Transport Assessment

Proposed Mixed-Use Development, 138-156 Victoria Road, Rozelle

Ref: 0534r07v2
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Appendices

1 Introduction

1.1 Overview

Ason Group has been commissioned by Heworth to provide transport and traffic consultancy services in support of a Development Application (DA) submission for a proposed mixed-use development at 138-156 Victoria Road, Rozelle (the Site). The proposed development generally relates to the demolition of all existing structures and the construction of a mixed-use development comprising residential apartments, a supermarket with ancillary speciality retail, plus the reinstatement of the Balmain Leagues Club (the Proposal). **Figure 1** presents a Location Plan of the Site within the context of the wider regional road network.

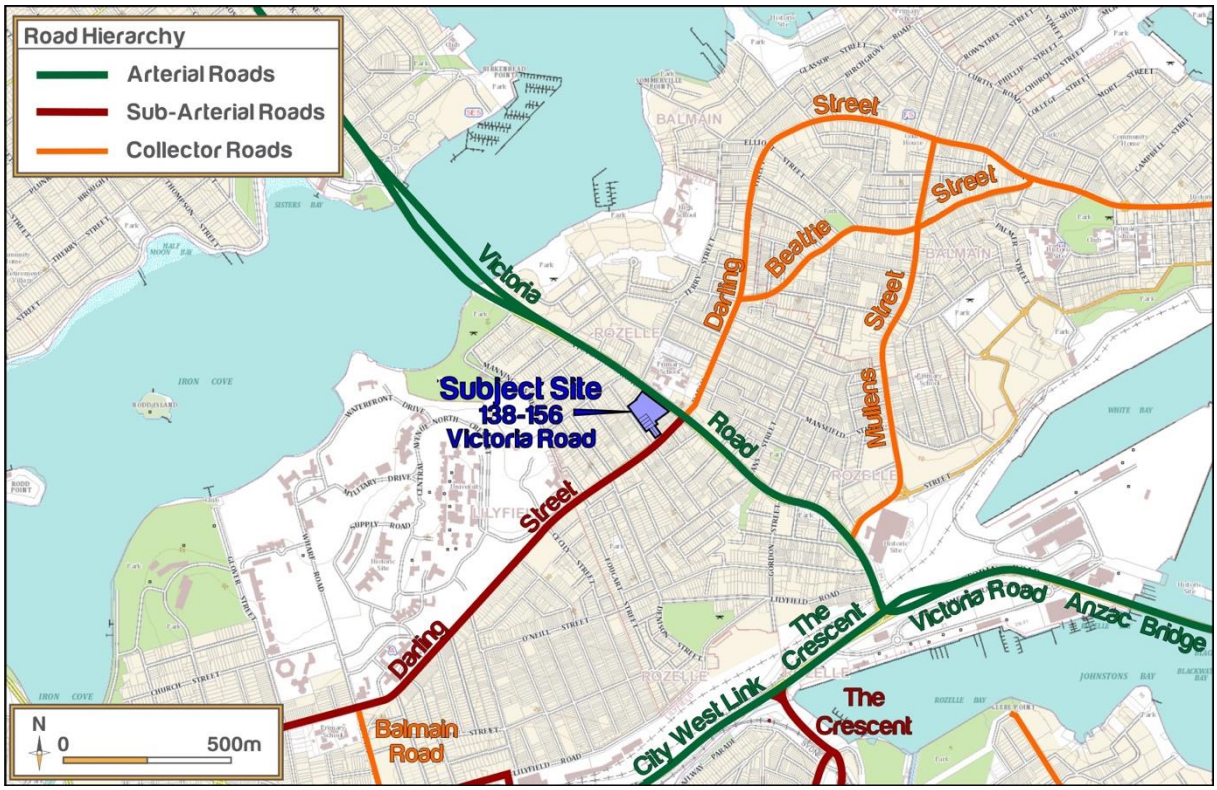


Figure 1: Location Plan

The Site is located within the unified LGA (local government area) of Inner West Council (Council). The DA was originally submitted to Council on 1 May 2018 for assessment (reference: D/2018/219).

Prior to submission of the DA, an application was made to modify the Site-Specific Development Control Plan (the Site Specific DCP or SSDCP) for the Balmain Leagues Club Precinct. Following submission of the DA – and a number of changes to the draft DCP – an amended SSDCP was adopted on 25 June

2019 and became operational on 16 July 2019. These Precinct controls are presented in the Leichhardt DCP – Part D1 – Amendment No. 18 – Balmain Leagues Club Precinct.

The SSDCP provides a number of controls relating to traffic and transport considerations for the Site. Notably, the main objective of control D1.14 (Vehicular and Pedestrian Access) is to ensure that parking areas and entrances are configured so that the focus of heavy vehicle movements is Victoria Road, and that traffic impacts on neighbouring residential areas are constrained.

The SSDCP states that vehicular access to the Site should *separate heavy commercial vehicle access from residential vehicular entry* as well as *minimise the traffic impact on Waterloo Street.*

Therefore, the SSDCP provides access requirements for the Site which include:

- Servicing access and access into the Club, retail and commercial uses to be gained via Victoria Road.
- Residential access to be gained via Waterloo Street and Victoria Road.

Critically, this has been a been long standing requirement of the SSDCP, with the previous version (Amendment No.15, adopted 3 June 2008 and operational on 26 August 2008) having similar controls. Therefore, it has been a long-standing requirement of the SSDCP to reduce the traffic impact to Waterloo Road.

Further to the access controls, the SSDCP also provides specific parking requirements for the Site, which were previously maximum controls. This reflected the intent of the previous SSDCP, which recognised the proximity of the Site to public transport, and the potential this provided to encourage travel by non-car modes. The previous SSDCP stated an objective to provide "*parking on site that reflects the sites proximity to public transport and promote choice in available transport modes*"

However, the amended SSDCP has since removed the maximum requirement for parking.

Following adoption of the SSDCP, the original Proposal was subjected to a number of relatively minor revisions to comply with the new SSDCP, with additional information submitted to Council in September 2019 in relation to the updated scheme. Subsequently, Requests for Information (RFIs) have been received from various Stakeholders. These requests included a number of items on traffic and transport received from Council, Transport for New South Wales (TfNSW), Road & Maritime Services (RMS – now formally incorporated in TfNSW) and NSW Police.

It is noted that on the 1 December 2019, RMS and TfNSW joined to create an integrated TfNSW, which was subsequent to receipt of the RFIs from the respective agencies. Therefore, for the purposes of this report, both the RFIs have been considered and references to RMS retained for clarity.

1.2 Recent Traffic and Transport Studies

Ason Group has provided Traffic and Transport consultancy services at every stage of the Heworth led proposal. The following summarises key traffic and transport reports and documents prepared by Ason Group to date:

- A preliminary traffic assessment to support an application to modify the SSDCP that covers the Site. This work was submitted to Council with the application by way of the document titled *Technical Note, Proposed Mixed-Use Development, 138-156 Victoria Road, Rozelle, Preliminary Traffic Assessment* dated 26 March 2018 (the 2018 TN).
- A traffic, transport and parking assessment to support the DA submission for the Proposal. This work was submitted to Council with the DA by way of the report titled *Transport, Traffic & Parking Assessment Report, Proposed Mixed-Use Development, 138-156 Victoria Road, Rozelle* dated 17 April 2018 (the TTPA Report).
- Aimsun microsimulation modelling in accordance with RMS Technical Direction TTD 2017/001, requiring 3 reports for review and endorsement. The 3 reports submitted consist of:
  - Modelling Methodology Report, Proposed Mixed-Use Development, 138-156 Victoria Road, Rozelle – Issue I dated 26 February 2018 (the MM Report 1).
  - Base Model Development Report, Proposed Mixed-Use Development, 138-156 Victoria Road, Rozelle – Issue II dated 15 May 2018 (the BMD Report 2)
  - Development Assessment Model Report, Proposed Mixed-Use Development, 138-156 Victoria Road, Rozelle – Issue II dated 17 July 2018 (the DAM Report 3). It is noted that this report was submitted after the TTPA Report that accompanied the DA submission.
- An addendum report to the TTPA Report which was submitted in combination with the BMD Report 3 and the DAM Report 3, tilted *TTPA Addendum Proposed Mixed-Use Development, 138-156 Victoria Road, Rozelle*, ref: 0534r05v02, dated 17 July 2018 (the 2018 Addendum report). The key purpose of this report was to update the findings of the overall traffic assessment with the modelling results.
- A further addendum report was submitted as part of the revised DA following gazettal of the amended SSDCP that became operational on 16 July 2019. The purpose of this report, titled *TTPA Addendum, Proposed Mixed-Use Development, 138-156 Victoria Road, Rozelle*, ref: 0534r06v01, dated 28 August 2019 (the 2019 Addendum report), was to provide a further addendum to the 2018 DA Assessment, with specific regard for the TTPA Report, following the endorsement of the revised SSDCP and the subsequent changes to the design of the Proposal.

- A Parking Study Report has been completed in conjunction with this TA. The purpose of this report, titled *Parking Study Report, Response to Council, 138-156 Victoria Road, Rozelle*, ref: 0534r09v2, dated 20 December 2019 (Parking Study), is to provide an assessment of the suitability of the proposed parking provision for the Proposal.

1.3 Requests for Further Information

As already noted, in response to the most recent DA submission – supported by the 2019 Addendum report – comments and requests for further information were received, with the following of relevance to traffic, transport and parking:

- Council's RFI for Development Application D/2018/219 issued on 21 November 2019.
- RMS (TfNSW) RFI comments received by way of letter dated 27 November 2019.
- TfNSW RFI comments received by way of letter dated 28 November 2019.
- The NSW Police Force (Leichhardt Police Area Command) comments received in October 2019.

The comments of significance were those raised by TfNSW. In summary, the comments indicated TfNSW would, "*grant concurrence*" subject to the following:

- *Prior to approval of this development application, the car park be redesigned to provide access to the entire car park via Waterloo Street with the loading dock access via Victoria Road to the satisfaction of TfNSW and Roads and Maritime Services;*
- *Prior to the issue of the Construction Certificate, the applicant be conditioned to undertake a road safety audit for the proposed access arrangement to the development via Victoria Road, in accordance with the Austroads guidelines by an independent TfNSW accredited road safety auditor; and*
- *Prior to the issue of the Occupation Certificate the applicant be conditioned to prepare a Loading Dock Management Plan in consultation with Transport for NSW and Roads and Maritime Services.*

Most notable is the comment in regard to access from Victoria Road. The previous development proposal included a primary access for the retail/club public car park at Basement 1 Level (and the loading dock) via a left-in / left-out vehicle access onto Victoria Road. A vehicular access onto Waterloo Street would provide access to the residential/commercial private car park. Critically, this was generally consistent with the long-standing provisions of the SSDCP.

The following summarises other TfNSW comments of note:

- *Given the size of service vehicles anticipated to access the development, TfNSW would not object to access to the loading dock via Victoria Road. This arrangement would provide benefits in relation to the traffic and transport operation to the site and road safety along Victoria Road.*
- *With the provision of car park access via Waterloo Street only would minimise disruptions to the bus services along Victoria Road and safety incidents between buses and the vehicles accessing the proposed development*
- *Waterloo Street would be able to maintain local road characteristics even with the car park access to retail/club via Waterloo Street only*
- *If the Victoria Road access would only be used for the loading dock, the applicant would be able to manage the queuing on Victoria Road with a Loading Dock Management Plan to minimise the impacts on Victoria Road.*
- *It advised that the proposed relocation of the bus stop on Darling Street as stated in the Figure 39 of the Statement of Environmental Effects is not supported as this stop is necessary to ensure access to local shops for Rozelle and Balmain residents and needs to be retained in its current location.*

The RMS comments effectively mirrored those of TfNSW by referencing clause 101(2a) of State Environmental Planning Policy (Infrastructure) 2007, whilst stating, "*that 'practicable' access for all vehicles, excluding service vehicles, can be obtained via a road (Waterloo Street) other than a classified road (Victoria Road)*".

With regard to Council's RFI comments, the following positive statements were provided by Council in relation to traffic generation and network performance:

Traffic Generation

When compared to the previously calculated traffic budget for the site (316 and 440 for the weekday evening peak and Saturday midday peak respectively) the data provided by the Applicant indicates that the peak traffic generation will be within the agreed limits.

Transport and traffic impacts based on previous modelling

In August 2018, Inner West Council commissioned Arup (transport consultants) to review the transport and traffic circumstances likely to be created by the proposed development. In carrying out this review Arup examined the Applicant's traffic modelling.

The analysis was carried out with the understanding that no kerbside parking spaces would be removed from Darling Street and that any future spare capacity on Victoria Road (resulting from

construction of the Iron Cove Link) would be used to improve the sustainable transport network and to provide opportunities for public domain improvements, rather than being used to accommodate increased traffic flow.

Arup's review of the Applicant's model indicated that; subject to a number of minor refinements; the model generally conformed to the RMS Traffic Modelling Guidelines.

In summary, the current revised proposal can be anticipated to result in generally acceptable increases in delay/congestion on the adjacent road network, when considered in the context of likely future conditions on the adjacent road network.

It is clear from the above that Council does not share the same concerns as TfNSW or RMS and accordingly Council's RFI comments do not include any in opposition to the Victoria Road access being used by cars and service vehicles. It is however noted that Council did request further information in relation to:

- Active transport and the opportunities for public domain improvements on Victoria Road.
- Travel Plan monitoring and review.
- Construction Traffic Management Planning.
- Car parking provision.
- Design of access, servicing and car parking.

1.4 Study Objectives

A key objective of this TA study is to respond to the RFIs submitted by the various authorities. However, it is noteworthy that the most significant response of the Proposal has been the decision to comply with the recommendations of TfNSW and RMS by redesigning the access strategy for the Proposal such that all car traffic would enter and exit the Site via Waterloo Street, with Victoria Road access limited to just service vehicles. As this is a fundamental modification to the Proposal, the other key objective of this study is a more general assessment of the Proposal under the revised access strategy.

Having consideration for the key objectives above, the following summarises the study objectives of this TA:

- **Parking:** A parking study has been prepared that justifies the proposed parking provision. Refer to Section 3 and the Parking Study report, provided separately.
- **Traffic Generation:** Analysis has been undertaken to confirm that for the revised Proposal the forecast, "*peak traffic generation will be within the agreed limits,*" when, "*compared to the previously*

calculated traffic budget for the site (316 and 440 for the weekday evening peak and Saturday midday peak respectively)". Refer to Section 4.

- **Network Performance:** Analysis of the performance of the network has been undertaken to demonstrate that the current Proposal is still, "*anticipated to result in generally acceptable increases in delay/congestion on the adjacent road network, when considered in the context of likely future conditions on the adjacent road network*". Refer to Section 5.
- **Access and Internal Design:** Demonstrate compliance with relevant AS2890 design guidance. Refer to Section 6.
- **Construction Traffic Management:** Provide a standalone CTMP Framework report that incorporates Council's RFI comments on the matter. Refer to Section 7.1 and **Appendix B**.
- **Travel Plan:** Provide a framework for how the measures of the Travel Plan are monitored, reviewed and reported on annually to Council. Refer to Section 7.3.

For completeness, in addition to the Sections referenced above, the remaining structure of this TA report can be summarised as follows:

- Section 2 – Provides a summary of the key yield, access and parking aspects of latest Proposal.
- Section 8 – Provides a checklist summary of all the relevant traffic and transport RFI comments made by the authorities and where within this TA report the response to each comment can be found.
- Section 9 – A summary of this TA reports conclusions.

2 Revised Development Proposal

2.1 Development Yield

A detailed description of the Proposal is included in the Statement of Environmental Effects, prepared by Mecone. In summary, the application relates to the demolition of all existing structures and the construction of a mixed-use development that would provide new residential dwellings, a supermarket alongside speciality retail units and restaurants, commercial space and importantly the reinstatement of the Balmain Tigers Leagues Club. **Table 1** summarises key aspects of the revised Proposal.

Table 1: Development Proposal

Use	Tenancy	GFA
Retail	Supermarket	3,092m^2
	Specialty Retail	277m^2
	Restaurants	670m^2
	Ancillary	1,233m^2
	Retail Total	5,272m^2
Commercial	Office	1,027m^2
	Live/Work	554m^2
	Commercial Total	1,581m^2
Club	Lounge and bar	1,873m^2
	Dining	
	Reception / Office	
	Back of House	1,174m^2
	Ancillary	
	Club Total	3,047m^2
High Density Residential	Studio, 1-bed & 1-bed+Study	72
	2-bed	53
	3-bed	39
	4-Bed	0
	Live/Work (1 bed)	4
	Residential Total	168

2.2 Access Strategy

An all movement vehicular access driveway to serve both the public and private car park is proposed via Waterloo Street. Servicing access is proposed by way of a left-in / left-out access driveway on Victoria Street.

This does not align with the long-standing access requirements of the SSDCP as a result of the comments received from TfNSW and RMS (as discussed in Section 1.3).

