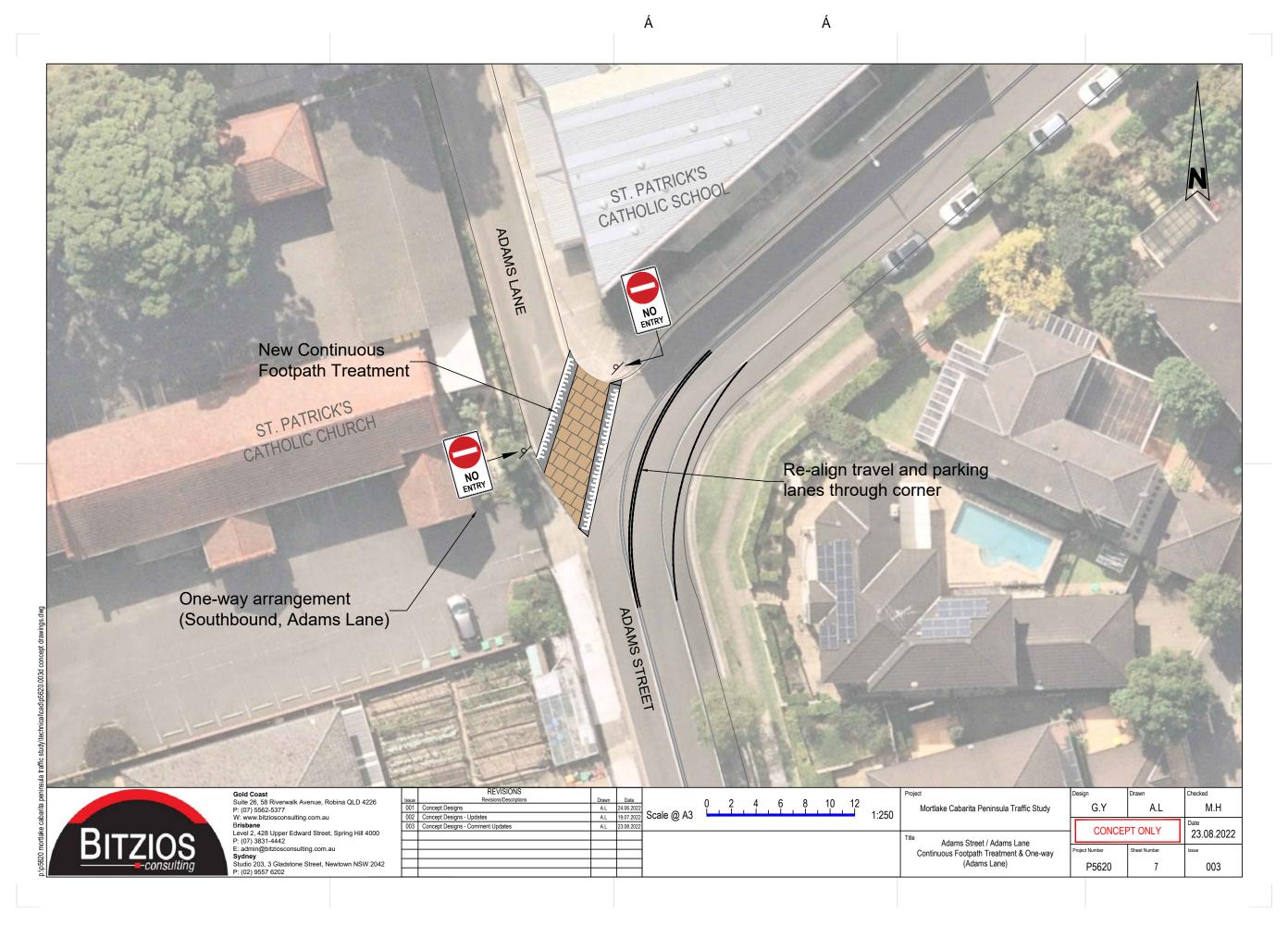
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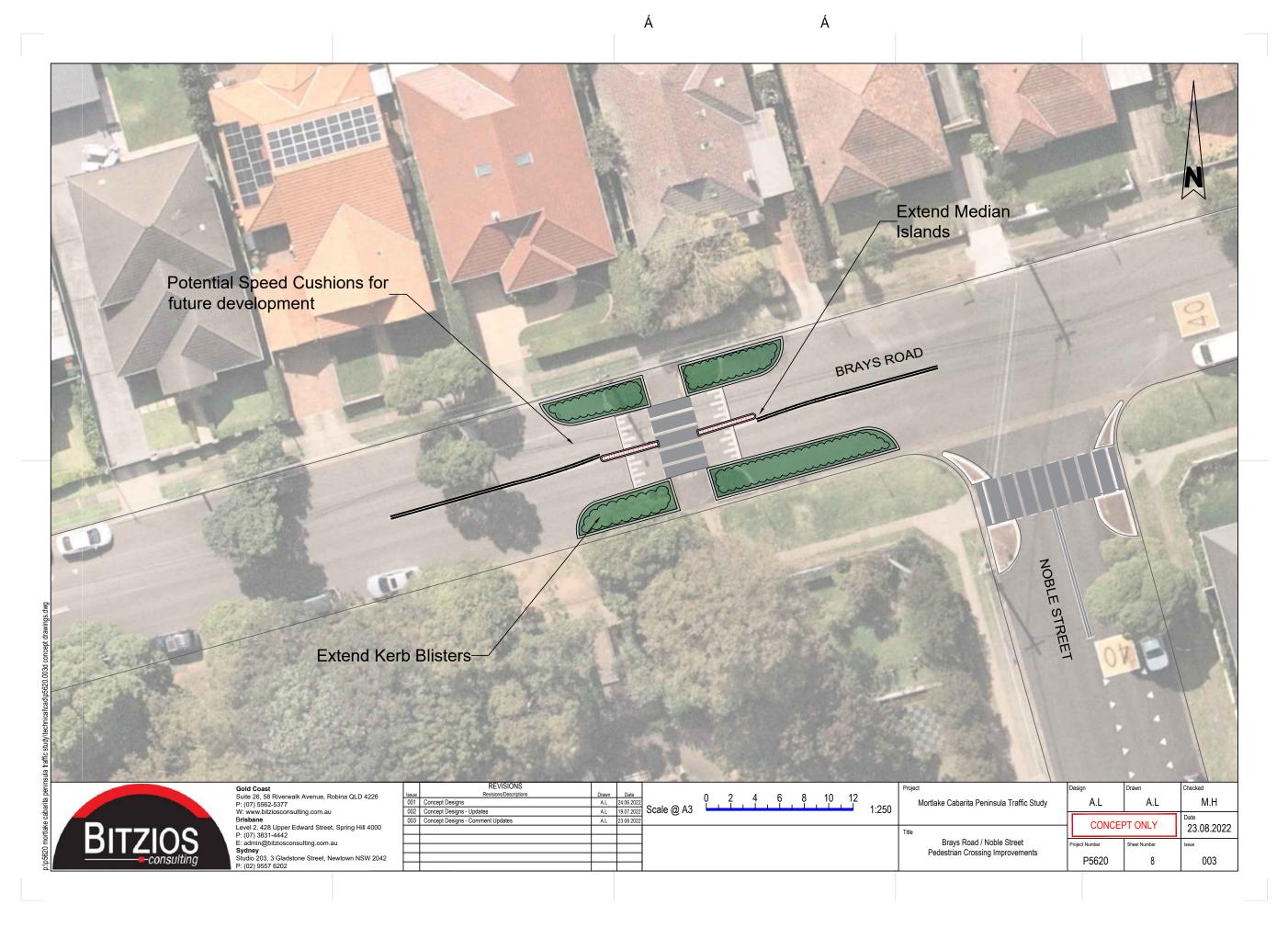