2.3 Parking Provision

2.3.1 Car Parking

A total of 273 parking spaces would be provided as part of the Proposal across 2 basement levels, with:

- 131 'public' parking spaces located at Basement 1 level, comprising:
  - 121 publicly accessible retail/club parking spaces (inclusive of 4 accessible spaces and 6 small car parking spaces)
  - 6 car share parking spaces
  - 2 x 5-minute parking / taxi parking spaces
  - 2 mini-bus parking spaces
- 142 'private' parking spaces located at Basement 2 level, comprising:
  - 98 residential parking spaces
  - 27 commercial parking spaces
  - 17 accessible spaces

2.3.2 Bicycle and Motorcycle Parking

In terms of bicycle parking a total of 102 spaces would be provided for the residential uses with 84 resident spaces provided in Basement 2 level, 12 visitor spaces in Basement 2 level and 6 visitor spaces provided on-street.

For the commercial and retail uses, a total of 96 bicycle parking spaces would be provided:

- 36 staff spaces located on Basement 1 level.
- 42 retail/commercial visitor spaces located on Basement 1 level.
- 18 retail/commercial visitor spaces provided on-street.

Changing and locker facilities would also be provided for the commercial and retail elements of the Proposal. Four (4) showers/cubicles have been provided within the Basement 1 Level.

With regard to motorcycle parking, the Proposal provides a total of 16 motorcycle spaces with 8 spaces located at Basement 1 Level and another 8 spaces located at Basement 2 Level.

2.3.3 Servicing

The multipurpose service area has been designed to accommodate the following vehicles:

- 1 x 6.4m Small Rigid Vehicle (SRV)
- 2 x 8.8m Medium Rigid Vehicle (MRV)
- 1 x 12.5M Heavy Rigid Vehicle (HRV)

All spaces are provided with a clear width of 3.5m and head height of 4.5m achieving the minimum requirements of AS2890.2.

The multi-purpose area would accommodate a wide range of servicing demands and, consistent with the findings of the TTPA Report, it is recommended that a Loading Dock Management Plan (LDMP) be prepared in response to a suitable condition of consent requiring consultation with Council at the relevant Construction Certificate Stage.

The design of the loading area was subject to extensive option testing during development of the DA submission and has undergone further testing and review following receipt of Council's RFI comments. An overview of the design is provided in **Section 6**.

3 Parking

3.1 SSDCP Parking Requirement

The parking controls of the SSDCP are presented in **Table 2**.

Table 2: SSDCP Parking Controls

Land Use	Parking Rate
Residential	
One Bedroom	0.6 spaces per unit
Two Bedroom	0.9 spaces per unit
Three or more Bedrooms	1.1 spaces per units
Non-Residential	
Restaurant, café or other refreshment rooms	5 parking spaces per 100m^2 GFA plus 2.5 parking spaces per 100m^2 of outdoor/semi-outdoor seating areas.
Club:	
Lounge and bar	5 / 100m^2 GFA
Dining and auditorium	1 space per 10 sets or 4 spaces per 100m^2 GFA whichever is less.
Shops and other retail	1.5 / 100m^2 GFA
Commercial	1.5 / 100m^2 GFA
Uses not defined	1.5 / 100m^2 GFA

Further to these parking rates, the SSDCP requires that minimum of 22 car parking spaces are to be provided on site for public use, which are to be free for a minimum of 2 hours, at all times.

3.1.1 Proposed Car Parking Provision

The corresponding parking requirements as per Table 2 are provided in **Table 3** noting that the ancillary GFA as shown by Table 1 has been excluded from the calculation.

Table 3: Car Parking Requirements

Use	Yield	Requirement	Proposed
Private Car Park – Basement 2 Level			
Residential			
One Bedroom	72	43	
Two Bedrooms	53	48	
Three Bedrooms (+)	39	43	
Residential Sub Total	164	134	98
Commercial			
Commercial	1,581m^2	24	27
Accessible	-	-	17
Residential/Commercial Sub Total		158	142
Public Car Park – Basement 1 Level			
Restaurant, café or other refreshment rooms	670m^2	34	117
Club:	1,873m^2	-	
Lounge and bar*	1,030m^2	52	
Dining/Auditorium*	843m^2	34	
Supermarket	3,092m^2	46	
Speciality Retail	277m^2	4	
Accessible	-	-	4
Non-Residential/Commercial Sub Total		170	121
Total	-	328	263

*Based on an assumed 55:45 split as the fitout is yet to be finalised

As part of the parking calculations, the 4 x Live/Work residential units have not been made part of the residential parking calculation as the GFA has already been included within the commercial GFA yields. This is deemed acceptable as workers would live and work at the same place.

Application of Council's parking rates to the development yield results in a permissible parking provision of 328 car parking spaces. In response, 263 standard car parking spaces are proposed across 2 basement levels.

As per the SSDCP, an additional 10 spaces are provided for, including:

- car share parking (6 spaces);
- taxi parking (2 spaces); and
- mini-bus parking (2 spaces)

This brings the total parking provision to **273 spaces**.

Therefore, there is a technical deficiency of 65 standard car parking spaces.

3.2 Parking Study Summary

It is noted that the SSDCP states the following:

"*If providing less than the required parking, a traffic and parking study shall be submitted to justify the proposed parking rate and ensure no impact on surrounding streets*"

Therefore, the Parking Study has been produced alongside this report, which investigates in detail the suitability of the proposed parking provision in relation to the local area.

Recognising the connected nature of the Site, a restrictive approach to car parking has been adopted as it assists in changing travel behaviour. It is considered that reducing travel by car in this location is highly achievable given the alternative travel options, alongside the facilities within the vicinity of the Site, and therefore a restricted approach to car parking is appropriate for the Proposal.

As noted, a separate Parking Study has been provided which fully explores the approach taken for parking provision. Nevertheless, it is important to note that the Proposal includes measures that promote the use of active and public transport (car share spaces, GTP, etc.), thereby reducing the demand for parking. It is widely recognised that restricting parking provision can reduce down traffic demand, particularly in highly accessible locations which also has heavily managed on-street parking provisions. Therefore, it is concluded that the proposed parking provision is supportable.

4 Traffic Generation Assessment

4.1 Adopted Trip Rates

The TTPA Report adopted trip rates based on earlier studies undertaken for the Site and the most recent RMS Guidance. The applicable trip rates established by the TTPA Report and adopted are provided in **Table 4**.

Table 4: Adopted Trip Generation Rates

Land Use	AM	PM	Saturday
Retail (trips / space)	0.54	1.36	1.34
Commercial (trips / GFA)	1.60	1.20	-
Club (trips / PFA)	-	1.82	1.82
Residential (trips / unit)	0.22	0.17	0.29

4.2 Traffic Generation Analysis

4.2.1 Forecast Traffic Generation – Standard Assessment

Adopting a consistent approach to that of the TTPA Report, Table 5, Table 6 and Table 7 provides the forecast trip generation for the Proposal – **based on the actual provision of car parking** – during the critical Saturday midday, critical weekday evening and weekday morning peak hours, respectively.

Table 5: Forecast Saturday Peak Hour Trip Generation

Land Use	Parking / Yield	Trip Rate	Generated trips
Retail	70 available spaces	1.34	94
Commercial (Office)	1,027m^2	-	-
Club (PFA)	1,873m^2	1.82	34
Residential	164	0.29	48
Total			176

Table 6: Forecast Weekday Evening Peak Hour Trip Generation

Land Use	Parking / Yield	Trip Rate	Generated trips
Retail	70 available spaces	1.36	95
Commercial (Office)	1,027m^2	1.2	12
Club (PFA)	1,873m^2	1.82	34
Residential	164	0.17	28
Total			169

Table 7: Forecast Weekday Morning Peak Hour Trip Generation

Land Use	Parking / Yield	Trip Rate	Generated trips
Retail	121 available spaces	0.54	65
Commercial (Office)	1,027m^2	1.6	16
Club (PFA)	1,873m^2	-	-
Residential	164	0.22	36
Total			117

4.2.2 Forecast Traffic Generation – Sensitivity Test Assessment

As shown by Section 3 above, if the maximum SSDCP parking rates were adopted, the Proposal could provide 338 spaces (including 10 servicing spaces) with 170 public parking spaces provided on Basement 1 level. Based on a traffic generation per space for the retail uses, the application of maximum parking rates to the Proposal – which would provide 39 additional public parking spaces – would increase the traffic generating potential of the Site.

The following summarises the sensitivity test traffic generation forecasts (based on adoption of the methodology detailed in the TTPA Report) for the critical weekday evening and Saturday peak hours:

- 236 vehicle trips during the evening peak hour, consisting of:
  - 169 standard assessment trips, plus
  - 67 additional retail trips.

- 241 vehicle trips during the Saturday peak, consisting of:
  - 176 standard assessment trips, plus
  - 65 additional retail trips.

4.2.3 Comparative Traffic Analysis Findings

Table 8 provides a comparison of the identified permissible site traffic generation budgets (as detailed in the TTPA Report) with the standard assessment and sensitivity test assessment traffic generation forecasts above for the critical weekday evening and Saturday peak hours.

Table 8: Traffic Generation Comparisons

Peak Hour	Permissible Traffic Budget	Standard Assessment	Sensitivity Test Assessment
Weekday PM	316	169	236
Saturday	440	176	241

The results above demonstrate that:

- Based on the standard assessment forecast, the Proposal is anticipated to generate:
  - 147 fewer trips than the permissible traffic budget during the weekday evening peak hour, a reduction of 47%.
  - 264 fewer trips than the permissible traffic budget during the Saturday peak hour, a reduction of 60%.
- Based on the sensitivity test assessment forecast, the Proposal is anticipated to generate:
  - 80 fewer trips than the permissible traffic budget during the weekday evening peak hour, a reduction of 25%.
  - 199 fewer trips than the permissible traffic budget during the Saturday peak hour, a reduction of 45%.

The comparative traffic generation analysis above – both that of the standard assessment and the conservative sensitivity test assessment – clearly demonstrates that the current Proposal would generate significantly less traffic than the peak hour traffic volumes identified by Arup (as summarised in the TTPA Report) as permissible traffic budgets for development at the Site.

In summary, the current Proposal for the Balmain Leagues Club site is considered acceptable as the forecast peak hour traffic generation during the critical weekday evening and Saturday midday peak

hours is so significantly below the permissible traffic budgets – in the range of 25-60% fewer trips – that the impacts of the less onerous Proposal would likely remain acceptable, regardless of the change in access strategy with this Proposal.

Nevertheless, the impacts to the network performance as a result of the updated access strategy have been assessed and are discussed in Section 5 below.

5 Network Performance Assessment

5.1 Objective

Based on the comments received, the previous modelling associated with the transport assessment has been deemed to be acceptable by the relevant authorities. Throughout the design process the access arrangement was considered to be an appropriate compromise between ensuring that new development does not compromise the effective and ongoing operation and function of Victoria Road; alongside preventing or reducing the potential impact of traffic noise and vehicle emissions on developments adjacent to Victoria Road. However, TfNSW's (as discussed in Section 1.3) preferred position is that access to the development is provided via the alternative local road of Waterloo Street.

Consequently, an investigation of changes to the access strategy proposed by TFNSW has been undertaken. The objective of this further investigation is to conduct a comparative modelling assessment based on the critical peak period, maintaining the previous modelling assumptions and network as shown in **Figure 2**.

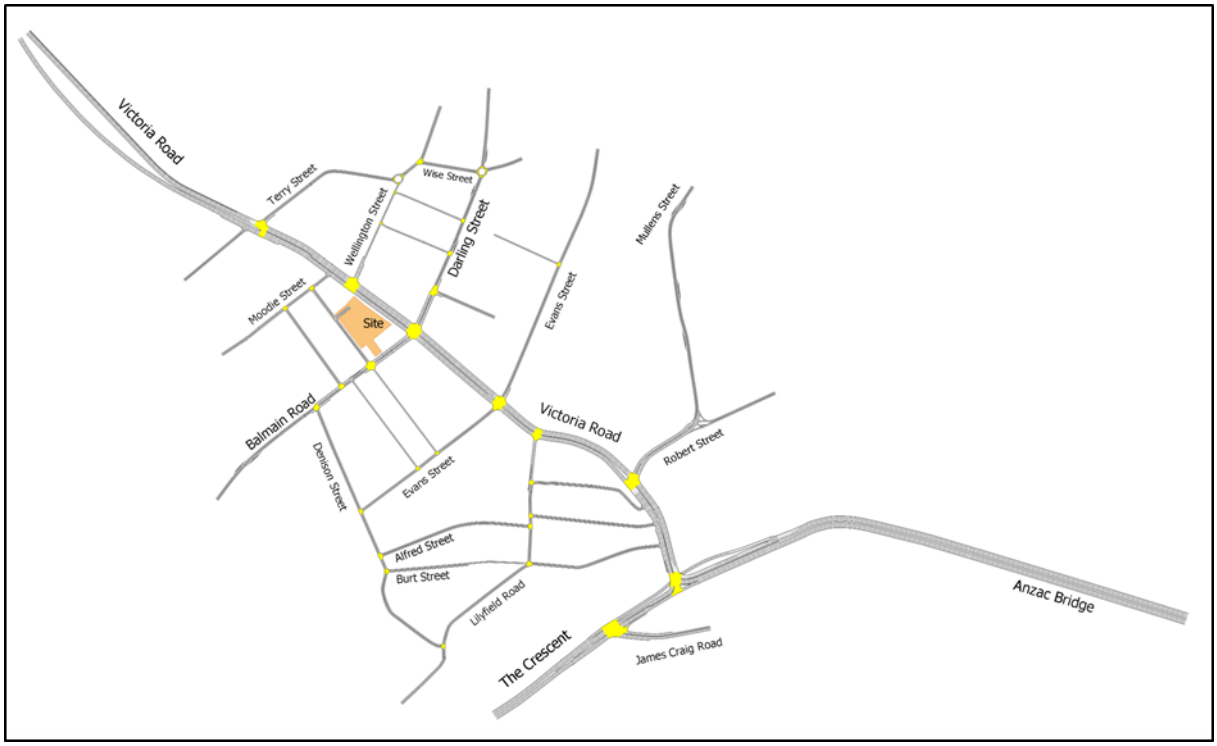


Figure 2: Aimsun model network

As reported in Ason Group's DAM Report 3, the traffic modelling process undertaken was based on a comparison of scenarios with and without the impacts of the Proposal. The impact of development traffic

on the surrounding network was assessed by comparison of the following Microsimulation Network Parameters for the entire modelling period:

- Number of vehicles completed trips
- Unreleased vehicles
- Vehicle Kilometres Travelled (VKT)
- Vehicle Hours Travelled (VHT) and
- Average vehicle speed in the network.

Additionally, the following Microsimulation Outputs were compared for appropriately defined time durations:

- Travel Time
- Congestion (Queue) in the network
- Simulated speed
- Approach Delay, and
- Level of Service (LOS) – overall performance of an intersection based on approach delay.

Addressing the wider traffic congestion issues within Rozelle was undertaken as part of the broader strategic study. Accordingly, the methodology for comparative modelling assessment of the effect of the proposed changed access strategy requires a comparison of model outputs from the critical weekday evening (PM) peak period.

5.2 Modelling Methodology and Assumptions

As in previous traffic assessments of proposals relating to the Site, the traffic distribution for the current proposed development has generally been derived using the following:

- 2011 Journey to Work (JTW) Data
- Rozelle Village Economic Impact Assessment

The same distribution of residential traffic and principles applied for the commercial component of the development—with adjustments to better reflect what is expected to occur—have been used in this comparative analysis. Separate percentages for residential and club/retail have been used, but the same route choice parameters have been used for both. Also, for the changed access scenario, the

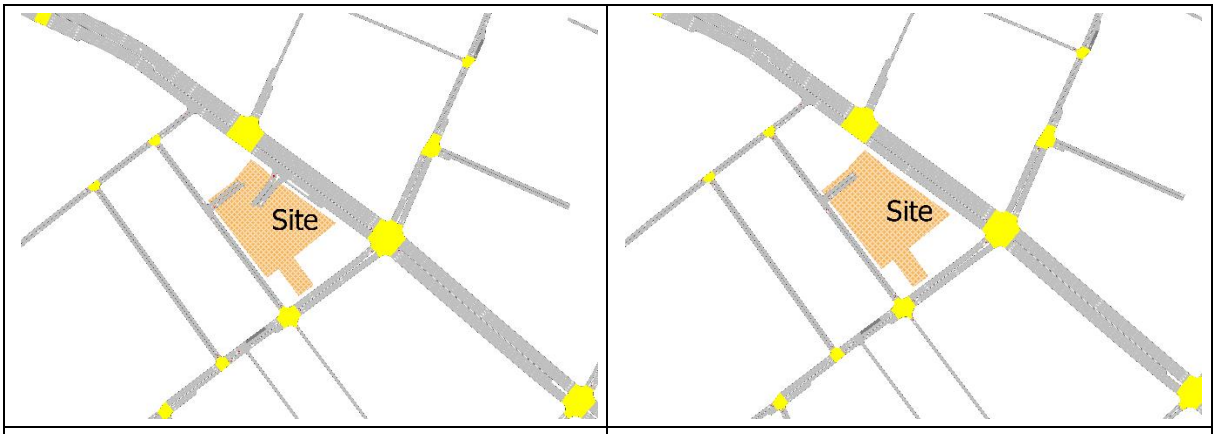
Victoria Road access was removed and the centroid for the club/retail was simply re-connected to the Waterloo Street access. Micro DUE was run, followed by Micro SRC.