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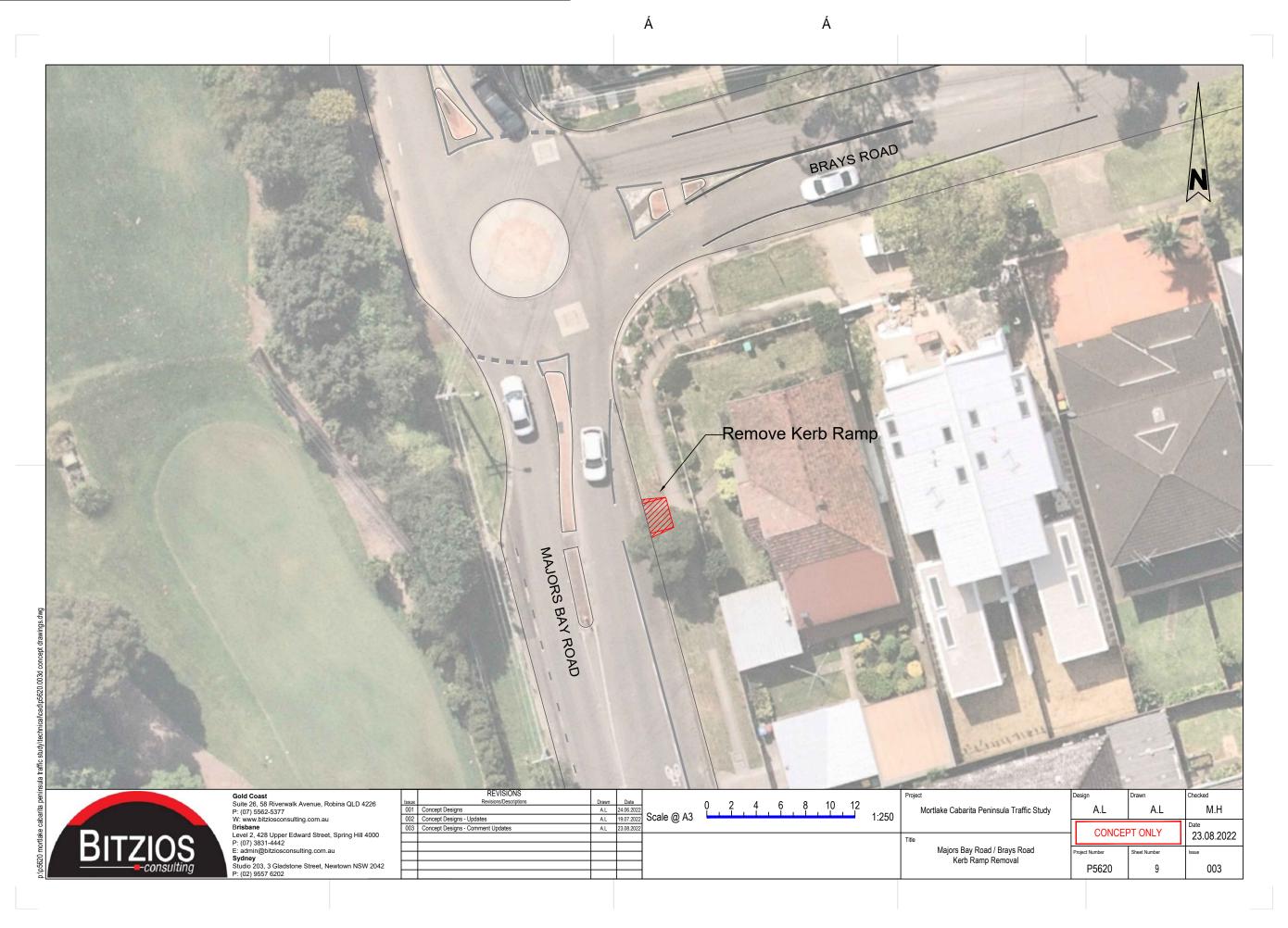
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On{ AF€ÌHÄAOTacass.@, ^}AFGÁ





On{ AF€ÌHÄÄOTicca&@ ^}cÁFGÁ



ST. PATRICK'S
CATHOLIC CHURCH Extend No Stopping Zone GALE STREET Gold Coast
Suite 26, 58 Riverwalk Avenue, Robina QLD 4226
P. (07) 5562-5377
W: www.bitziosconsulting.com.au
Brisbane
Level 2, 428 Upper Edward Street, Spring Hill 4000
P. (07) 3831-4442
E: admin@bitziosconsulting.com.au
Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042
P: (02) 9557 6202 | Diswn | Date | AL | 24.06.2022 | AL | 19.07.2022 | AL | 23.08.2022 | AL | 23.08.20 A.L M.H Mortlake Cabarita Peninsula Traffic Study 01 Concept Designs Date 23.08.2022 CONCEPT ONLY BITZIOS Gale Street Extension of No Stopping Zone P5620 003

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On{ AF€ÌHÄÄOTicca&@ ^}cÁFGÁ





Figure 1: 361 Victoria Avenue, Drummoyne



Figure 2: 19 Therry Street, Drummoyne



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Figure 3: 164 Burwood Road, Concord



Figure 4: 33 Churchill Crescent, Concord



Figure 5: 41 Llewellyn Street, Rhodes



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Consultation Report

RUSSELL LEA PEDESTRIAN CROSSING PROPOSAL

- BARNSTAPLE ROAD & BRENT STREET



CONSULTATION REPORT

This report provides a summary of feedback received regarding Council's proposal to construct pedestrian crossings in Russell Lea.

Contents

Background	1
Consultation Outcomes Summary	2
Consultation Participation	2
Overall Findings	2
Barnstaple Road	3
Feedback Themes – (surveys, emails and drop-in feedback)	3
Brent Street	4
Feedback Themes – (surveys, emails and drop-in feedback)	4
Other feedback	5
Participant data (survey only)	6
Promotional materials	7

Background

At the November 2021 Council Meeting, Councillors resolved to give in-principle support to installing a pedestrian crossing on Barnstaple Road for Russell Lea Public School students and the broader community. The Council also resolved to investigate a traffic refuge or appropriate safety measures on Brent Street, as well as several other investigations regarding pedestrian safety improvements.

At present there is no designated point to assist pedestrians in crossing Barnstaple Road and Brent Street in the vicinity of Russell Lea Public School.

The Proposal

Council has completed investigations, including observations of current pedestrian movements in the area and impacts on parking, and is proposing two raised pedestrian crossings on Barnstaple Road, between Speed Avenue and Duchess Avenue, as well as on Brent Street between Whittall Street and Clements Street.

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Consultation period 26 August – 11 September 2022

Council shared the proposals for the crossings with the community and sought feedback on any design or location concerns they had.

What methods were implemented to notify the community of this consultation opportunity?

- •Á Direct Notification Letters to 1000 residences in the area here >
- •Á Two email notifications:
 - •Á Consultation launch: 2,409, click through rate 3.03%
 - •Á Drop-in reminder email: 2,419, click through rate 2.89%
- •Á Two on-site posters at the proposed crossing location

What engagement methods were undertaken?

- •Á Online engagement survey at collaborate.canadabay.nsw.gov.au
- Á Direct email and phone number provided for further information
- •Á Two hour drop-in session at Nield Park



Consultation Outcomes Summary

Consultation Participation

942 visits to the Collaborate page

97 survey submissions

12 emails

1 phone call

30+ drop-in participants

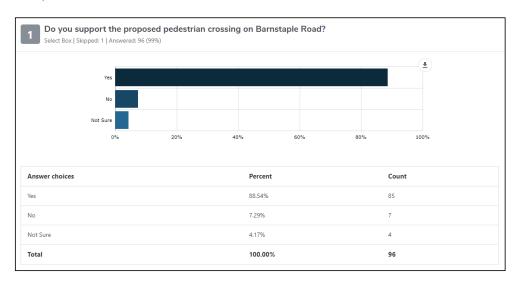
Overall Findings

- •Á 88% (85) of survey participants support the pedestrian crossing on Barnstaple Road
- •Á 87% (84) of survey participants support the pedestrian crossing on Brent Street
- •Á 60% (59) of survey participants send their children to Russell Lea Public School
- •Á 9 emails received indicate support the pedestrian crossings in principle, with 3 offering suggested changes to the design or location of the crossings
- •Á 3 emails received indicate opposition to the pedestrian crossings due to proximity to their homes and the impact a pedestrian crossing will have
- •Á BayBUG (Canada Bay Bike User Group) and others have highlighted that both crossing block cyclists from passing on the road and have requested that the crossing be redesigned
- •Á Several residents have requested that Council investigate different locations for the crossings

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Details of feedback is outlined below.

Barnstaple Road



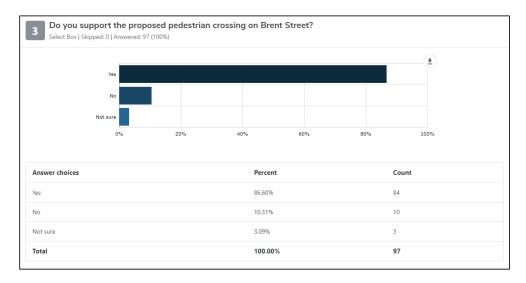
Feedback Themes – (surveys, emails and drop-in feedback)