5.2.1 Modelling Scenarios

As discussed earlier, the critical peak for the study area is the weekday evening (PM) peak. The objective of this study is to identify the impact of removing access from Victoria Road. In this regard, the modelling outcomes are presented for the PM peak as a comparison of the following scenarios:

- **Base:** Background traffic only, no development trips.
- **Scenario 1 – Previous analysis:** Network traffic includes development trips. Club / Retail access on Victoria Road and residential access at Waterloo Street.
- **Scenario 2 – New Analysis:** Network traffic includes development trips. One access point at Waterloo Street for all developments on the Site.

The above changes are reflected in the Aimsun model geometry as shown in **Figure 3**.



Scenario 1 (two access points)	Scenario 2 (one access on Waterloo Street)

Figure 3: Changes to Aimsun model geometry

5.2.2 Median Seed

As described in Section 4.2.2 of the BMD Report 2, the median seed for the PM peak period was identified by analysis of Vehicle Hours Travelled (VHT) over five seed runs (PM peak median seed number: 2849 or Run 5).

Consequently, all development assessment outputs in the following sections of this report are drawn from the median seed. It should be noted that the model was run for all five seeds to ensure there was no gridlock anywhere in the network in any seed.

5.3 Comparison of Outputs

5.3.1 Microsimulation Network Statistics

Microsimulation Stochastic Route Choice (SRC) outputs for all vehicle types over a three hour period (2 hour peaks, plus warm-up and cool-down periods of 30 minutes each) were compared for the three scenarios and the results are summarised in **Table 9**.

Table 9: Comparison of PM Peak Microsimulation SRC Outputs

#	Parameter	Unit	Base	Scenario 1	Scenario 2
1	Vehicles completed trips	veh	41,730	42,548	42,548
2	Unreleased vehicles	veh	0	0	0
3	Vehicle Kilometres Travelled (VKT)	km	85,603	86,918	86,859
4	Vehicle Hours Travelled (VHT)	h	2,654	2,616	2,672
5	Network Speed	km/h	32.3	33.2	32.5

As shown in Table 9, the increase in traffic demand in both scenarios with the development resulted in minor increases in network speed with a 0.7km/h reduction from Scenario 1 to Scenario 2.

More importantly, there are no unreleased vehicles during any of the scenarios tested. This means the network is not overloaded and would not require capacity enhancements, both at the perimeter to allow unreleased traffic demand into the network, and within the network to relieve forecast levels of through and turning traffic.

5.3.2 Travel Time

The same eight travel time routes were selected for this analysis to provide a comparison of end-to-end travel time assessment i.e. covering the entire length of each route within the boundary of the model network as shown in **Figure 4**. The comparison of travel times along these routes for all scenarios is summarised in **Table 10** and the graphs for the two individual PM peak hours are shown in **Figure 5** and **Figure 6**.

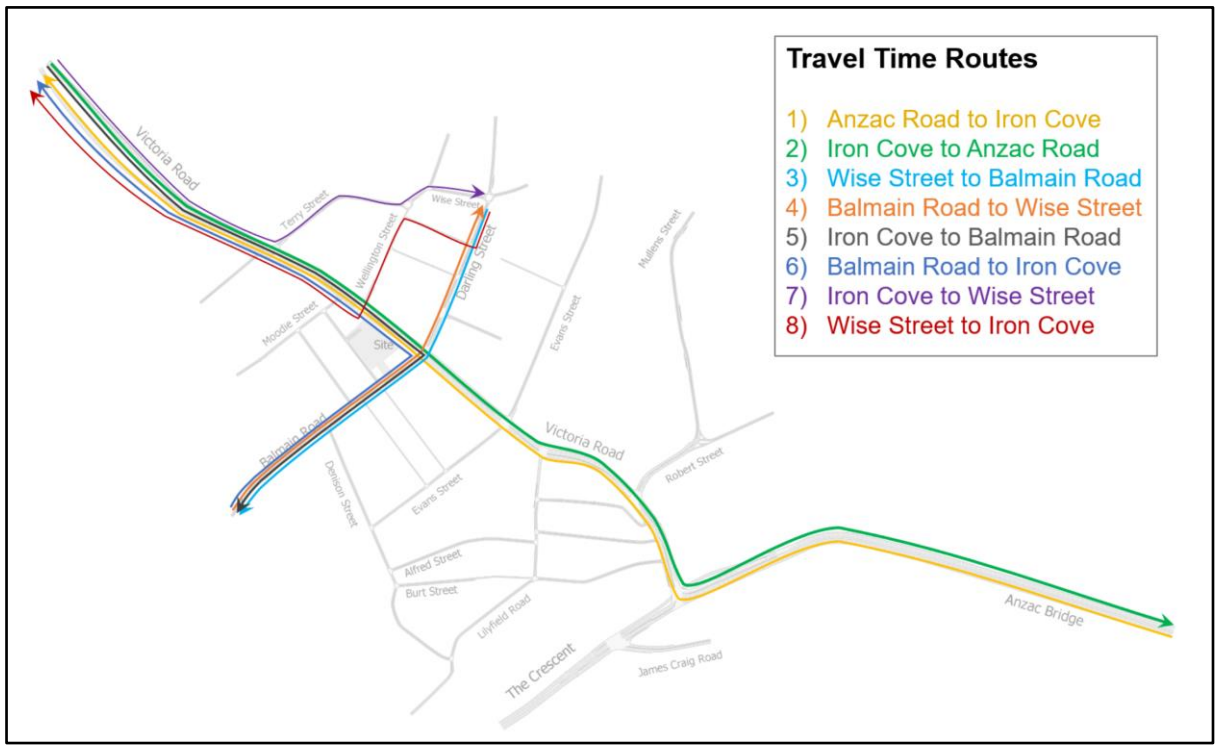


Figure 4: Travel Time Routes

Table 10: Comparison of PM Peak Travel Time (m:ss)

Section	1700-1800			1800-1900		
	Base	Scenario 1	Scenario 2	Base	Scenario 1	Scenario 2
Anzac Bridge to Iron Cove	5:15	5:49	5:56	5:11	5:25	5:40
Iron Cove to Anzac Bridge	5:33	5:37	5:34	5:23	5:23	5:22
Wise Street to Balmain Road	2:48	2:50	2:45	2:54	2:47	2:37
Balmain Road to Wise Street	2:46	2:43	3:03	2:54	3:08	3:37
Iron Cove to Balmain Road	3:34	4:03	4:15	3:28	3:57	4:19
Balmain Road to Iron Cove	3:12	3:19	3:27	3:17	3:27	3:50
Iron Cove to Wise Street	2:30	2:27	2:29	2:43	2:44	2:38
Wise Street to Iron Cove	3:48	4:02	3:53	3:42	3:53	3:55

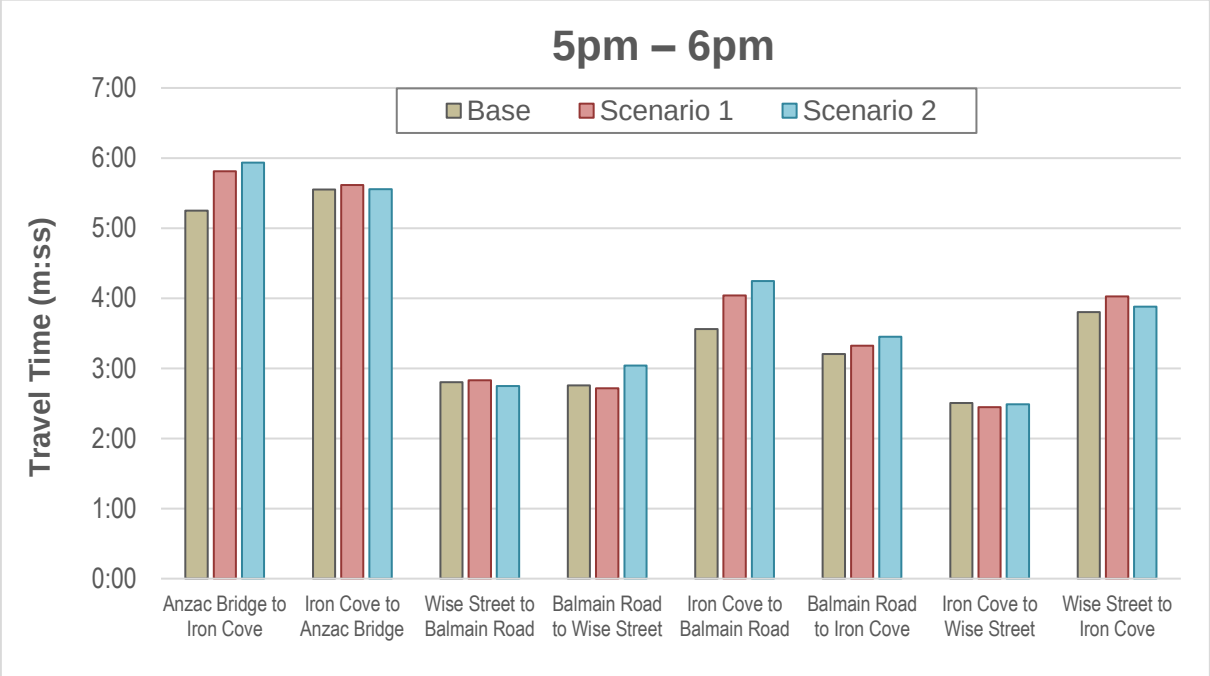


Figure 5: Travel Time Comparison (5pm – 6pm)

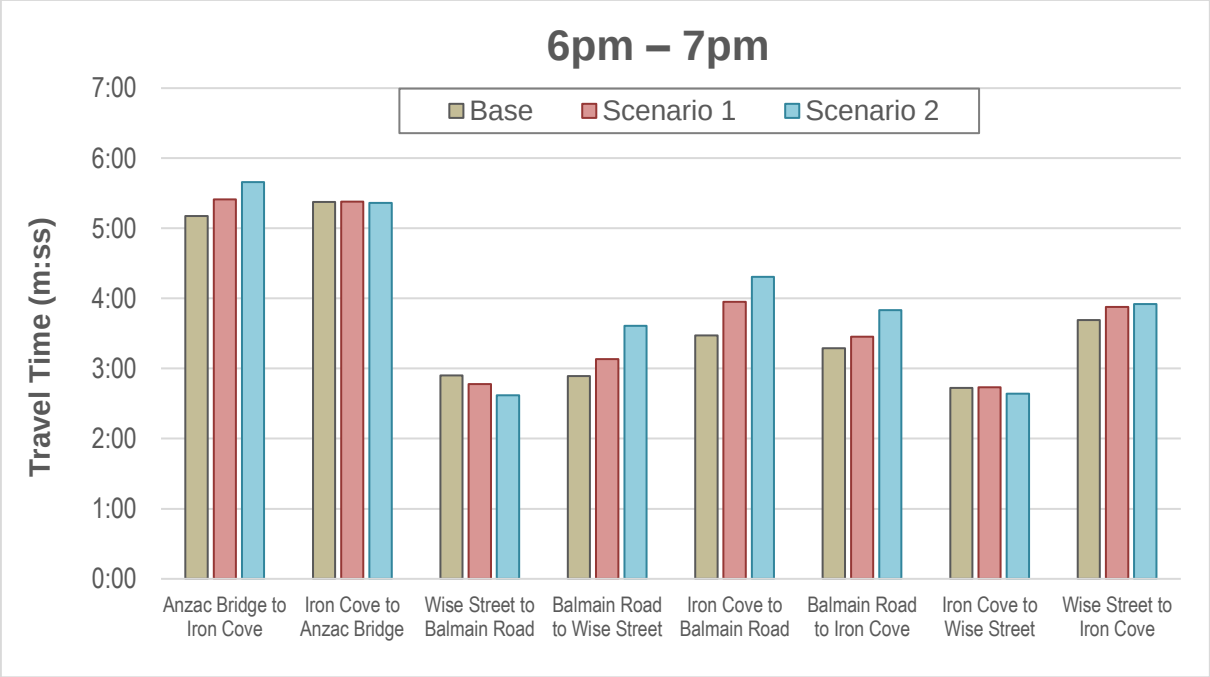


Figure 6: Travel Time Comparison (6pm – 7pm)

The model generally demonstrated minor increase in travel time (less than 1 minute) in both of the scenarios with the development compared to the Base scenario. There were exceptions along a few routes where travel time either reduced (faster journey) or remained identical in “with Development” scenarios.

A further review of the hourly graphs indicates that the travel times of all routes between 5pm and 6pm are quite similar to those between 6pm and 7pm. During both hours, slightly higher travel times were noted in Scenario 2 along most routes.

5.3.3 Queuing and Congestion

Changes in queue or congestion patterns in the road network resulting from the development traffic are demonstrated with a comparison between the simulated density of the Base and “with Development” scenarios, shown from **Figure 7** to **Figure 9**. Density is defined as average number of vehicles per kilometre on a given road section.

Time selected for comparison of density is 6pm which is midway between the two peak hours.

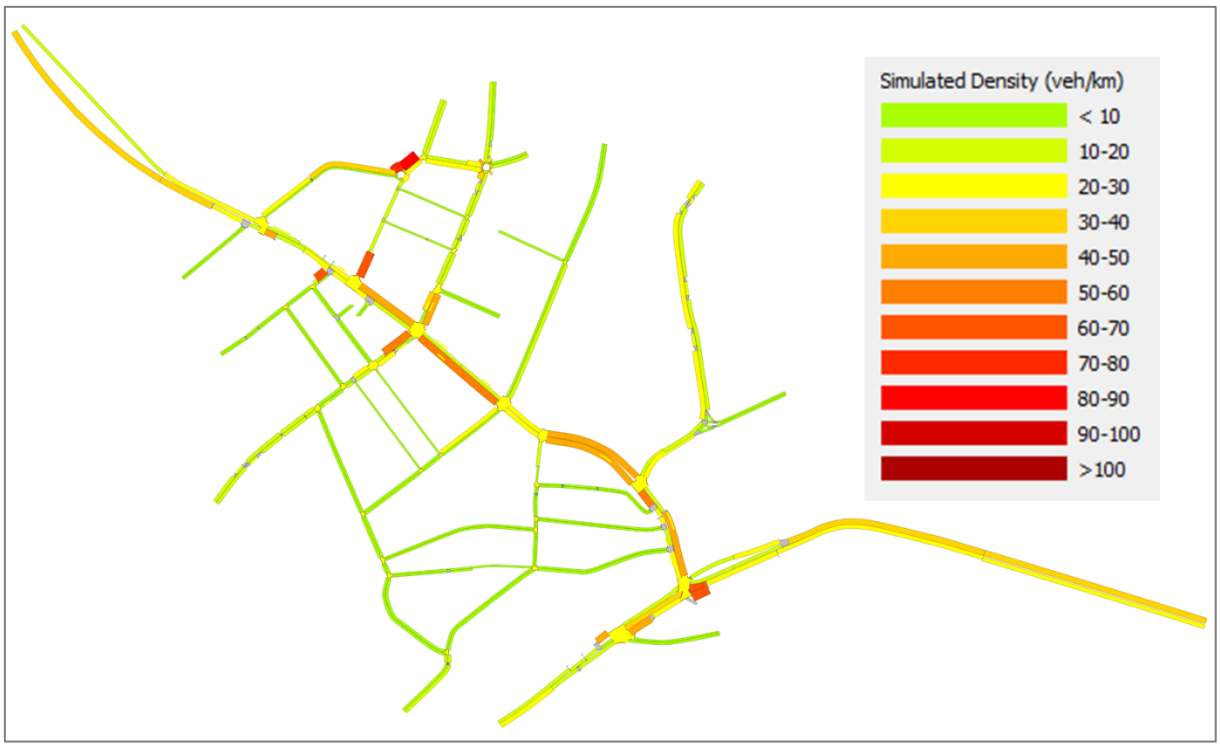


Figure 7: Simulated Density at 6pm (Base)

Figure 8: Simulated Density at 6pm (Scenario 1)

Figure 9: Simulated Density at 6pm (Scenario 2)

The model generally demonstrated moderate increases in density in both scenarios with the development near Victoria Road / Darling Street and more precisely, westbound on Victoria Road approaching Darling Street. On the broader road network, the impact was negligible.

5.3.4 Intersection Performance

The intersection performance during individual peak hours under “with Development” scenarios were compared with the Base scenario for 10 signalised and 4 priority intersections. The basis for the assessment was Approach Delay i.e. the delays experienced by vehicles in the sections approaching an intersection. For signalised intersections, Average Approach Delay was calculated as the sum of the delay time of each section weighted by the link flow and then divided by the total flow of all approaches. For priority intersections, the worst approach delay was identified.

The comparison of LoS and approach delays for all scenarios is shown in **Table 11** and **Table 12** for priority and signalised intersections, respectively.