Theme	Comments and # of submissions			
Move to cross into Larkins	Students walk down McCulloch Street, create walking path in Larkins			
Reserve	Reserve (9)			
	If needing to access Nield Park, students can walk down Noble Street			
	and cross on Nield Avenue which are always very quiet (3)			
	This is Russell Lea Schools fire evacuation zone, so makes more sense			
	(1)			
	More people use this crossing to get to Five Dock Park (1)			
Support	Long overdue (5)			
	Much needed (13)			
	Good location for students and walkers, elderly (5)			
	Will reduce speeding (4)			
Move to other side of	So children don't have to cross twice leaving school (4)			
Speed Avenue	"With this design, the children from Russell Lea will have to cross Speed			
	Avenue to access the crossing. Whereas if they leave school gates, cross			
	Whittall St crossing, they walk down Speed Ave and arrive at the crossing on			
Oppose location / pearby	Barnstaple."			
Oppose location / nearby resident concerns	Loss of easy access to driveway (3)			
resident concerns	Loss of parking for residents on the street (3) No speed humps – cause too much noise to residents (3)			
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	Loss of verge for rubbish collection and bulk household collection (3)			
	Perceived property value loss (2) Russell Lea School too big (1)			
	5 ()			
Cycling hazards	Waste of Council resources, focus on Henley Marine Drive crossing (1) Squeeze point, blocks path of cyclists (5)			
Cycling Hazards				
	Add cut outs where the planter boxes are currently planned to go (5)			
	Remove planter beds (2)			

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Move to near Arthur St	A difficult junction and one much used for accessing public transport and the shops at Rodd Point (1)
Low plantings	Minimise obstruction to visibility for drivers and cyclists (3)
Lighting	Add lighting for nighttime visibility (1)
Traffic calming	Add speed humps at crossing (2)
suggestions	Extend school zone. Need 40km/h signage for students (3)
	Signage (1)
	Double lines to stop u turns (1)
	Stop sign at corner of Seabrook Avenue and Barnstaple Road (1)
	Edge of streets – parking lines to improve sight lines (1)
	Traffic lights (1)
Will worsen traffic	Will increase congestion (2)
No more speed humps	(1)
Lollipop person	Assist children crossing (2)

Brent Street



Feedback Themes – (surveys, emails and drop-in feedback)

Theme	Comments and # of responses
Speeding	Concern for traffic speed down the hill (16)
Support	Long overdue (10)
	Much needed (16)
	Do not want location moved (1)
Move to between	No footpath on connecting Whittall St (8)
Undine and Whitall	"Would make more sense to be the other side of the Whittall St Junction as there is no
Street / approx.	footpath leading to the school on the proposed side"
25m north of	More space (2)
current proposal	Easier for right turn out of Whittall onto Brent St (1)
	Better for speed reduction if higher up the street (1)

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	Right turn out of Whittall St onto Brent St will be difficult, busy turn during drop off (2)
	No off street parking for either resident at this site (3)
	Oppose crossing unless moved up the street (1)
Traffic calming	Signage (5)
suggestions	Flashing lights (2)
	Speed humps ahead of crossing or other traffic calming options (3)
	Extend school zone. Need 40km/h signage for students (5)
	Raised crossing (3)
	Add traffic lights (1)
Cycling hazards	Squeeze point (3)
	Add cut outs where the planter boxes are currently planned to go (3)
	No tank traps (1)
Lighting	Add lighting for nighttime visibility (2)
Loss of parking and	Losing 3 spaces is hard for residents and parents of students (1)
off-street parking	Proximity of planter bed to 2 Seabrook Avenue garage made be difficult for
amenity	reversing out (1)
Increased traffic	No more speed humps (1)
congestion	Congestion for cars turning right out of Clements St, left out of Seabrook Ave (1)
Low plantings	Minimise obstruction to visibility for drivers and cyclists (1)

Other feedback

Comment	Team
Intersection at the bottom of Brent St needs attention (7) – pedestrian	Traffic and transport
crossing or traffic lights needed	
Install Henley Marine Drive pedestrian crossing at Barnstaple Road (1)	Traffic and transport
Traffic divider on Brent St is dangerous – from people turning from	Traffic and transport
Seabrook Avenue on Brent St often get stuck on it. Can this be	
investigated? (1)	
Potter St issues (2)	Traffic and transport
 •Á Cars coming from Lyons Road at speed down Lithgow St to Whittall and onto Brent St 	
 Á Cars driving down upper Potter Street (Lamrock to McCullough direction), cutting across McCullough and accelerating up Potter Street towards Lithgow). 	
•Á Cars are also coming up Speed Avenue and turning left (often at speed and as traffic comes along Whittall to do the school drops) and not always in the designated times. They swing round towards Whittall and down to McCullough	
Suggestions:	
•Á Consider how this proposal might exacerbate these issues	
•Á Make Lithgow Street one way only with only exit to Lyons Road	
to the left.	
•Á Add some traffic speed constraints /controls on Upper Potter	
Street (Lithgow end)	
No right turn from Seabrook onto Brent during morning peak	Traffic and transport
Pedestrian crossing at lower end of Brent St also (1)	Traffic and transport
Pedestrian crossing on Barnstaple Road at Ingham Avenue (4)	Traffic and transport



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Pedestrian crossing on Barnstaple Road at Arthur Street (1)	Traffic and transport
Pedestrian refuge at Ingham and Noble Avenues to connect to Bowling	Traffic and transport
Club (2)	
Parents park illegally on Lithgow Street in the mornings. Needs	Enforcement team
enforcement (1)	
Roundabout at Lamrock and Arthur Streets – no speedhumps	Traffic and transport
Wayfinding signage to Russell Lea School	Traffic and transport
New trees planted on corner of Arthur St and Barnstaple Road are	Tree team
likely to cause sight line/visibility issues at this busy junction.	
Larkins Reserve needs a path	Traffic and transport (PAMP)
Barnstaple Road path is uneven in many sections, difficult to walk on	Traffic and transport (PAMP)? /
(Robert Avenue, McCulloch Avenue)	footpath renewal
Traffic calming needed on Arthur St, similar to what has been installed	Traffic and transport
on First Avenue (2)	

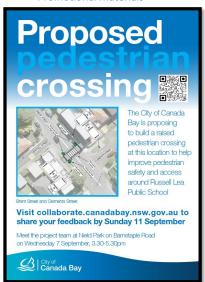
Participant data (survey only)

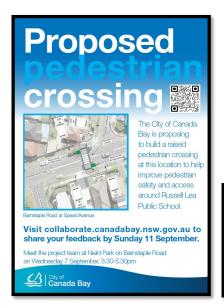
- •Á 78% of participants live in Russell Lea/Rodd Point
- •Á 60% of participants send their children to Russell Lea Public School
- \bullet Á 50% of visitors to the Collaborate page came from social media, 40% came directly through the URL
- •Á 60% of participants are female
- •Á Broad range of ages across participants



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Promotional materials





26 August 2022

Dear Resident,

Proposed changes around Russell Lea Public School

At the November 2021 Council Meeting, Councillors resolved to give in-principle support to installing a pedestrian crossing on Barnstaple Road for Russell Lea Public School students and the broader community. The Council also resolved to investigate a traffic refuge or appropriate safety measures on Brent Street, as well as several other investigations regarding pedestrian safety improvements.

At present there is no designated point to assist pedestrians in crossing Barnstaple Road and Brent Street in the vicinity of Russell Lea Public School.

Council has completed investigations, including observations of current pedestrian movements in the area and impacts on parking, and is proposing two raised pedestrian crossings on Barnstaple Road, between Speed Avenue and Duchess Avenue, as well as on Brent Street between Whittall Street and Clements Street.

This proposal will require the removal of 3 Parking spaces in Brent Street and 3 Spaces in Barnstaple Road. The proposed locations can be viewed overleaf, and background information is available at collaborate.canadabay.nsw.gov.au.

We are seeking the community's feedback on this proposal until Sunday 11 September 2022. You can provide feedback in one of the following ways:

• In-person: 7 September 2022, 3.30 – 5.30pm (midweek) Nield Park at Barnstaple Road

- Online: collaborate.canadabay.nsw.gov.au/rlpedestrian or via below QR code
 Email: council@canadabay.nsw.gov.au
 (subject: Russell Lea pedestrian safety improvements)
 Phone: 9911 6395
 Mail: Locked Bag 1470, Drummoyne NSW 1470

Should you require any clarification of the proposed changes, do not hesitate to contact Council's Traffic Engineer, Samuel Lindsay, on 9911 6395.

Kind regards,





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Attachment 1 – Investment Report September 2022

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FÍ£BÉΣDÂÎ	læas æan∧uæy∖ V^æas@l•ÁΓččæ4ÁÓæ)∖	ÓÓÓ	ÀÌ̀Ȁ€È€	FÌGÍ	HÈÌÃ	€USEIEUF FÎEBÊEDF	Ø∥ææaj*Aŭæe^A⊅[e∿• Ø∥ææaj*Aŭæe^A⊅[e∿•
FJEE EUS	V∴aas@i•Ai caancaa;∖ Op.ÕÁÓaa}∖	Œ	AÍ €€Ê€€È€€	FÌGÎ	GÊHÃ	FJBE BDF	Ø∥ææaj*Aŭæe^A⊅[e∿• Ø∥ææaj*Aŭæe^A⊅[e∿•
FÌ BEÌ BOÏ	Ô[{{[]},^æ o@AOæ}\Aj-ACE∙dæ ae	OEDEË	ÅFƀƀ€Æ	FÌGÎ	HÈH€Ã	FÌ BEÌ EOG	Øliægi*AÜæ¢Ápi¢•
FÍÐFG803G	bWÔ	OEDE	ÅGÆEEÆEEÆ	ì∉ì	FÈI€Ã	GÌ-BEJ-ED9€	Øã¢^âÁÜæe^ÁÓ[}å
FÍ #FGEØH	ÞWÔ	OEDE	ACIÈCCIÈCCIÈC	FFÌ Î	FÈE€Ã	FÍ£BEJ£09€	Øāp^âÁÜæe^ÁÓ[}â
FÍ BFGEGI	ÞWÔ	OEOE	ÅGÊGGÊGGÊG	FŒÎ	FÈ€Ã	GÏBEÌEDF	Øāt^âÁÜæt^ÁÓ[}å
FÍÆBÊÎÆQÍ	έWÔ	OEOE	ÅGÊEERÊEERÊE	FIJÎ	FÈ€Ã	FFBEÍ EOF	Øä¢^åÁÜæe^ÁÓ[}å
FÌ BEÌ EQÍ	Ô[{{[}},^æ¢o@AÓæ}\A,-ACE∙dæ¢äee	OEOEË	ÅFÆ €€Æ€€Æ€	F€JÎ	IÈG€Ã	FÌ BEÌ EDG	Øā¢^åÁÜæe^ÁÓ[}å
GIE®ÈE®Î	Ù*}&[⊹]ÆT^çæê	΃	ÅCÆEERÆEERÆE	FÍÌΪ	HÈCÍÃ	G€BEIEDG	Øä¢^åÁÜæe^ÁÓ[}å
	ÓET ÚÁÓæ)∖	ÓÓÓ	ÅFÊ€€IÊËÏFÈ€H		GÈÈ€Ã		OETÚÁNFÖæ∂ÁÞ[œã&∧Á
1	OETÚÁÓæ∳∖	ÓÓÓ	ÅFJGÈHÍ		€Ě€Ã		ŒTÚÁÓ *ā,^••ÁÛæç∧¦
1	Ô[{{[}, ^æ¢o@ÁÓæ) \ Aj-ÁDE∙dæ¢äæe	ŒŒ	Å€ÌE€		€ÈG€Ã		ÔÓŒŒŒ®
1	Tæ&rĭælan\AÓæ)∖	Œ	ÅGÂGÌJÈGÍ		FÈE€Ã		Tæ&ĭ`ælanAÔT0E
	Tæ&rĭælā∿ÁÓæ)∖	Œ	ÀÏ ÔFIÔHÍÈEÏ		FÈÍÃ		Tæ&ĭĭælaħÁÔT0E
	30/09/22		\$142,871,887.70		2.17%		
1	ÁVUVOEŠÁÐAX ÖÙVT ÖÞVÙ ÁÐÐÁFFÐÐÌ ÐÐEGG	I	ÅFIÍÊÏFÊÌÏÈ€				
	Áp^oÁQ&l^æ•^EQÖ^&l^æ•^DÁgÁQç^•∢{^}œ·Á		ÇÅH <u>ÊECEÊECEÌEC</u> E	1			