Table 11: Performance of Priority Controlled Intersections (PM peak)

#	Intersection	Approach LoS Delay in seconds					
		5-6 pm			6-7 pm		
		Base	Scenario 1	Scenario 2	Base	Scenario 1	Scenario 2
1	Victoria Road / Moodie Street	B	B	C	B	A	C
		21	17	32	20	14	33
2	Waterloo Street / Moodie Street	A	A	A	A	A	A
		1	1	7	1	2	5
3	Darling Street / Denison Street	A	A	A	A	A	A
		4	5	14	5	3	5
4	Evans Street / Nelson Street	A	A	A	A	A	A
		2	2	2	2	2	2

Table 12: Performance of Signalised Intersections (PM peak)

#	Intersection	Approach LoS Delay in seconds					
		5-6 pm			6-7 pm		
		Base	Scenario 1	Scenario 2	Base	Scenario 1	Scenario 2
1	Victoria Road / Terry Street	A	A	A	A	A	A
		6	7	7	6	7	8
2	Victoria Road / Wellington Street	A	A	A	A	A	A
		8	9	8	7	8	8
3	Victoria Road / Darling Street	C	D	D	C	C	D
		37	49	54	29	33	47
4	Darling Street / Waterloo Street	A	A	A	A	B	B
		10	12	13	10	15	17
5	Darling Street / National Street	A	A	A	A	A	A
		7	8	8	5	6	6
6	Victoria Road / Evans Street	A	A	A	A	A	A
		6	8	10	4	5	7
7	Victoria Road / Gordon Street	B	B	B	B	B	B
		16	17	26	17	17	19
8	Victoria Road / Robert Street	B	B	B	B	B	B
		24	24	24	24	24	24
9	Victoria Road / The Crescent	B	B	B	B	B	B
		23	24	23	26	27	26
10	The Crescent / James Craig Road	A	A	A	A	A	A
		8	7	7	6	6	6

In summary, it is expected that approach delays at these intersections would generally increase marginally with the proposed development. All key intersections in the network would continue to operate with acceptable delays in both scenarios with the development.

5.3.5 Simulated Speed

Another measure of assessing the impact of development traffic is Average Speed of all vehicles. Average simulated speed for each scenario is shown from **Figure 10** to **Figure 12**. Times selected for the comparison of simulated speed is 6pm, i.e. midway between the two PM peak hours.

Figure 10: Simulated Speed at Weekday 6 pm: Base

Figure 11: Simulated Speed at Weekday 6 pm: Scenario 1

Figure 12: Simulated Speed at Weekday 6 pm: Scenario 2

With the proposed development, the modelling shows negligible localised reductions in average vehicle speed in both "with Development" scenarios, particularly near the Victoria Road / Darling Street intersection.

5.4 Summary

In order to investigate changes to the access strategy for the Proposal, a comparative modelling assessment has been conducted based on the critical weekday evening (PM) peak period, maintaining the previous modelling assumptions. The model was developed using the Aimsun modelling platform (version 8.2.0 R49393) and was calibrated and validated in accordance with the requirements outlined in the RMS Traffic Modelling Guidelines, 2013.

The following scenarios have been compared:

- **Base**: Background traffic only, no development trips.
- **Scenario 1 – Previous analysis:** Network traffic includes development trips. Club / Retail access on Victoria Road and residential access at Waterloo Street.
- **Scenario 2 – New Analysis:** Network traffic includes development trips. One access point at Waterloo Street for all uses on the Site (excluding servicing).

The key findings of the additional modelling assessment of the Proposal are as follows:

- The increase in traffic demand in both scenarios with the development resulted in minor increases in network speed with a 0.7km/h reduction from Scenario 1 to Scenario 2.
- There are no unreleased vehicles during any of the scenarios tested, demonstrating that the network is not overloaded and would not require capacity enhancements both at the perimeter and within the network.
- The model generally demonstrated minor increase in travel time (less than 1 minute) in both of the scenarios with the development compared to the Base scenario. There were exceptions along a few routes where travel time either reduced (faster journey) or remained identical in “with Development” scenarios.
- There were moderate increases in density in both scenarios with the development westbound on Victoria Road approaching Darling Street. On the broader road network, the impact was negligible
- Approach delays at most intersections in the study area generally increase marginally with the proposed development. All key intersections in the network continue to operate with acceptable delays in both scenarios with the proposed development.
- With the proposed development, the modelling shows negligible localised reductions in average vehicle speed in both development access scenarios.

Overall, the modelling analysis demonstrates that the current Proposal is acceptable from a traffic impact perspective.

6 Access and Internal Design

6.1 Introduction

Due to the change in access strategy, there has been a significant redesign to the access, loading dock and basement carparks. As such, the new set of drawings have changed significantly from the initial DA submission plans and have therefore been reviewed as such.

6.2 Relevant Design Standards and Reference Documents

The Site access, car park and loading areas are required to comply with the following relevant Australian Standards:

- AS2890.1 for car parking areas;
- AS2890.2 for commercial vehicle loading areas;
- AS2890.6 for accessible (disabled) parking.

6.3 Victoria Road Access

Only service vehicles are proposed to access the Site via Victoria Road. In this regard, a left-in / left-out driveway on Victoria Road has been designed for the 12.5m Heavy Rigid Vehicle (HRV) for access only to the basement loading dock. No deceleration lane is proposed for the loading dock access. This is considered appropriate given the low volumes of vehicles associated with servicing activities. As discussed in Section 7.2, the Site would be subject to a LDMP, which could restrict servicing activities during peak hours if required.

The proposed service vehicle access incorporates the following vehicle and pedestrian design principles:

- A maximum of 1:20 gradient for more than 6 metres near the property boundary for exiting ramp noting that AS 2890 requires a minimum of 6 metres
- The access ramp grades has been checked with vertical clearance assessment for scraping.
- 2.0 x 2.5m visual splay in accordance with AS 2890.1 mandatory pedestrian safety provision
- Central median for safe refuge of pedestrians
- Design Compliance accommodating the largest vehicle (12.5m HRV) to access the Site

Appendix A details the swept paths of the key heavy vehicles accessing their respective bays.

6.4 Waterloo Street Access

Access to Basement Level 1 and 2 (Public and Private Car Park) is provided to the south west of the development, via Waterloo Street. A Category 2 driveway is designed in accordance with AS2890.1, which is a driveway with a combined entry and exit width of 6.0m – 9.0m. A separated driveway has been provided with both entry and exit widths of 3.0m and a median width of 900mm with a visibility splay to be provided for exiting vehicles to provide compliant sightlines. The access ramp has been designed in accordance with swept path analysis attached in Appendix A. The curved roadways have been designed in accordance with AS2890.1 Figure 2.9 and Table 2.2. The access ramp grades have been checked with vertical clearance assessment for scraping.

6.5 Car Parking – Access Control and Management

All light vehicles will enter via a single access at Waterloo Street and share the same access ramp. The first basement floor will be for retail parking and the second basement will be used for residential and commercial parking. All residential and commercial vehicles will need to circulate past the retail basement floor to access the private carpark floor.

A smart parking management system such as a license plate recognition system would be used for the retail parking floor system to overcome the need for an unnecessary queuing area, providing unfettered free-flow entry movements but monitored access to the car park to manage excessive dwell periods. The system ultimately implemented would likely involve a form of a boom gate on exit, as part of the license plate recognition system.

Access to the ramp to the private carpark will be controlled via electronic fobs. Residents and commercial staff will be able to pass through the retail license plate recognition system with a registered license plate without the need for a separate key card.

All public parking spaces are recommended to be electronically monitored to reduce recirculation of the car park.

6.6 Car Parking Design

Car parking for the proposed development has been provided on two separate basement levels as follows:

- Basement 1 Level (Public Car Park) Club Members / Retail Customers; and
- Basement 2 Level (Private Car Park): Residents / Commercial employees

6.6.1 Basement 1 Level (Public Car Park)

- All parking has been designed in accordance with a User Class 3A dimensions with all spaces to be provided with a minimum space length of 5.4m, a minimum width of 2.7m, and a minimum aisle width of 6.2m.
- Small carparking spaces have been designed in accordance with AS2890.1 with a minimum space length of 5.0m and a minimum width of 2.3m.
- A community bus bay that is able accommodate 2 x B99 minibuses. Each community minibus can park with a minimum 2.7m width with an additional 2.7m of shared space between the two minibus parking spaces for side loading of vehicles.
- A minimum head height clearance of 2.2m is to be provided within all areas traversed by private vehicles.
- A maximum gradient of 5% (1 in 20) for the first 6m inside the property boundary is required and provided. A superior 1:20 gradient length is provided for exiting vehicles over and above the 6m minimum requirement.
- A maximum gradient of 20% (1 in 5), with transitions of 12.5% (1 in 8) is provided and responds to site constraints. AS2890.1 requires a 1:6 gradient for public ramps exceeding 20 metres in length. The provision of 1:5 grades is considered acceptable in this circumstance in order to achieve the optimum design outcome accommodating light and heavy vehicle design requirements, ensuring satisfactory operation.
- The access ramps provide 3.0 metre width (kerb to kerb) in accordance with straight ramp design requirements for public facilities.
- All disabled parking is designed in accordance with AS2890.6 and should be provided with 2.5m head height above parking module (including shared area).

6.6.2 Basement 2 Level (Private Car Park)

- All resident/commercial (employee) parking spaces are designed in accordance with a User Class 1A and are to be provided with a minimum space length of 5.4m, a minimum width of 2.4m, and a minimum aisle width of 5.8m.
- In locations where dead-end aisles are proposed, the required 1.0m aisle extension is provided in accordance with Figure 2.3 of AS2890.1
- A minimum head height clearance of 2.2m is to be provided within all areas traversed by private vehicles.

- A maximum gradient of 20% (1 in 5), with transitions of 12.5% (1 in 8) is provided in accordance with AS2890.1.
- Swept path analysis has been undertaken in order to demonstrate satisfactory operation and passing opportunities for the ramp system. The analysis provided in Appendix A confirms satisfactory operation.
- All disabled parking is designed in accordance with AS2890.6 and should be provided with 2.5m head height above parking module (including shared area).

6.6.3 Car Park Summary

It is expected that any detailed construction drawings in relation to any modified areas of the car park or site access would comply with these Standards. Furthermore, compliance with the above Standards would be expected to form a standard condition of consent to any development approval.

6.7 Loading Dock Design

6.7.1 Australian Standard Compliance

The commercial (heavy) vehicle facilities of the development have been designed having regard for the operational requirements of the future tenant and the requirements of AS2890.2.

The internal design of the service area meets the requirements of AS28090.2 for the maximum sized vehicle, this being a 12.5m Heavy Rigid Vehicle. A minimum head height of 4.5m is provided within all areas traversed by service vehicles.

Service bays have been designed in accordance with Table 4.1 of AS2890.2, with minimum bay width of 3.5m and the necessary lengths for an HRV, MRV and SRV. All service vehicles can enter and exit the site in a forward direction. The HRV bay is able to accommodate a Council Waste Vehicle of 9.4m given a 12.5m HRV is able to access the loading dock.

Swept path analysis is provided on the plan attached in Appendix A, which demonstrate compliance with relevant sections of AS2890.2 and commercial vehicles accessing the loading docks.

A LDMP will be prepared to ensure efficient and safe loading within the loading dock. This will be detailed in response to a suitable condition of consent and would be undertaken in liaison with Council.

7 Conditional Frameworks

7.1 Construction Traffic Management Plan Summary

A Construction Traffic Management Plan (CTMP) Framework has been prepared in response to Council's RFI comments. The CTMP Framework provides a high-level overview of the construction traffic management principles required to minimise traffic and pedestrian impacts on the surrounding local road and pedestrian network. Council's RFI comments regarding the construction within the Site have been considered in the development of this CTMP Framework.

It is important to note from the outset that this CTMP is a preliminary assessment of construction traffic management for the Site, noting that given the early stage in the DA process, no Builder has been contracted to undertake the construction works. As such, there are no set construction site plans, methodology and construction traffic generation. Thus, the CTMP Framework provides high-level traffic mitigation strategies based on the limited construction information available.

Further, due to the current stage of the project, the construction timeframes are unknown, making it difficult to assess cumulative impacts with other key construction projects, some of which also have undefined timeframes.

A more comprehensive and detailed CTMP would be developed at Construction Certificate Stage once a Builder has been appointed, which will be submitted to Council and TfNSW for review prior to the issue of a Construction Certificate. The CTMP Framework is attached in Appendix B.

7.2 Loading Dock Management Plan

A LDMP would be developed at the Occupation Certificate stage. The LDMP will need to demonstrate how safe servicing arrangements will be undertaken without interrupting general traffic and prevent queuing on public roads. As such, the LDMP will detail the anticipated delivery vehicle sizes, the heavy vehicle movements in and out of the loading and provide a loading strategy to minimise traffic impacts and improve pedestrian safety. A booking/scheduling system will be developed as part of the LDMP to enable efficient loading patterns and prevent queuing on public roads.

The effective use of a LDMP would contribute to the minimisation of delays, prevention of accidents and meet customer expectations. Ultimately, this would result in reduced costs, higher productivity and a safer environment for all users of the loading dock.

The plan is to be submitted to and approved by Council and TfNSW prior to the issue of any Occupation Certificate.

7.3 Traffic Monitoring and Reporting Framework Summary

7.3.1 Overview

A Green Travel Plan (GTP) had been prepared by The Transport Planning Partnership (TTPP) as part of the initial DA submission. As part of the GTP, an ongoing data collection process is required to track progress and trends of travel choices of the proposed development. Therefore, it is proposed to implement an overarching Operational Traffic Monitoring and Reporting Framework (OTMRF) to review the Travel Plan's effectiveness and to evaluate if the Travel Plan is meeting the Key Performance Indicators (KPIs). These KPIs would show that the Travel Plan is "*facilitating a shift towards more sustainable transport modes*" and "*mak[ing] the site a great place to live, work and visit*". Such KPIs could include detailing positive trends to mode share targets prescribed in the GTP. Nonetheless, the KPIs will be agreed upon with the relevant authorities prior to the issue of the Construction Certificate.

The suggested condition of consent for the Travel Plan would be:

"Prior to the issue of the Occupation Certificate, the applicant is to prepare a detailed Operational Traffic & Access Management Plan that would include a Loading Dock Management Plan and details of a comprehensive monitoring and review program which include:

- *annual reporting to a responsible Council officer*
- *tracking of progress, compliance and trends*
- *a series of key performance indicators (KPIs) linked to a penalty system to ensure proponent's achievement of these KPIs as well as compliance with the reporting mechanism*

The anticipated goals of this monitoring program would be to:

- validate the anticipated impacts of the Travel Plan; and,
- determine the effectiveness of the Travel Plan measures (including the success of public and active transport incentives).

This OTMRF is in response to Council's RFI which details that a comprehensive Operational Traffic & Access Management Plan (OTAMP) should be prepared prior to the issue of a Construction Certificate. The OTMRF provides a preliminary methodology for traffic and access monitoring activities that would be carried out to ensure compliance and tracking of progress and trends of the Green Travel Plan.

The detailed comprehensive OTAMP will be prepared at a later date during the Construction Certificate stage. The future comprehensive OTAMP would be reviewed and approved by Council and TfNSW.

The purpose of this OTMRF is to provide guidance in relation to the parking and traffic monitoring arrangements for the Site with an overall objective to track travel and access plan's performances and ensure sustainable and efficient movement of vehicles and personnel. This high-level framework details the following:

- Preliminary traffic and access monitoring activities
- Methodologies to undertake operational traffic monitoring activities
- Reporting requirements for traffic and access monitoring
- Review and improvement procedures

7.3.2 Monitoring and Reporting Framework

A report of the monitoring and data collection is to be prepared annually by the Travel Plan Coordinator and are to be submitted to the relevant Council officer. The data collection and annual report is to be undertaken by the chosen Travel Plan Coordinator of the Site.

The structure of the traffic monitoring report would generally follow this structure:

- Introduction
- Traffic Volumes
- Operational Parking Demand Data
- Employee, Club Members and Resident Survey and Data Analysis
- Car Share and Community Bus Usage
- Review of KPIs and Trends
- Summary

7.3.3 Methodology for Monitoring Activities

The following table outlines a list of the preliminary traffic and access monitoring activities that would be undertaken at the proposed development:

Table 13: Preliminary Monitoring Activity and Methodology

Monitoring Activity	Methodology
Carpark Traffic Volumes	The total number of vehicles accessing the carpark will be recorded utilizing data collected from smart parking systems. Classification of the vehicles will be split into residential and non-residential traffic volumes. The retail vehicle traffic volumes would be further be classified as standard vehicle, taxis, minibuses and car share vehicles.
Loading Dock Traffic Volumes	The number and type of heavy vehicles accessing and leaving the site is to be recorded by on-site personnel. The time the vehicles arrive, and leave are to be recorded as well.
Retail Parking Demand	The number of car parking space being utilised can be estimated through the use of the license plate recognition software by subtracting the number of non-residential vehicles entering and exiting the carpark within a given time period. Alternatively, smart parking management systems such as parking space detection software installed in security cameras or vehicle detection sensors above each parking space can be used to create a parking demand profile in real-time.
Employee and Resident Survey	An annual online survey will be distributed to residents and staff within the development. The survey would gather travel modes and journey to work data as well as understanding general satisfaction and perception of how the Travel Plan is operating.
Registered Club Member Data Collection	The club would have access to their member's data such as where they live and when they arrive on-site as part of the typical club entry processing procedure.
Community Bus Usage	The number of commuters using the community minibus should be recorded regularly for review.
Car Share Usage	The car share operator should be able to provide data on the usage patterns of the car share spaces within the retail carpark.