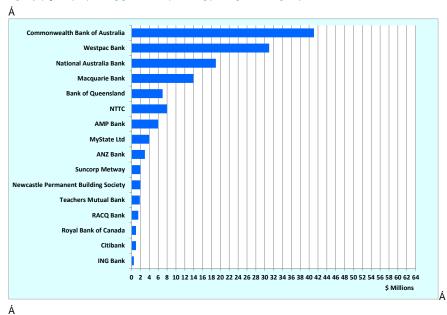
Certificate of the Responsible Accounting Officer

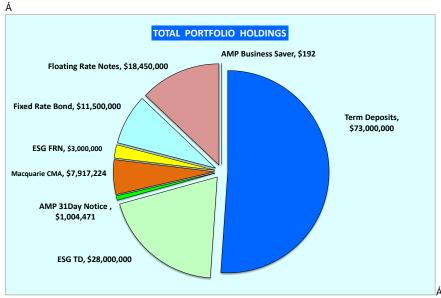
(\$\text{Acc} \times \ Òçæ) ÁP~ c&@3, *•Á Öæe^kÁeÎÁU&qà^¦ÁG€GGÁ

ÁÁ Á Úæt^ÁHÁ, ÁFFÁ

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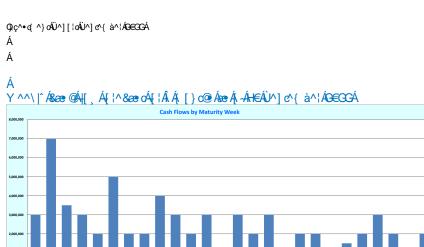




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ST Ratings	ADI	Policy Limit	% of Portfolio
	OEÞZÁÓæ)∖	ΙÍÃ	Œ Ì F€Ã
	Ô[{{[}, ^æ c@ÁÓæ)\Á;ÁOE•dækãæ	ΙÍÃ	ĠĖÏÃ
Ω∰É	ÞWÔ	ΙÍÃ	ÍÈÌ€Ã
CIII L	Þæda[}ædACE•dæda@eÓæd)∖	ΙÍÃ	F HÌH €Ã
	Ü[^a\$\dot{O}a\$)\A[\dot{A}\dot{O}a\$) and and and and and and and and and and	ΙÍÃ	€ÌË€Ã
	Y^•d]æ&ÁÓæ}\	ΙÍÃ	ŒĨĖÃ
	Tan&ariada ÁÓaa}∖	H€Ã	JĖĖĮÃ
Ω∰Ä	QeÕÁÓæ}\	H€Ã	€ÈHÍÃ
CIL-A	Ôãcãna)\	H€Ã	€ÈË€Ã
	Ù`}&[¦]ÁT^c;æê	H€Ã	FÈL€Ã
	ŒTÚÁÓæ}∖	F€Ã	IÈG€Ã
	Óæ)\Á;ÁÛ`^^}• æ)å	F€Ã	IÈJ€Ã
Œ	T^Ùœe^ÁŠcå	F€Ã	ŒÌ€Ã
CIES	V^æ&@.¦•ÁT č过ÁÓæ}\	F€Ã	FÈGJÃ
	ÜŒÛÛÁÓæ}\	F€Ã	FÈ€ÍÃ
	Þ^, &æ•d^ÁÚ^¦{æ},^}oÁÓ°ā¦åå},*ÁÙ[&ænc°	F€Ã	FÈÈ€Ã
	Total Portfolio		100.00%

Type Long Term	Holdings	Policy Limit	% Portfolio
OEOEË	ÅF CCÎFCCÎCC	W}∣ãįãe^å	ΪΙĖ̈́HÃ
΃	Åì Æ€€€Æ€€€	Ì€Ã	ÍÈΪÃ
Œ	ÅÍ €€Ê€€€È€€	Ì€Ã	€ÈHÏÃ
Œ	ŀȀ€	Ì€Ã	€ÌÈ€Ã
ÓŒŒ	ŀȀ€	Ì€Ã	€Ì£€ Ã
ÓÓÓÉ	ÅFÍ ÉÉ €€É€€€È€€	H€Ã	FFĚ Ï Ã
ÓÓÓ	ÅJÊÍ €Ê€€€È€€	H€Ã	Ϊ ÈH ÍÃ
ÓÓÓË	ŀȀ€	H€Ã	€Ì£€ Ã
ÞÜ	ŀȀ€	FÍ Ã	€Ì£€ Ã
Total	\$133,950,000.00		100.00%