A comprehensive data collection procedure would be provided to the Travel Plan Coordinator to follow. Data should be presented to provide a comparison against previous years' data and measured against agreed upon KPIs. Commentary is to be provided for any missing or flawed data. All data collected should be reviewed and validated to ensure it is fit for purpose.

7.3.4 Summary

The Operational Traffic Monitoring and Reporting Framework provides preliminary guidelines for recording and reporting on the data required for the report to be submitted to relevant Council authorities.

8 RFI Checklist

This TA provides an assessment of the access, traffic, pedestrian and parking characteristics of the proposed DA works in response to Council and TfNSW comments. In this regard, Ason Group has specifically referenced the RFIs (as discussed in Section 1.3).

Table 14, **Table 15** and **Table 17** below provides a summary response to each of the relevant RFIs, with Ason Group's response, or refence to the relevant section provided.

Table 14: RMS (TfNSW) RFI Checklist

RMS (TfNSW) Comments	TA Section
Key Summarised Comments: Roads and Maritime has reviewed the submitted application and notes that the development proposes vehicular access on Victoria Road. Roads and Maritime does not provide concurrence for the proposed vehicular access on Victoria Road as proposed due to future safety and network performance concerns. Consideration may be given for access to service vehicles only from the Victoria Road frontage with all other vehicular access via Waterloo Road. Roads and Maritime also advises that current practice is to limit the number of vehicular conflict points along the arterial road network to maintain network efficiency and road safety. Reference to Guide to Traffic Generating Development states '*access across the boundary with a major road is to be avoided wherever possible*'. Further to the above, clause 101(2a) of *State Environmental Planning Policy (Infrastructure) 2007*, states: "The consent authority must not grant consent to development on land that has frontage to a classified road unless it is satisfied that: (a) "*where practicable, vehicular access to the land is provided by a road other than the classified road*". Roads and Maritime at this time notes that 'practicable' access for all vehicles, excluding service vehicles, can be obtained via a road other than a classified road. Upon receipt of amended plans that reflect the abovementioned requirements, Roads and Maritime will review and provide a response accordingly.	**Section 2, Section 5 & Section 6** The design has been revised to accommodate these comments.

Table 15: TfNSW RFI Checklist

TfNSW Comments	TA Section
Impacts on Bus Services along Victoria Road Recommendation It is requested that: • Prior to approval of this development application, the car park be redesigned to provide access to the entire car park via Waterloo Street with the loading dock access via Victoria Road to the satisfaction of TfNSW and Roads and Maritime Services; • Prior to the issue of the Construction Certificate, the applicant be conditioned to undertake a road safety audit for the proposed access arrangement to the	**Section 5, Section 6 & Section 7** The design has been revised to accommodate these comments. A Road Safety Audit would be undertaken prior to the issue of CC

TfNSW Comments	TA Section
development via Victoria Road, in accordance with Austroads guidelines by an independent TfNSW accredited road safety auditor; and • Prior to the issue of the Occupation Certificate the applicant be conditioned to prepare a Loading Dock Management Plan in consultation with Transport for NSW and Roads and Maritime Services.	
Darling Street Bus Stop It advised that the proposed relocation of the bus stop on Darling Street as stated in the Figure 39 of the Statement of Environmental Effects is not supported as this stop is necessary to ensure access to local shops for Rozelle and Balmain residents and needs to be retained in its current location. This bus stop was recently relocated to its current position as a Bus Priority infrastructure Project to address traffic issues at Victoria Road intersection.	It is not proposed to relocate the Darling Street Bus Stop.

Table 16: NSW Police Force RFI Checklist

NSW Police Force Comments	TA Section / General Comments
Immediately, it is noted and a cause for concern for the NSW Police Force that the development is only providing 110 parking spaces for the use by person utilising the public areas, stated in one area of the Statement of Environmental Effects, then stated at 5.3.4 the number of non-residential spaces differs to 143 spaces, with 102 spaces allocated specifically to the Leagues Club.	**Section 3**
As shown in the Harrold Park development (City of Sydney D/2015/297), that site supplies 144 parking spaces for a development which has commercial and retail outlets as well as no less than 6 licensed premises. The Licensed Premises alone can cater for upwards of 1200 patrons. On regular occasions, especially weekends the car spaces are filled early, and a large amount of overflow of cars fill the surrounding streets which has a detrimental effect on residents in the vicinity of the site. The Leagues Club development with only 143 public parking spaces will have the same if not worse effect on the vicinity which is already at a capacity for vehicular traffic.	**Section 3** and the separate Parking Study provides justification for the proposed parking provision.
Possible Parking Conflict Consideration is proposed to be given to making Waterloo Street, "residents only" parking. It could be expected that the proposed car park will not be able to cater for the numbers of vehicles the development precinct would attract. With this in mind, consideration would need to be given to the traffic control signals at the intersection of Darling Street and Waterloo Street. There would be an expectation of a larger quantity of vehicles wishing to enter the development and doing so via Waterloo Street, this would add extra stress to an already congested intersection.	**Section 5**

Table 17: Council RFI Checklist

Council's Comments	TA Section / General Comments
Traffic Generation When compared to the previously calculated traffic budget for the site (316 and 440 for the weekday evening peak and Saturday midday peak respectively) the data provided by the Applicant indicates that the peak traffic generation will be within the agreed limits.	**Section 3**
Transport and traffic impacts based on previous modelling In August 2018, Inner West Council commissioned Arup (transport consultants) to review the transport and traffic circumstances likely to be created by the proposed development. In carrying out this review Arup examined the Applicant's traffic modelling. The analysis was carried out with the understanding that no kerbside parking spaces would be removed from Darling Street and that any future spare capacity on Victoria Road (resulting from construction of the Iron Cove Link) would be used to improve the sustainable transport network	**N/A**

Council's Comments	TA Section / General Comments
and to provide opportunities for public domain improvements, rather than being used to accommodate increased traffic flow. Arup's review of the Applicant's model indicated that; subject to a number of minor refinements; the model generally conformed to the RMS Traffic Modelling Guidelines. In summary, the current revised proposal can be anticipated to result in generally acceptable increases in delay/congestion on the adjacent road network, when considered in the context of likely future conditions on the adjacent road network.	
Active Transport The development proposes a series of initiatives to encourage active transport through a Travel Plan. In addition to this, it is considered essential that detailed design of the Victoria Road deceleration lane, forecourt and frontage path should address medium to long term opportunities for public domain improvements that may arise when traffic flows on Victoria Road are significantly reduced in response to opening of the Iron Cove Link (RMS projections indicate a possible reduction of 30% or greater). It is anticipated that Council will request TfNSW/RMS to assist in capturing any spare road capacity once the Iron Cove Link opens. This spare capacity/carriageway width could potentially include, but not be limited to, the following public domain (and associated) improvements: • Footpath widening; • Bike lanes; • Enhanced bus facilities; • Enhanced place-making; • Public Art.	A deceleration lane for the Victoria Road access is no longer proposed.
Travel Plan It is considered that the proposed Travel Plan has the potential to assist in encouraging use of public and active transport, however it is essential that a mechanism be established in which the Travel Plan Coordinator's monitoring and reviews be annually communicated to a responsible Council officer to ensure compliance and tracking of progress/trends.	**Section 7.3** Noted.
Construction Traffic Management Council is concerned that the construction of the development is likely to coincide with several other major construction projects including: • Iron Cove Link (and associated Victoria Road works); • WestConnex Stage 3b; • Western Harbour Tunnel; • Sydney Metro West; • Elements of the Bays Precinct Redevelopment. Consequently, it is requested that the cumulative impact of such construction activity be assessed (in consultation with all major stakeholders) and appropriate construction traffic management be instigated. The current construction traffic routes are specified as: **Access Routes:** • Access Route 1: Vehicles approaching the Site from the west, traverse along City West Link, continue onto The Crescent, left onto Victoria Road and then left into the Site; • Access Route 2: Vehicles approaching the Site from the north, travel south following the Bradfield Highway onto the Western Distributor, follow the Western Distributor in a westerly direction before turning right onto Victoria Road and then left into the Site;	**Section 7.1**

Council's Comments	TA Section / General Comments
• Access Route 3: Vehicles approaching the Site from the South and East travel westbound along the Cross-City Tunnel before merging onto the Western Distributor to head further west, right onto Victoria Road and then left into the Site. **Exit Routes:** • Egress Route 1: Vehicles exiting the Site to head west, turn left onto Victoria Road, follow Victoria Road until the Burns Bay Road divergence, keep left to continue on the westbound Victoria Road; • Egress Route 2: Vehicles exiting the Site to head north, turn left onto Victoria Road, follow Victoria Road until the Burns Bay Road divergence, keep right to continue on the northbound Burns Bay Road, turn right onto Centennial Avenue, exit onto Epping Road to continue in a northerly direction; • Egress Route 3: Vehicles exiting the Site to head south, turn left onto Victoria Road, follow Victoria Road until the Burns Bay Road divergence, keep right to continue on the northbound Burns Bay Road, turn right onto Centennial Avenue, exit right onto Epping Road, continue straight onto Gore Hill Freeway, straight onto the M1 to travel towards the Sydney Harbour Tunnel to head south. In relation to these routes Council is concerned that: • Access Route 1 will directly conflict with other construction traffic associated with Sydney Metro West, the Bays Precinct Redevelopment, WestConnex Stage 3b and heavy vehicles associated with the Glebe Island Concrete batching works and materials handling/multi-user facility; all of which will potentially use The Crescent/City West Link or pass through the intersection of The Crescent with James Craig Road; • All three egress routes rely on the site's construction traffic continuing in a west/north-west direction via Burns Bay Road, however no evidence has been provided to indicate that discussions have been held with Lane Cove Council (and/or RMS/TfNSW) regarding potential impacts of such increased heavy movements through that LGA. Should the development be approved it will be essential to manage its construction traffic in a manner which considers: • Construction of the Iron Cove Link, including current works proposed for Victoria Road; • Impacts on the nearby active transport network; • Impacts on adjacent sensitive uses, including residential uses on Waterloo Street, retail premises fronting Darling Street, and, other uses further afield such as Rozelle Public School, Darling Street shops (north of Victoria Road) residential uses in Terry and Wellington Streets; • Impact of construction activity on the operation of Sydney Bus services. It is considered that all of the above concerns should be addressed in the detailed Construction Traffic Management Plan. Council notes your advice that you propose that the CTMP discussion in the current documentation be updated and compiled into a standalone 'CTMP Framework' report to be submitted to Council.	
Additional Information In relation to the transport implications of the proposal it is generally considered that the development's traffic generation is within the previously agreed traffic budget for the site. However, the following matters are required to be addressed:	**Section 3, Section 5 & Section 7**

Council's Comments	TA Section / General Comments

Notwithstanding that the final design of the works on Victoria Road requires the approval of the RMS, Council requires you to address how medium to long term opportunities for public domain improvements may be facilitated by capturing spare road capacity if traffic flows on Victoria Road are significantly reduced once the Iron Cove Link opens (RMS projects indicate a possible reduction of 30% or greater).

A mechanism should be specified which will permit Council to easily, and at no cost to Council, be able to have the Travel Plan Coordinator's monitoring and reviews annually communicated to a responsible Council officer to ensure compliance and tracking of progress/trends. This provision of travel plan reviews to be supported by a series of Key Performance Indicators (KPIs) linked to a penalty system to ensure the proponent's achievement of these KPIs as well as compliance with the reporting mechanism. If you consider that this matter could be satisfied by a condition of consent, please submit your suggested condition for Council's consideration. Council notes that you have advised that you propose the preparation of a Comprehensive Operational Traffic & Access Management Plan (OTAMP) prior to the issue of a Construction Certificate. As this OTAMP will require the approval of Council and the RMS, such approval should be given at the time of issue of an operational consent.

A detailed Construction Traffic Management Plan to be provided that particularly addresses issues including the following:

- Access Route 1 will directly conflict with other construction traffic associated with Sydney Metro West, the Bays Precinct Redevelopment, WestConnex Stage 3b and heavy vehicles associated with the Glebe Island Concrete batching works and materials handling/multi-user facility; all of which will potentially use The Crescent/City West Link or pass through the intersection of The Crescent with James Craig Road;

- All three egress routes rely on the site's construction traffic continuing in a west/north-west direction via Burns Bay Road, however no evidence has been provided to indicate that discussions have been held with Lane Cove Council (and/or RMS/TfNSW) regarding potential impacts of such increased heavy movements through that LGA;

- Construction of the Iron Cove Link, including current works proposed for Victoria Road;

- Impacts on adjacent sensitive uses, including Residential uses on Waterloo Street, retail premises fronting Darling Street, and, other uses further afield such as Rozelle Public School, Darling Street shops (north of Victoria Road) residential uses in Terry and Wellington Streets;

- Impact of construction activity on the operation of Sydney Bus services;

- Impact of construction activity on active transport and adjacent sensitive uses including:
    - residential uses on Waterloo Street (and other adjacent streets);
    - retail premises fronting Darling Street; and
    - other uses further afield such as Rozelle Public School, Darling Street shops (north of Victoria Road) residential uses in Terry and Wellington Streets;

Council's Comments	TA Section / General Comments
Provision of parking The development is not supported as it falls short of the required provision of off-street parking, motorcycle and bicycle parking in accordance with the controls and numerical requirements of DCP Amendment No. 18 Balmain Leagues Club Precinct Adopted on 25 June 2019 Operational on 16 July 2019 Section D1.15. In this regard: a) The Transport, Traffic & Parking Assessment Addendum report by Ason Group dated 28/08/2019 Section 4.1 has calculated the Car Parking requirements in accordance with D1.0 Site Specific Controls Balmain Leagues Club Precinct Section D1.12 Parking as 326 car parking spaces with 255 car parking spaces proposed, a shortfall of 71 car parking spaces. b) The number of bicycle parking spaces has not been clearly identified or compliance with class 1 Bicycle lockers for residents, class 2 for employees and class 3 for visitors. c) Motorcycle parking must be provided as per the required vehicle parking, not the proposed vehicle parking. In addition, the required motorcycle parking rate must be calculated separately for each floor. Additional motorcycle parking is required. The proponent justifies reduced on-site parking provision based on reference to the SSDCP's objective (D1.15,O3) which seeks to" promote choice in available transport and reduce dependency on private cars". While it is agreed that reduced private car dependency has strategic merit it is considered that the rates proposed by the SSDCP were developed with consideration to the specific location and should be complied with. The SSDCP does however provide an opportunity to reduce on-site provision as stated in C3 below: *C3. If providing less than the required parking, a traffic and parking study shall be submitted to justify the proposed parking rate and ensure no impact on surrounding streets.* It is not considered that the proponent has provided a sufficiently robust analysis to ensure that there will be no impact on surrounding streets, particularly noting the increased supermarket and retail components (when compared to the original TTPA Report transport analysis) and the reduction non-residential parking. It is considered that there is insufficient justification for reduced on-site parking provision and that the development should not be approved until it complies with the SSDCP's required on-site parking. Further detail should also be provided regarding the location and management of bicycle, motorcycle and car share parking If adequate justification cannot be provided to address the reduced on-site parking provision, consideration is to be given to providing an **additional** basement floor.	**Section 6**
Loading Dock and Car Park Design Council provided a number of comments in relation to the design of the loading dock and car parking areas, which included compliance with the relevant Australian Standards. However, as discussed, the design of the loading and parking areas have been significantly altered as a result of the RFI process. The comments received were considered during the development of the latest design.	**Section 6** The car park, loading areas and access driveway have been designed in accordance with the relevant Australian Standards.

9 Conclusion

9.1 Study Objectives

This Transport Assessment (TA) study has been provided in support of the mixed-use development at 136-156 Victoria Road, Rozelle (the Site). A key objective of this study is to respond to the RFIs submitted by the various authorities – a table which provides a checklist of where these have been responded to within this report is provided in Section 8.

As discussed in Section 1, the most significant response of the Proposal has been the decision to comply with the recommendations of TfNSW and RMS by redesigning the access strategy for the Proposal such that all car traffic would enter and exit the Site via Waterloo Street, with Victoria Road access limited to just service vehicles. Therefore, the other key objective of this study is a more general assessment of the Proposal under the revised access strategy, which has resulted in a number of modifications to the design of the Proposal.

The following key objectives have been identified to provide a general assessment of the Proposal:

- **Parking:** A parking study has been prepared that justifies the proposed parking provision. Refer to Section 3 and the separate parking study report that has been prepared by Ason Group.
- **Traffic Generation:** Analysis has been undertaken to confirm that for the revised Proposal the forecast, "*peak traffic generation will be within the agreed limits,*" when, "*compared to the previously calculated traffic budget for the site (316 and 440 for the weekday evening peak and Saturday midday peak respectively)*".
- **Network Performance:** Analysis of the performance of the network has been undertaken to demonstrate that the current Proposal is still, "*anticipated to result in generally acceptable increases in delay/congestion on the adjacent road network, when considered in the context of likely future conditions on the adjacent road network*".
- **Access and Internal Design:** Demonstrate compliance with relevant AS2890 design guidance.
- **Construction Traffic Management:** Provide a standalone CTMP Framework report that incorporates Council's RFI comments on the matter.
- **Travel Plan:** Provide a framework for how the measures of the Travel Plan are monitored, reviewed and reported on annually to Council.