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Date	Transaction	Bank/Issuer	Туре	Term	Int Rate	Amount	Interest Paid
HFB€Ì £00€0G	Óæţæ) &^	(D,ç^•q(^} oHÓa‡a) &^AZea≣AKa‡`^				ÂFIÍÊÏFÊÌÏÈ€	
Ì-B€J£09€CG	Tæcĭ¦ãĉ	Ô[{{[},^æ¢o@ÁÓæ∳\Á;ÁŒ•dæ¢äæ	V^¦{ÁÖ^][•ãc	FGÍ	FĚÌÃ	ÇÎH ÎECCÎECCÎEC E	ÂFÌ ÉGÌ Ï ÉË Ï
JBEJE09€GG	Tæcĭ¦ãcî	Ô[{{[},^æ¢o@ÁÓæ∳\Á(AŒ•dæ¢äee	V^¦{ÁÖ^][•ãc	ĤΙ	€ÈHÃ	ÇÂH ÎĞE CE ÎĞE CE ÎĞE CE	ÅFFĒÎĪĖÍ
FHBEJE09EGG	Tæcĭ¦ãcî	Ô[{{[}},^a¢o@ÁÓæ)\Á;-Á0E∙dæ¢äæ	V^¦{ ÁÖ^][•ãc	FGH	FĚΪÃ	¢ÅC ÆCCÆCCÈC CE	ÅFFÉJGJÈHG
FÍЀJ£®€GG	Tæcĭ¦ãcî	Óæ}∖Á;ÁÛ [*] ^^}∙ æ}å	V^¦{ ÁÖ^][•ãc	ĤH	€ÈÍÃ	¢AC RECCRECCREC E	ÅFÌ Ê JÍ È J
GGB€J£0€GG	Tæcĭ¦ãcî	Ô[{{[},^æ¢o@ÁÓæ)\Á;-Á0E∙dæ†äæ	V^¦{ ÁÖ^][•ãc	FFG	FÈJHÃ	ÇÂH <u>ÊCCCÊCCCÈCC</u> E	ÁFÏ ĒÎÎ ĚÌ
H€B€J£0€GG	Tæcĭ¦ãcî	T^Ùcæe^AŠcå	V^¦{ ÁÖ^][•ãc	ΗÎΙ	ÃÌÉÐ	ÇÅC ÎECCÎECCÎEC E	À Ê Î Î ÊH
FB€J£09€0G	Ú"¦&@æ^	Ô[{{[}, ^a‡o@ÁÓæ)\Á(-Á0E•dæ‡äæ	V^¦{ ÁÖ^][•ãc	IJ	GÈHÏÃ	ÅC ÆCCÆCCÈC	
Ì£EU£09€0G	Ú"¦&@æ^	Ô[{{[},^aqbo@nÓan}\A[,-ADE•dan äee	V^¦{ ÁÖ^][•ãc	ĪÌ	GÈÏÃ	ÅC ÆCCÆCCÈC	
OBEJ£09€GG	Ú~¦&@æ^	Þænā[}æ∳ÁŒ•dæþãæÁÓæ)∖	V^¦{ ÁÖ^][•ãc	ÌJ	HÈŒÃ	ÅG ÆCCÆCCÈ CC	
GÎ B€J£09€0G	Ú"¦&@æ^	Ô[{{[}, ^a‡o@ÁÓæ)\Á(-Á0E•dæ‡äæ	V^¦{ ÁÖ^][•ãc))	HĚEÃ	ÅH ÆCCÆCCÈC C	
J B €J E D€GG	Ú"¦&@æ^	Ô[{{[}, ^a‡o@ÁÓæ)\Á(-Á0E•dæ‡äæ	V^¦{ ÁÖ^][•ãc	FHH	HÈFÃ	ÅH ÆCCÆCCÈC C	
H€B€J£0€GG	Ú"¦&@æ^	T^Ùcæe^AŠcå	V^¦{ ÁÖ^][•ãc	FÌF	IÈF€Ã	ÅC ÆCCÆCCÈC	
ÍЀJÐЀGG	Ü^∙^c	Y^•djæ&ÁÓæ)∖	ÒÙÕÁÖ	ĹĹĴ	FĒÌÃ	ÅCÆCCÆCCÆ	
ÍЀJÐЀGG	Ü^∙^c	Y^•djæ&ÁÓæ)∖	ÒÙÕÁ⁄Ö	ÌFJ	FÉ GÃ	ÅFÆ €€Æ€€€Œ€€	
ÍЀJÐЀGG	Ü^∙^c	Y^•djæ&ÁÓæ)∖	ÒÙÕÁ⁄Ö	FŒÍ	GÉGGÃ	ÅC ÆCCÆCCÈC	
Í£B€J£09€GG	Ü^∙^c	Y^•djæ&ÁÓæ)∖	ÒÙÕÁ/Ö	ÎHÏ	FĒÌĀ	¢ÅC IÈCCIÈCCIÈC C	ÀÌÈHÌÈJ
Í£B€J£09€GG	Ü^∙^c	Y^•djæ&ÁÓæ)∖	ÒÙÕÁÖ	JFH	FÉ GÃ	ÇÅFÍÍ €€ÍÈ€€ÈÈ€E	ÂÎÊGÍÌÈEÌ
ÍЀJÐЀGG	Ü^∙^c	Y^•djæ&ÁÓæ)∖	ÒÙÕÁÖ	FHÎ J	ŒŒÃ	¢\c ieceieceiec e	ÅFFÊ HI Ě G
J#EJ#D€GG	Ü^∙^c	Tæ&rĭæla?ÁÓæ)∖	Ø [æda]*ÁÜæd^ÁÞ[d^•	J€	FÈIÎÃ	ÇÅC ÎECCÎECCÎEC E	ÁJÊ JÎ È
FΣ9€J£09€GG	Ü^∙^c	V^æ&@.¦•ÁTččæþÁÓæ).∖	Ø [æda]*ÁÜæd^ÁÞ[d^•	J€	GÈ GÃ	ÇÅÌÍ €ÊE€€ÌE€ E	ÅÍÊFJ€ÈĞÏ
J B €J E D€GG	Ü^∙^c	Tæ&rĭælaħÁÓæ)∖	Ø [æ23}*ÁÜæ2^Á⊅[c^•	J€	HÈ€JÃ	ÅC ÆCCÆCCÈC	
FΣ9€J£09€GG	Ü^∙^c	V^a&&@ ¦•ÁT čáa∳ÁÓæ) ∖	Ø[ææ]*ÁÜæe^ÁÞ[c^•	J€	HÈÌÃ	ÀÌÍ€ÈE€€ÈE€	
GHB€J£®€GG	Ü^∙^c	Ô[{{[}},^a¢o@ÁÓæ)\Á;-ÁŒ•dæ¢ãee	Ø [æ23]*ÁÜæ2^Á⊅[c^•	J€	HÈGÃ	ÅG ÆCCÆCCÈ CC	
GHB€J£®€GG	Ü^∙^c	Ô[{{[}},^a¢o@ÁÓæ)\Á;-ÁŒ•dæ¢ãee	Ø [æ23}*ÁÜæ2^Á⊅[c^•	J€	GÈFÍÃ	¢ÅC ÆECCÆECCÈEC E	ÅF€ÉHÌÈHÎ
	OB-cápác	Tæ&rĭælaħÁÓæ)∖	OE⁄ÁÔæ		FÈÍÃ	ÇÅÇ ÎZECCÎZECCÎZEC E	
30/09/2022		EOM Balance			Total	\$142,871,887.70	\$139,517.14

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Ledger Account	Туре	September
F€GÎGHËTIÎÍËE€ÊÌÌ	Φ¢^• α(^) σ•	ÅFHJÉ FÏ ÈFÍ
F€GÎGHËFIÎÍËE€ĜÏ	OEAÔæ ÁOE&&[ˇ} ♂	ŀ̀€
	Sub-Total	\$139,517.15
F€GÎGHËFIÎÍËE €€ÎÎ	Õ^}^¦æ‡ÁÓæ}∖ÁŒ&&[`}c	ÅHÊ€ÏIÈÈÌ
	Total	\$142,591.33

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$\dot{U}_{cae}^{A} = \dot{A}_{cae}^{A} + \dot{A}$

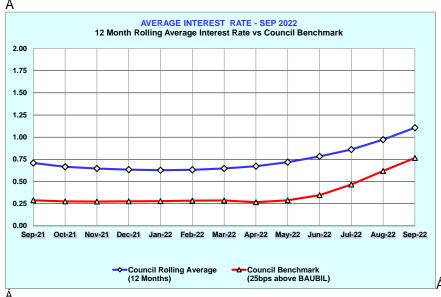
Consolidated Cash & Investments		
Cash & Investments		
Ôæ @ÁŒÁÓæ)∖Áæ ÁæÁH€ÁÙ^]ÁŒGG	ÅÎ FJÊ F (I È€) H	
(\$\text{Q}\$\text{\$\dag{\text{\$\det{\$\cancert{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\dag{\text{\$\din}}}\end{\text{\$\dag{\\careq}}}}\end{\text{\$\din}}}}}\text{\$\dintex{\$\end{\text{\$\din}}}\end{\text{\$\dintex{\$\dintex{\$\dintex{\$\dintex{\$\dintex{\$\}\end{\text{\$\dintex{\$\}\end{\text{\$\dintex{\$\}\end{\text{\$\dintex{\$\}\end{\text{\$\dintex{\$\}\end{\text{\$\}\end{\text{\$\dintex{\$\}\end{\text{\$\}\end{\text{\$\}}}}}\end{\text{\$\dintex{\$\}\end{\text{\$\dintex{\$\}}}}}\end{\text{\$\dintex{\$\}}}}}\end{\text{\$\dintex{\$\}}}}}\end{\text{\$\dintex{\$\}}}}\end{\text{\$\end{\text{\$\}}}}\end{\text{\$\dintex{\$\}}}}\end{\text{\$\dintex{\$\end{\}}}}\end{\text{\$\din}}}}\end{\text{\$\dintex{\$\}}}}\text	ÅFIQÊÎÏFÊÎÏË€	
Total Cash & Investments		\$143,490,990.73
V@Ánaà[ç^Á&æe@Ána)åÁ5şç^•q(^}orÁnæb^Á&[{]¦ã^åÁį́-K	
Externally Restricted Reserves		
Ò¢ơ\} æ ^Á^•dæơåÁ^•^¦ợ•Á^~¦Á[Á* ā]][•^åÁ^* ā^{ ^}ơÁ[¦Á*ç]^}âãc' ^Á; ā,& *å^Á}^ç]^} â^åÁs^ç^ []^!Á8[}dâå*	(}Á()^&ãã&Á(`¦][•^•ÈÓ¢c^¦}æ	^Á^•d&c^åÁ^•^¦ç^•
Total External Restrictions		\$95,048,144.52
Internally Restricted Reserves		
Q,c^\}æ ^Á^•d&&c^åÁ^•^\ç^•Áæ\^Á~}å•Á	k^∙da&c^åÆgÁc@Ár∙^Æa^Á∧∙[ĭ	cā[}Á[¦Á][ā&^Á[-ÁÔ[*]&ā]Á
Total Internal Restrictions		\$44,561,127.54
Unrestricted Cash & Investment	ts	
Total Unrestricted Cash & Inves	stments	\$3,881,718.67
Total Cash & Investments		\$143,490,990.73
	his report, developer contril be finalised for Sep 2022	outions
Á	be illialized for Sep 2022	

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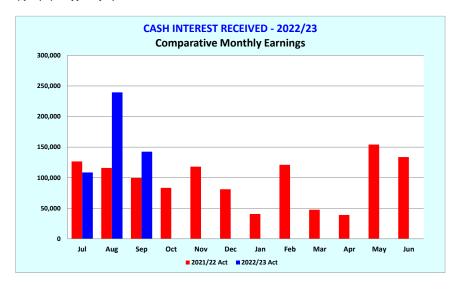


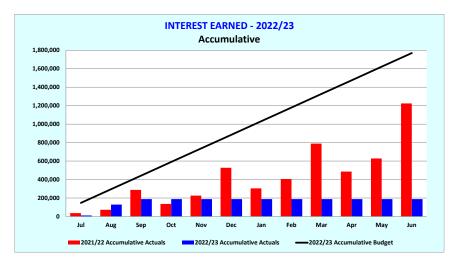


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Investment Report September 2022

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