9.2 Summary

The following summarises the key conclusion for each of the Study Objectives:

Parking

- A Parking Study Report has been undertaken separately which fully explores the approach taken for parking provision. Nevertheless, it is important to note that the Proposal includes measures that promote the use of active and public transport (car share spaces, GTP, etc.), thereby reducing the demand for parking. It is widely recognised that restricting parking provision can reduce down traffic demand, particularly in highly accessible locations which also has heavily managing on-street parking provisions.

  Therefore, it is concluded that the proposed parking provision is supportable.

Traffic Generation

- The traffic generation assessment within Section 4 has demonstrated that the current Proposal would generate significantly less traffic than the peak hour traffic volumes previously identified as permissible traffic budgets for development at the Site.
- The current Proposal for the Balmain Leagues Club site is considered acceptable as the forecast peak hour traffic generation during the critical weekday evening and Saturday midday peak hours is so significantly below the permissible traffic budgets – in the range of 25-60% fewer trips – that the impacts of the less onerous Proposal would likely remain acceptable, regardless of the change in access strategy with this Proposal.

Network Performance

- The network analysis already undertaken has been updated to reflect the revised access strategy for the Proposal. As discussed in Section 5, following the increase in traffic demand as a result of the Proposal, all key intersections assessed in the network are expected to continue to operate with acceptable delays.
- Therefore, it is concluded that the current Proposal is still, "*anticipated to result in generally acceptable increases in delay/congestion on the adjacent road network, when considered in the context of likely future conditions on the adjacent road network*".

Access and Internal Design

- The car park, loading dock and access driveways have been designed in compliance with the Australian Standards. Furthermore, compliance with these Standards would be expected to form a standard condition of consent to any development approval.

CTMP Framework and Travel Plan

- A CTMP Framework is provided as Appendix B. It is expected that this would be developed into a comprehensive and detailed CTMP at Construction Certificate Stage. This CTMP will be submitted to Council and TfNSW for review prior to the issue of a Construction Certificate. It is expected that this could form a Condition of Consent to any development approval.
- A monitoring framework has been outlined in Section 7.3. This Operational Traffic Monitoring and Reporting Framework provides preliminary guidelines for recording and reporting on the data required for the report to be submitted to relevant Council authorities.

Appendix A

Swept Path Analysis

Kerb line to be extend to accommodate swept path of vehicle. Can readily be achieved and detailed design phase prior to Construction Certificate stage.

RETAIL PARKING + DOCK EXIT

RESI ENTRY

6 VISITOR BIKES

DEEP SOIL

1 / AD-DA211

2 / AD-DA214

BLD C LOBBY

COMMS ROOM

WATER PUMPS

MAIL

CLNR

RESIDENTIAL BULKY WASTE ROOM

RESIDENTIAL WASTE COLLECTION AREA

CLUB/RESI GOODS LIFT

CHAMBER SUBSTATION

MSR 1

MSR 2

GAS REGULATER

OSD[250KL] - RAINWATER [40KL] TANK UNDER

SUPERMARKET

FITOUT SUBJECT TO FUTURE APPROVAL

COLES/CLUB/ RETAIL LIFT

COLES ENTRANCE FOYER

SRV 6400 x 3500

MRV - Medium Rigid Vehicle 8800 x 3500

MRV - Medium Rigid Vehicle 8800 x 3750

HRV 12500 x 3750

TRUCK TURNTABLE

RETAIL/CLUB/ COMMERCIAL WASTE ROOM

COMPACTOR

PALLET HOIST

TROLLEY BAY

HYD/SPR TANKS

SUPERMARKET INDOOR PLANT

RETAIL GOODS LIFT

CLUB GREASE

VOID

VOID

VOID

NO SLOPE

NO SLOPE

ROLLER SHUTTER

RL. 32.800

RL. 32.800

RL. 32.769

RL. 33.500

RL. 33.300

1:8

1:5

1:16

1:45

3609

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By: VC

Client: Heworth

Project: 0534d17 Balmain Tigers League Club

Drawing Title: Access Ramp - Heavy Vehicles: 12.5m HRV

Date: 19/12/2019

Scale @ A3: n/a

Drawing Number: 01

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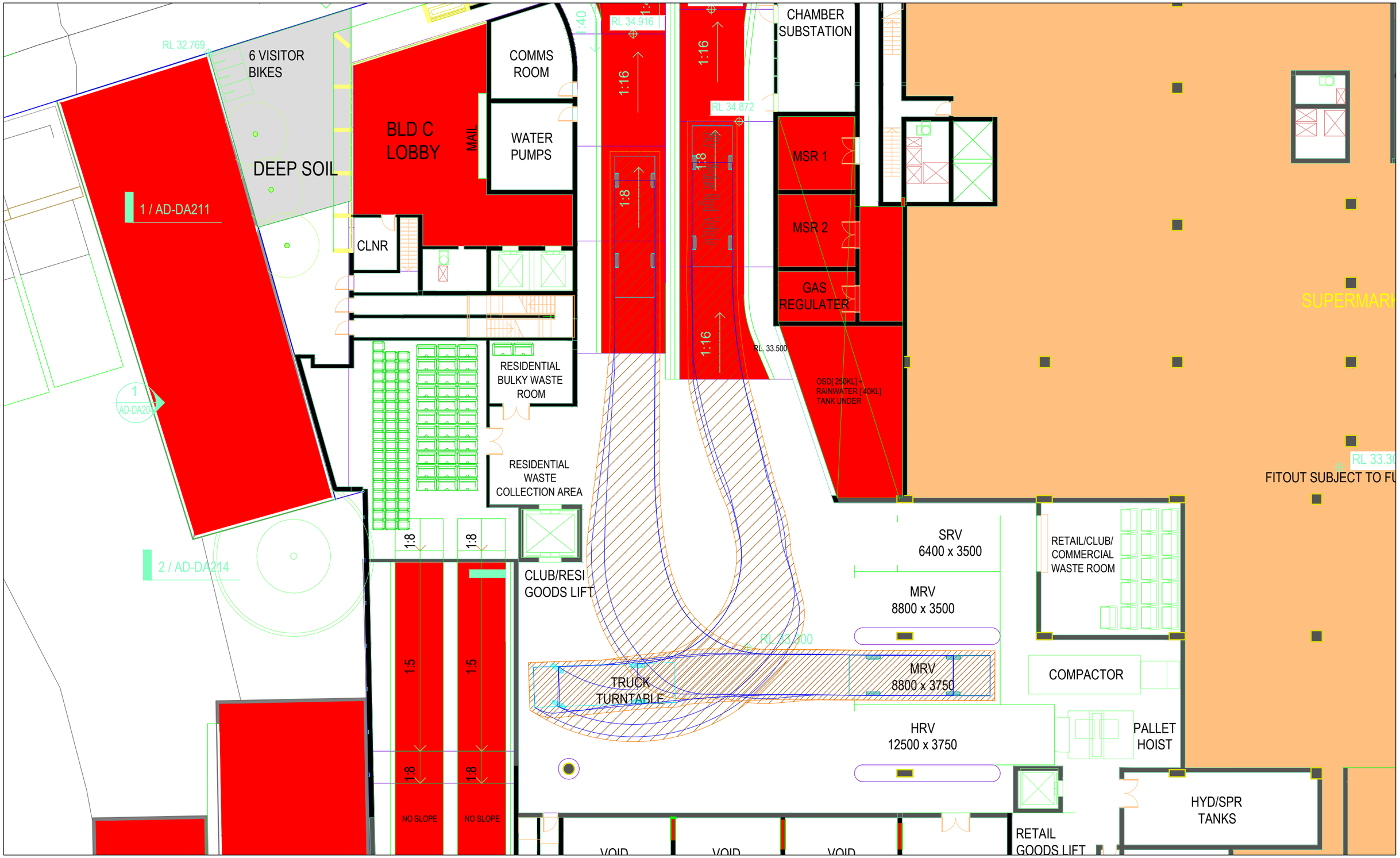
Suite 5.02, Level 5, 1 Castlereagh Street
Sydney NSW 2000
info@asongroup.com.au



Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By: VC

Client: Heworth

Project: 0534d17 Balmain Tigers League Club

Drawing Title: Access Ramp - Heavy Vehicles: 8.8m MRV

Date: 19/12/2019

Scale @ A3: n/a

Drawing Number: 02

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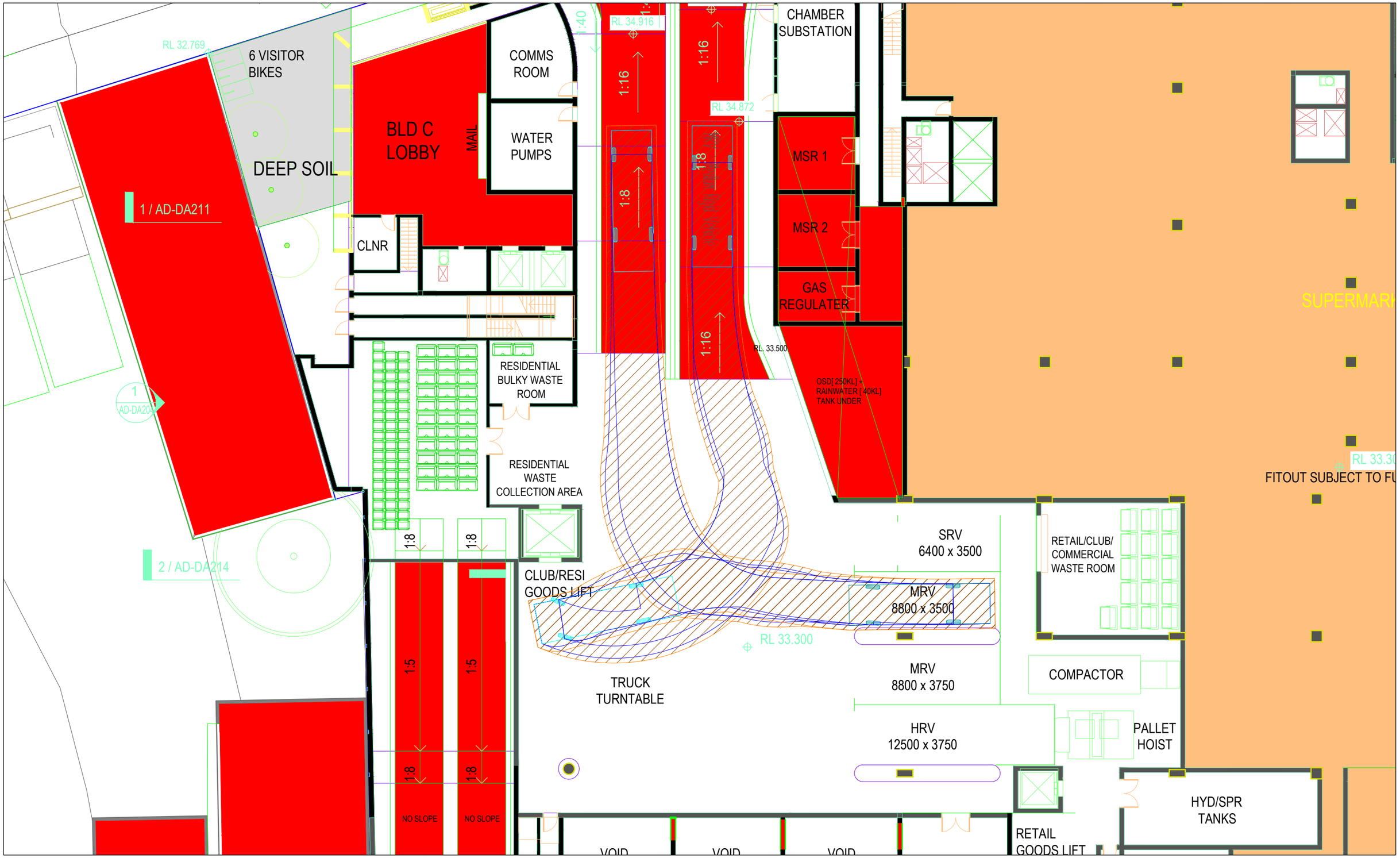

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By: VC

Client: Heworth

Project: 0534d17 Balmain Tigers League Club

Drawing Title: Access Ramp - Heavy Vehicles: 8.8m MRV

Date: 19/12/2019

Scale @ A3: n/a

Drawing Number: 03

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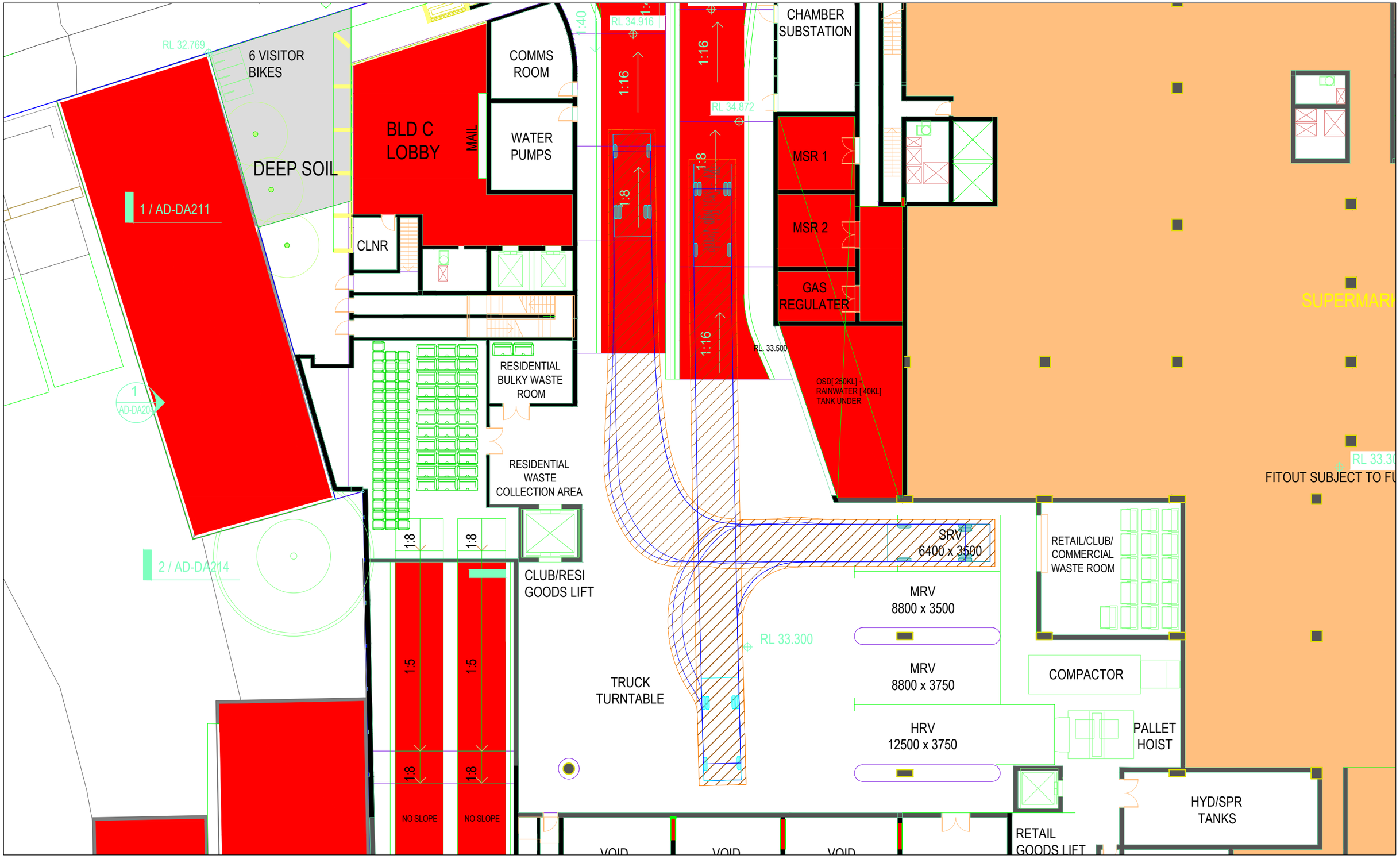

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By: VC

Client: Heworth

Project: 0534d17 Balmain Tigers League Club

Drawing Title: Access Ramp - Heavy Vehicles: 6.4m SRV

Date: 19/12/2019

Scale @ A3: n/a

Drawing Number: 04

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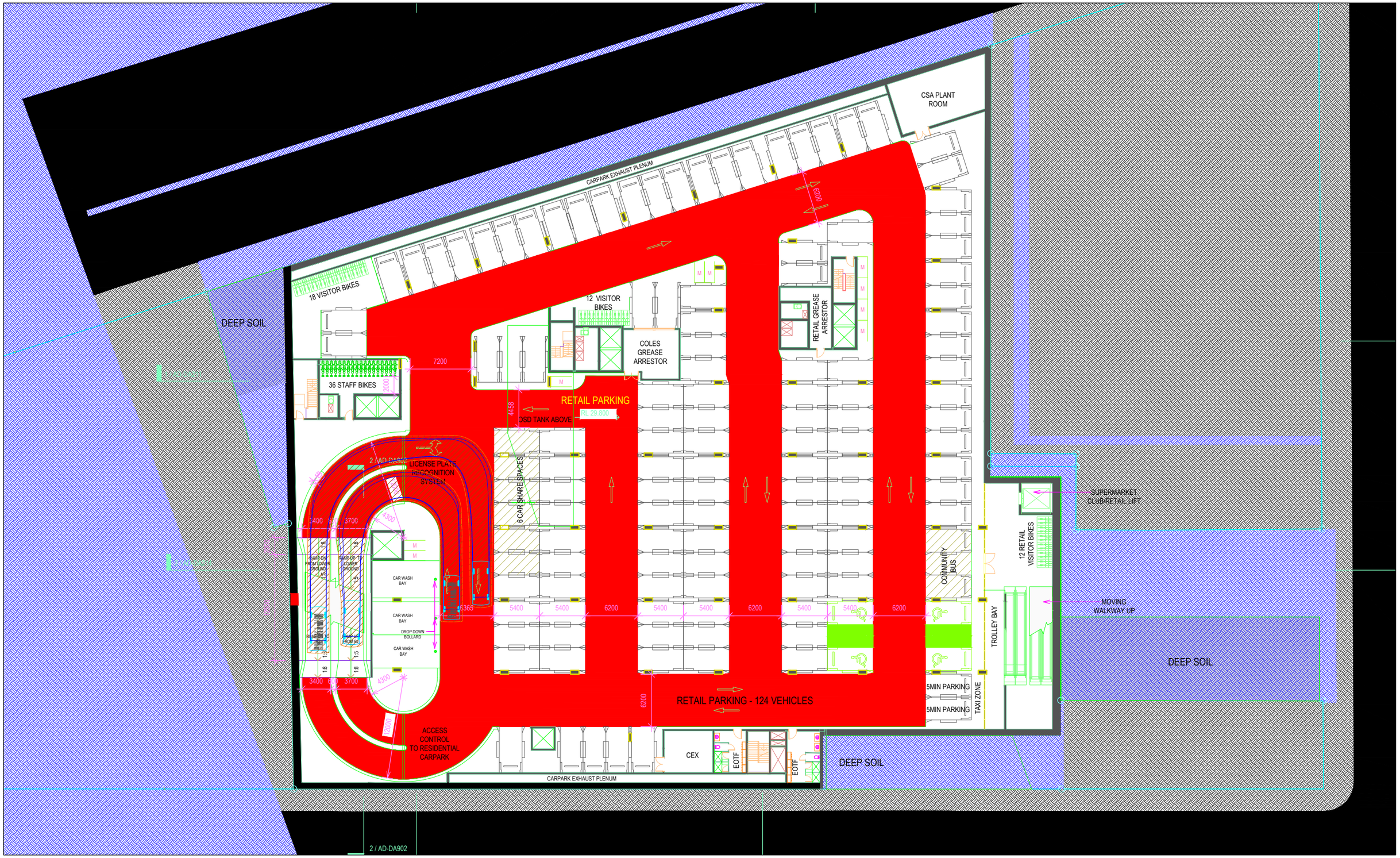

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By: VC

Client: Heworth

Project: 0534d17 Balmain Tigers League Club

Drawing Title: Basement 1 - Retail

Date: 19/12/2019

Scale @ A3: n/a

Drawing Number: 05

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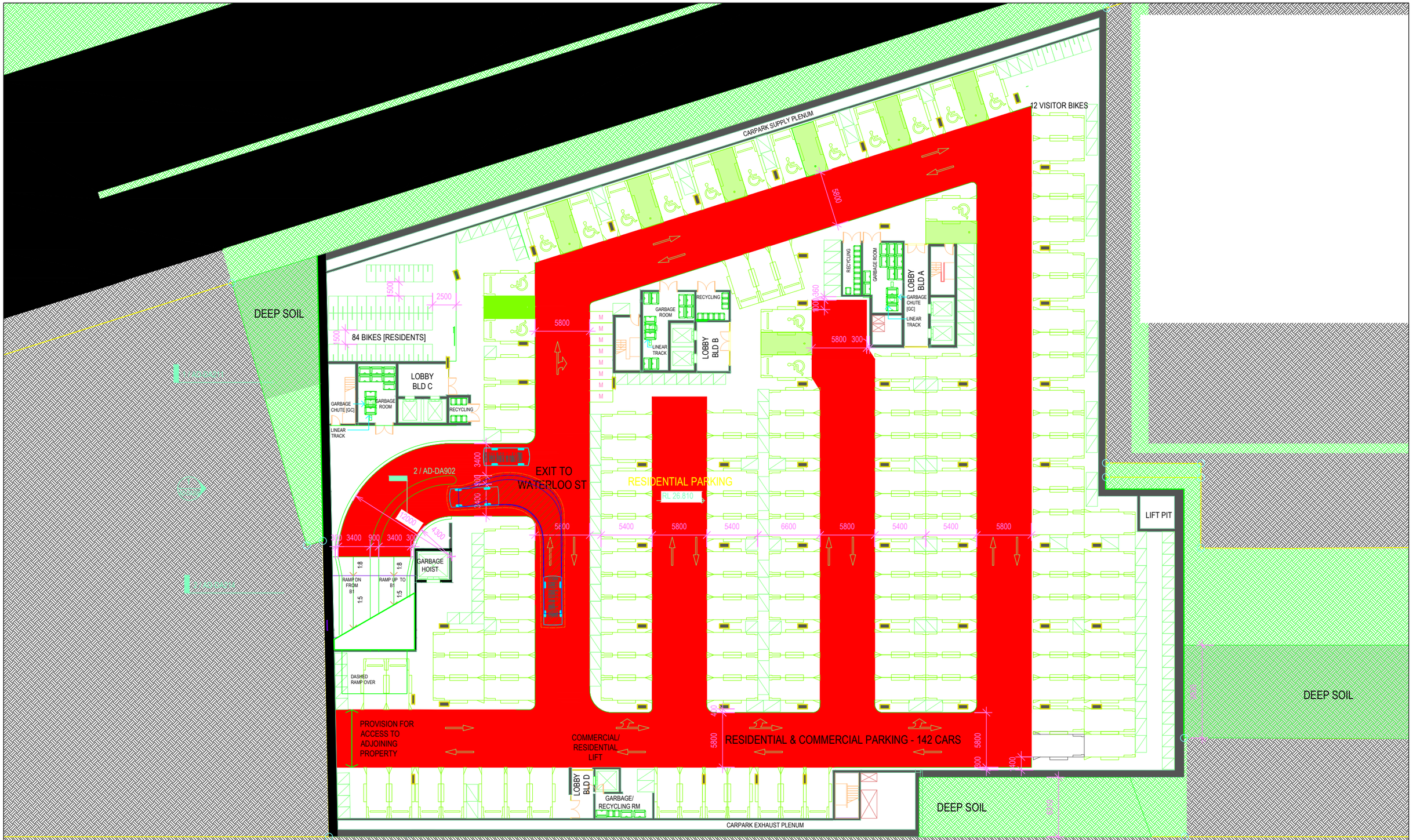

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By: VC

Client: Heworth

Project: 0534d17 Balmain Tigers League Club

Drawing Title: Basement 2 - Residential / Commercial

Date: 19/12/2019

Scale @ A3: n/a

Drawing Number: 03

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Appendix B

Construction Traffic Management Plan Framework

Construction Pedestrian & Traffic Management Plan Framework

Proposed Mixed-Use Development
138-156 Victoria Road, Rozelle

Ref: 0534r08v01
19/12/2019

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Document Control

Project No: 0534r08

Project: 138-156 Victoria Road, Rozelle CPTMP Framework

Client: Heworth

File Reference: 0534r08v1 CPTMP 138-156 Victoria Rd, Rozelle

Revision History

Revision	Date	Details	Author	Approved by
-	19/11/2019	Draft	V. Cheng	J. Laidler
I	19/12/2019	Issue I	V. Cheng	D. Budai

Table of Contents

Appendices

1 Introduction

1.1 Overview

Ason Group has been engaged by Heworth to prepare a Construction Pedestrian and Traffic Management Plan (CPTMP) framework for the proposed mixed-use development at 138-156 Victoria Road, Rozelle (the Site).

The purpose of this CPTMP framework is to detail a preliminary traffic plan for the construction of the 138-156 Victoria Road development (further to approval) that seeks to:

- Minimise traffic impacts on the surrounding road network;
- Mitigate construction traffic risks;
- Ensure safety and efficiency for workers, pedestrians, other road users; and
- Provide information regarding the construction vehicle access routes and any changed road conditions (if applicable).

The CPTMP will be finalised by the Construction Contractor (to be appointed) once all details of the construction task are finalised; nonetheless, this CPTMP is based on all available information.

From the outset, it is important to note that Ason Group is responsible for the preparation of this CPTMP only, and not for its finalisation or implementation, which will be the responsibility of the Construction Contractor.

It is expected that this plan would be updated should any necessary changes to the currently proposed arrangements arise in the future and respond to Council and any other government authorities. Any changes to this plan shall be done in consultation with the Inner West Council. Any special events (if required) would be subject to a separate request for a specific permit not covered by this report.

2 The Site and Development Application

2.1 DA Overview

The Proposal for the DA is a mixed-use development comprising residential apartments, a supermarket with ancillary speciality retail, plus the reinstatement of the Balmain Leagues Club (the Proposal) located at 138-156 Victoria Road, Rozelle. Access to the development is proposed from Victoria Road and Waterloo Street. The Site is legally known as DP528045 and DP109047 and is located within the Inner West Local Government Area.

2.2 Site Location

The construction site is bounded with frontages on Victoria Road to the north, residential dwellings along Waterloo Street to the south, retail and residential developments to the west, and retail developments to the east.

The Location and Road Hierarchy Plan presented as **Figure 1** provides an appreciation of the Site and its location.

2.3 Road Hierarchy

The road hierarchy in the vicinity of the Site is shown in **Figure 1**, with the following roads considered noteworthy:

- **Victoria Road** – A classified TfNSW (formerly RMS) road (MR165) that generally runs in a north-west to south-east direction to the north of the Site and carries approximately 33,140 vehicles eastbound per day with peak hour flows of approximately 10,300 vph. It provides access to Moodie Street and Darling Street. The road carries three lanes of traffic in the westbound direction and two right turn lanes, two through lanes and a bus lane is the eastbound direction. These lanes are separated by a median. The eastbound kerbside lane operates as a bus lane from 6.00-10.00AM, Monday to Friday, with Clearway restrictions applying from 3.00-7.00PM, Monday to Friday and 8.00-8.00PM on Saturday and Sunday. The westbound kerbside is subject to clearway restrictions from 6.00-10.00AM, 3.00- 7.00PM, Monday to Friday, and 8.00-8.00PM Saturday and Sunday. Victoria Road is subject to a 60km/h speed zone in the vicinity of the Site and carries three lanes of traffic in either direction plus an eastbound Bus Lane, within a separated carriageway width of approximately 24 metres.
- **The Crescent** – A classified TfNSW road (MR650) that joins at the major intersection of Victoria Road and The Crescent which connects the major City West Link Road to Rozelle. The road carries two to three lanes of traffic and has a speed limit of 70km/h.

- **City West Link Road** – A classified TfNSW road (MR655) that generally runs in a west to east direction. This road connects to the Victoria road the east and carries approximately 66,260 vehicles (bi-directional) per day. The road carries two to three lanes in both directions which is separated by a median. A speed limit of 70km/h applies to this road.
- **Darling Street** – a sub-arterial road that runs in a north-east to south west direction to the east of the Site. It connects Victoria Road to the suburb of Lilyfield and to the north of Rozelle. It carries two lanes of traffic in both directions, however the kerbside lane has restricted parking available during the off-peak hours. School zone speed limits also applies further along the north-east of the road. No Stopping restrictions apply along its western kerbside for a length of 250 metres on approach to its intersection with Victoria Road between the hours of 6.30-9.30AM, and 3.30-6.30PM Monday to Friday. A No Right Turn restriction applies between 6.30-8.30PM for northbound vehicles on Darling Street turning west into Victoria Road. Darling Street carries approximately 18,000 vpd to the south of the site. It generally includes a parking lane and a single through lane on both approaches and is constructed with an undivided 12.8m wide carriageway in the vicinity of the Site.
- **Moodie Street** – a local road that runs in a north-east to south-west configuration that connects Waterloo street to Victoria Road. The street has a single lane of traffic on both sides of the road and provides bi-directional dedicated bike lanes along the eastern portion of the street. The speed limit of this road is 50km/h.
- **Waterloo Street** – a local road that generally runs in a north-west to south-east direction to the south of the Site. Restricted kerbside parking is available on both sides of the road, along the site frontage. The road carries a single lane of traffic in both directions and has a speed limit of 50km/h. Previous access to the Site was from this road.

The Site is conveniently located with primary access to the arterial and local road network serving the region. It is therefore able to effectively distribute traffic onto the wider road network, minimising traffic impacts on local roads.

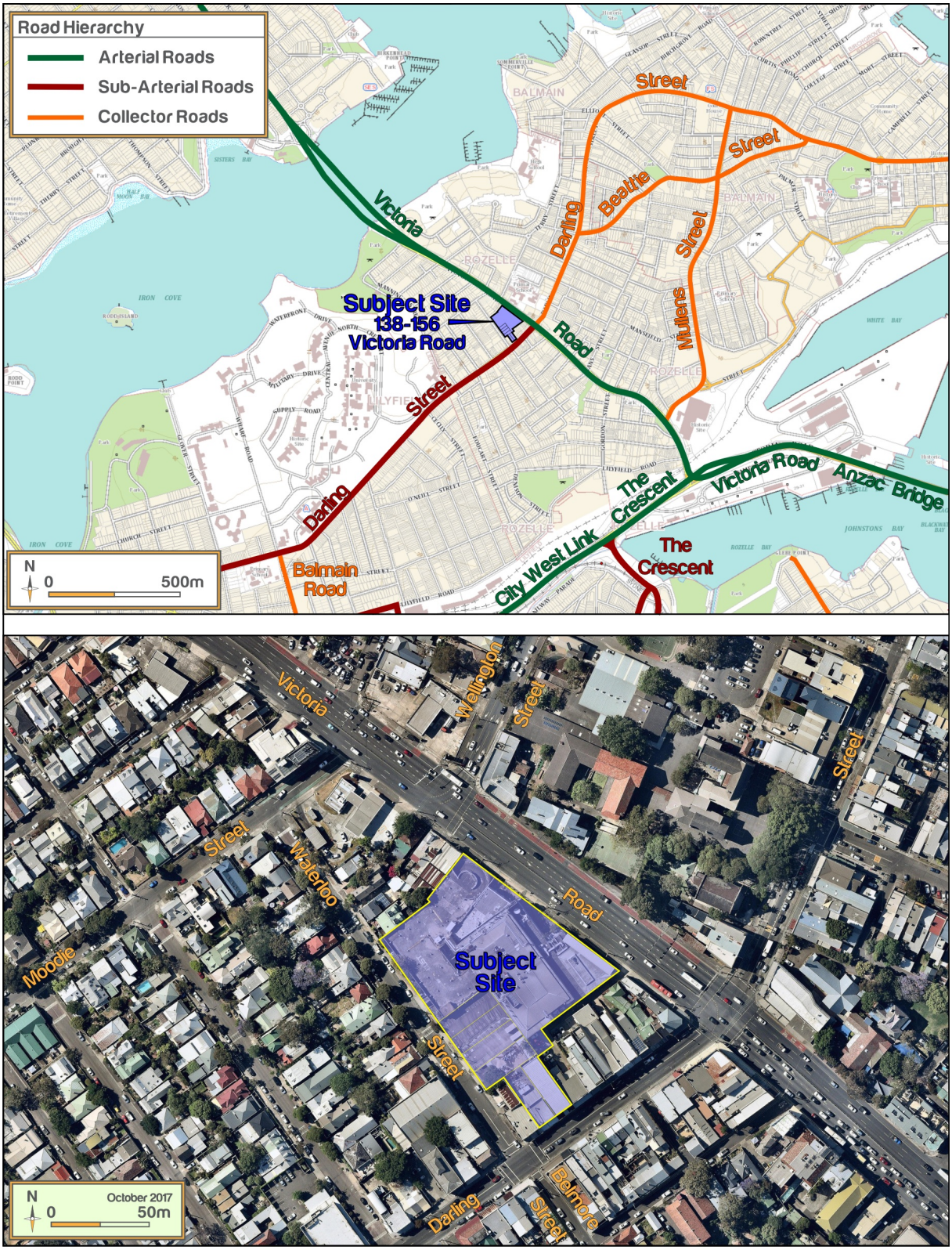

Figure 1: Location Plan and Road Hierarchy

2.4 Non-Car Access

The Site's proximity to public transport is shown in **Figure 2**, which highlights the locations and distances to bus and train services surrounding the Site.

2.4.1 Existing Bus Services

Having regard for the standard bus travel, the Integrated Public Transport Service Planning Guidelines state that bus services influence the travel mode choices of sites within 400 metres (approximately 5 minutes) of a bus stop. The Site is well serviced by several bus stops within 400m walking distance of the Site. The bus routes available have exceptional connections and frequencies to the rest of Sydney's metropolitan area with up to 22 different bus services.

The Site is therefore well serviced by bus services that are accessible and frequent.

2.4.2 Pedestrian and Cycle Network Connectivity

Pedestrian access is provided via footpaths along Victoria Road fronting the north of the Site and along Waterloo Road to the south of the Site. This currently allows convenient pedestrian access to the bus stops along Victoria Road and Darling Street.

Dedicated cycling lanes are available along the Site's frontage of Victoria Road. These cycling lanes extend towards Pyrmont, Lilyfield and Drummoyne along major arterial roads. Bicycle-friendly roads are available across the Rozelle's cycling network allowing travellers to cycle with ease within Rozelle. It is important to note that bicycle access to all the Site's street frontages is available. The expansive bicycle network surrounding the Site is shown in Figure 2.

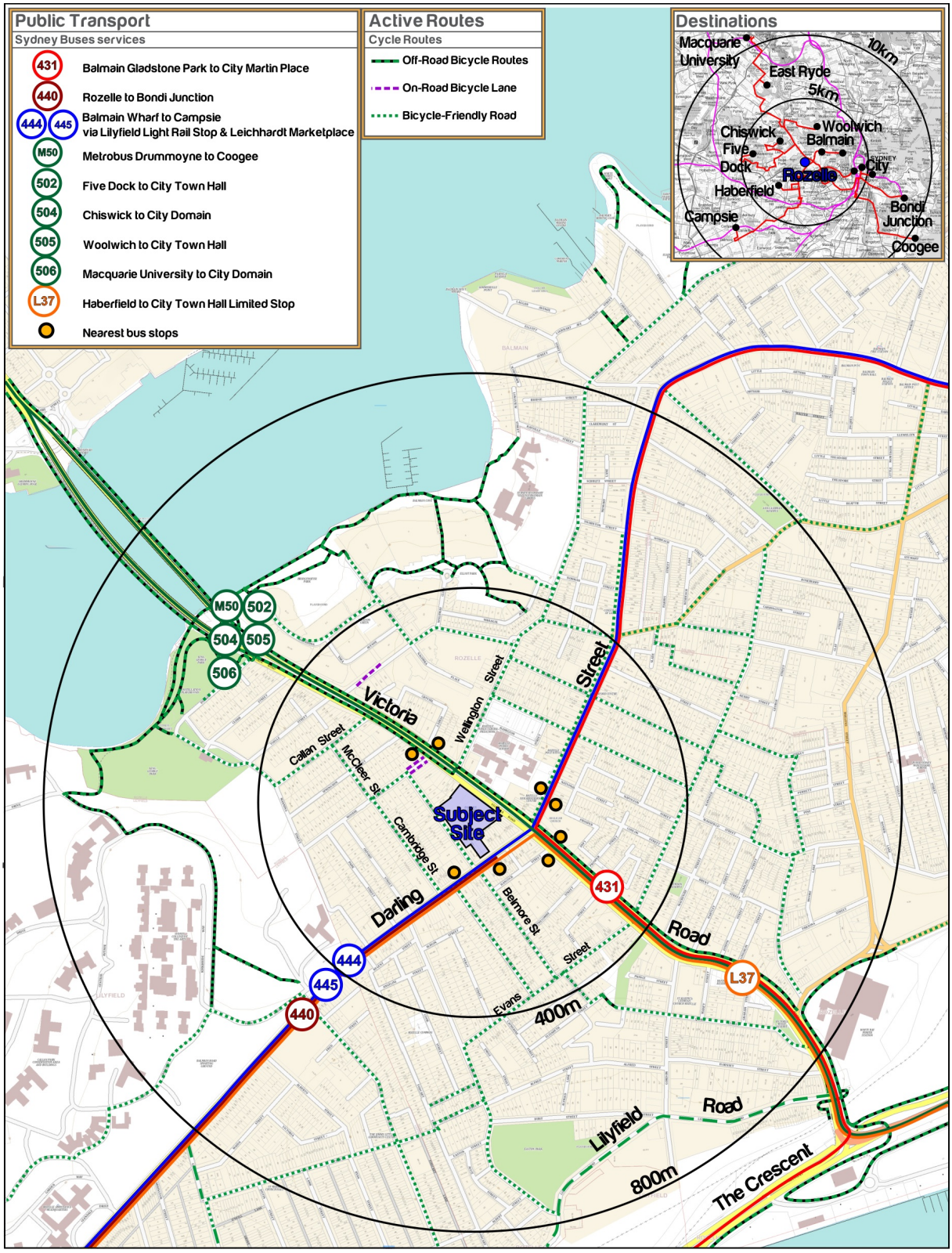

Figure 2: Existing Public and Active Transport Map

3 Overview of Works

3.1 Staging and Duration of Works

Recognising the purpose of this CPTMP framework, until a Builder has been appointed, the construction methodology and timeframes are unknown. A more accurate timeframe for construction will be determined when the status of this development reaches Construction Certificate (CC) stage. Nonetheless, the following summarises the estimated durations for the key construction stages:

- Stage 1: Demolition and Excavation — Duration: 8 months
- Stage 2: General Construction — Duration: 12 months
- Stage 3: External Finishes — Duration: 16 months

It is reiterated that the construction programme for the development has not yet been finalised, however, indicative timings for the key construction periods has been provided above.

3.2 Hours of Operation

The type of work being undertaken will vary depending on the phase of construction and associated activities. This includes both construction and design personnel. Notwithstanding, all works will be undertaken in accordance with the CC conditions of consent. The following indicative timeframes are as follows:

- Monday to Friday (other than Public Holidays): 7:00am – 5:30pm.
- Saturday: 7:00am – 3:30pm
- Sunday and Public Holidays: No works to be undertaken.

In the event that works are required outside of the above hours, then prior approval will be sought by Council before works are undertaken. Notwithstanding, it is also expected that these works shall be:

- Works that are inaudible at the nearest sensitive receivers;
- Works agreed to in writing by the Planning Secretary;
- For the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or
- Where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.
- This may be addressed by Council by way of a condition of consent.

3.3 Vehicle Size

The largest vehicles anticipated to access the site during construction would generally by represented by a 19m truck and dog trailer during the excavation and demolition stages. Future CC assessments will provide swept path analysis to and from the site access and at the key intersections.

3.4 Drivers Code of Conduct

All drivers shall adhere to the Driver Code of Conduct, outlined in **Appendix A**.

3.5 Proposed Site Access

During the construction period, all vehicles will enter via a proposed vehicular crossover at the south-eastern site boundary on Victoria Road. Construction vehicles exiting the Site will leave via the existing north western driveway which would be further widened to facilitate larger vehicle movements. TfNSW Approval will be sought prior to any construction of these crossovers.

This access strategy has been considered as it will provide a one-way left-in/left-out flow through the Site which would limit construction traffic impacts along residential Waterloo Road and remove the need to undertake loading along Victoria Road. Part of the pedestrian footpath will be utilised to accommodate heavy vehicle deliveries by providing an internal road. Class B Hoarding will extend beyond the property boundary to enable loading along parts of the pedestrian footpath. Based on previous construction traffic management plans, this site access methodology would likely use 1.2 metres of the 3.6 metres wide footpath. It is proposed that Class B hoardings be utilised along the site's frontage on Victoria Road. Implementation of this access strategy will be subject to TfNSW's approval and consultation.

The proposed site access arrangements are detailed in **Figure 3** below.

Figure 3: General Construction Site Access Plan

The largest vehicle to access the Site will be a 19m Truck and Dog vehicle. Appropriate access designs and traffic mitigations measures will be put in place to facilitate this movement into the Site. All heavy construction vehicles must utilise the access route provided in the Site Access Plan in **Figure 4** and **Figure 5**.

3.6 Work Zone Requirements

Having regard for the above, no on-street Works Zone is proposed. A Road Occupancy License (ROL) would be required in the event that any special or discreet work activities do require the use of kerbside parking for the purposes of a Works Zone.

3.7 Emergency Vehicle Management

Emergency vehicle access to and from the Site will be available at all times while the Site is occupied by construction workers. This process would be implemented through emergency protocols on the site which will be developed by the Contractor.

3.8 Contractor Parking

Limited contractor parking spaces will be provided on-site to accommodate for contractors. Initially, there would be very little on-site parking, however, once the basement and parking levels are completed, contractors may be able use these facilities subject to availability. However, it is intended that the majority of contractors will be utilising the excellent public bus services to travel to and from the Site due to the limited on-site parking spaces.

3.9 Construction Vehicle Access Routes

All construction vehicles would enter and exit the Site via the routes shown in **Figure 4** and **Figure** 5. The routes shown are to be utilised by all construction vehicles travelling to and from the site and represents the shortest route available - hence minimising the impacts of the construction process. Nevertheless, further consultation with the RMS(TfNSW), Sydney Coordination Office, Council and the future Builder will be required to determine the most optimal heavy vehicle routes for the Site. A copy of the approved routes will be distributed by the Contractor to all drivers before their arrival to Site.

The following details the indicative heavy vehicles of would access the Site via the following entry routes:

- **Access Route 1:** Vehicles approaching the Site from the west, traverse along the Great Western Highway, continue onto Broadway, left onto Wattle Street, right onto Pyrmont Bridge Road, left onto the Western Distributor in a westerly direction before turning right onto Victoria Road and then left into the Site.
- **Access Route 2:** Vehicles approaching the Site from the north, travel south following the Bradfield Highway onto the Western Distributor, follow the Western Distributor in a westerly direction before turning right onto Victoria Road and then left into the Site.
- **Access Route 3:** Vehicles approaching the Site from the South and East, travel westbound along the Cross-City Tunnel before merging onto the Western Distributor to head further west, right onto Victoria Road and then left into the Site.

For exiting the Site, all construction vehicles are to use one of the following two routes:

- **Egress Route 1:** Vehicles exiting the Site to head west, turn left onto Victoria Road, follow Victoria Road until the Burns Bay Road divergence, keep left to continue on the westbound Victoria Road

- **Egress Route 2:** Vehicles exiting the Site to head north, turn left onto Victoria Road, follow Victoria Road until the Burns Bay Road divergence, keep right to continue on the northbound Burns Bay Road, turn right onto Centennial Avenue, exit onto Epping Road to continue in a northerly direction.
- **Egress Route 3:** Vehicles exiting the Site to head south or west, turn left onto Victoria Road, follow Victoria Road until turning left onto Lyons Road, turn left onto Great North Road, exit onto Parramatta Road to head to the south or west

These routes have been chosen based on the approved heavy vehicle routes on the RMS (TfNSW) Restricted Access Vehicle (RAV) maps in conjunction with initial discussions with Council. It is understood that some of these proposed routes will directly conflict with other construction traffic associated with Sydney Metro West, the Bays Precinct Redevelopment, WestConnex Stage 3b and the Glebe Island Concrete Facility. These concerns will be addressed in **Section 3** which will detail the proposed strategies to mitigate construction traffic impacts on the road network.

Discussions with TfNSW would be undertaken to assess the potential impacts of increased heavy vehicle movements on their roads.

At this stage, this CPTMP relates to general construction and does not seek the use of oversize vehicles. Notwithstanding, any oversized or over-mass vehicles travelling to and / or from the Site will be required to obtain a permit from the TfNSW and / or the National Heavy Vehicle Register (NHVR).

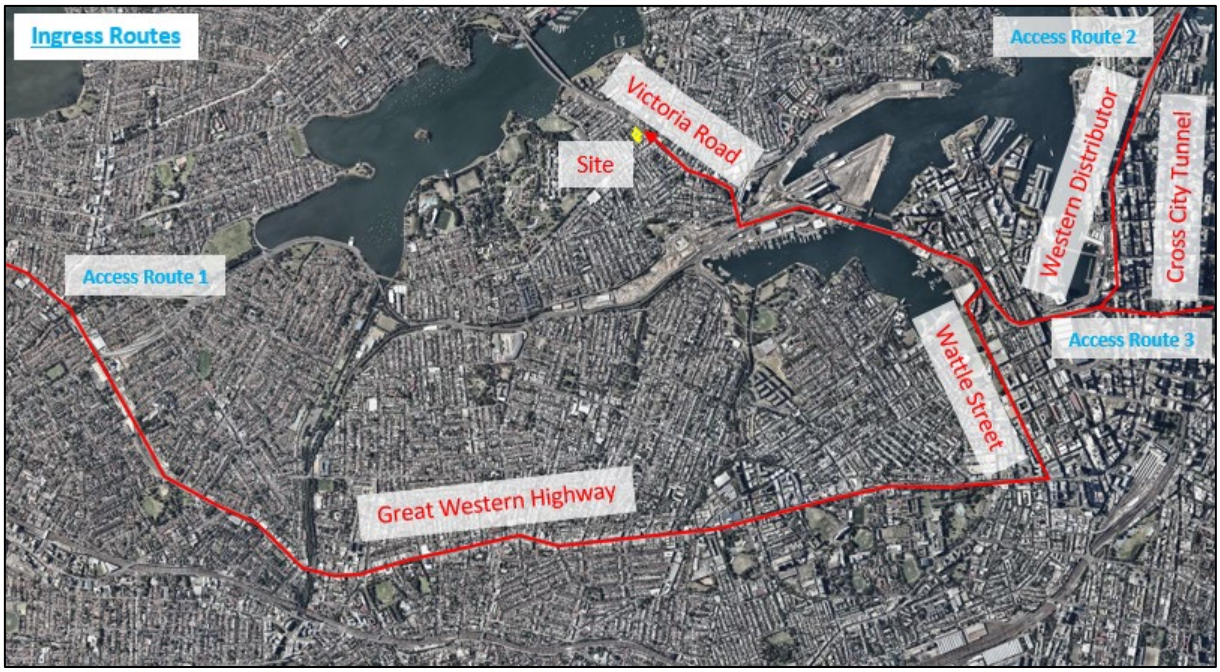

Figure 4: Construction Vehicle Ingress Route Map

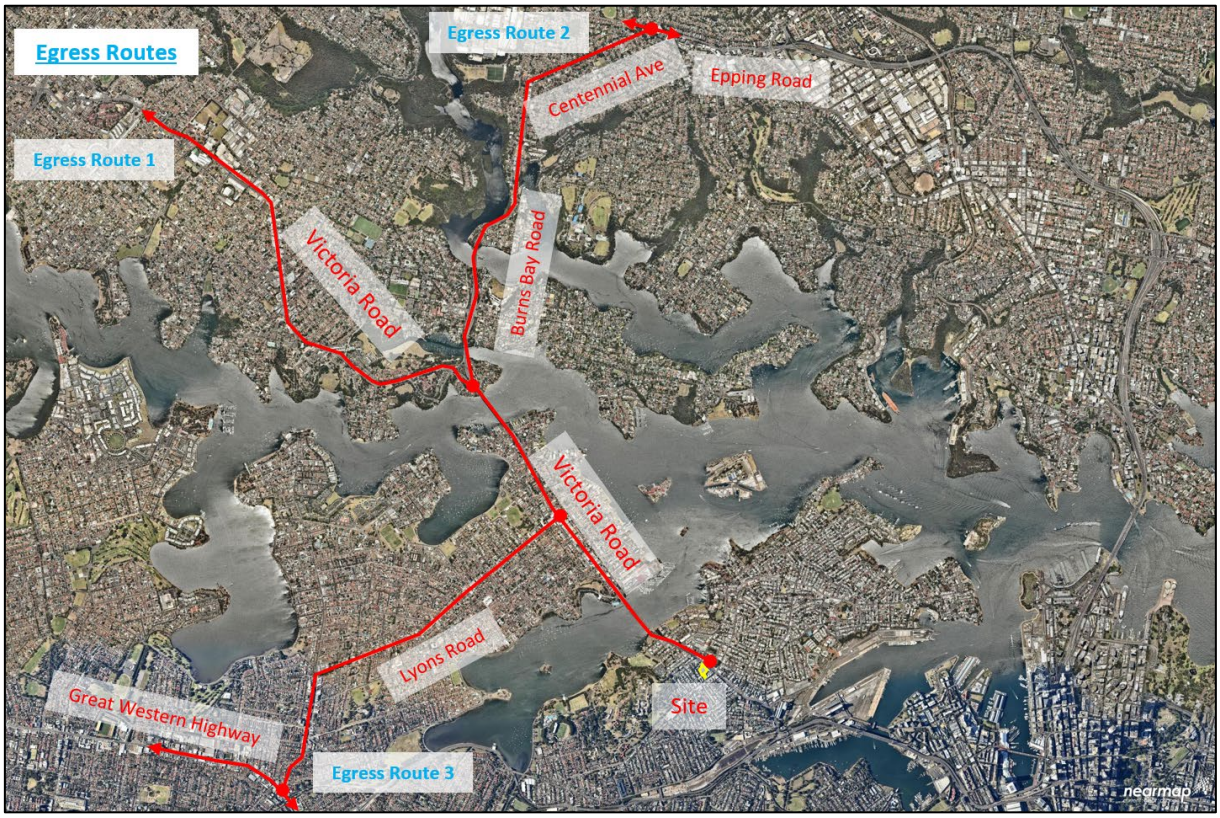

Figure 5: Construction Vehicle Egress Route Map

3.10 Fencing Requirements

Hoarding will be erected along the entire boundary of the site and will be maintained for the duration of the construction program. The hoarding is to ensure unauthorised persons are kept out of the Site. Site access gates would be provided along Victoria Road and will be closed at all times outside of the permitted construction hours.

Hoarding layout and timings may change throughout the development, however prior approval shall be sought before these changes are made.

3.11 Materials Handling

It is proposed that all material loading will occur within the construction site boundary. Equipment, materials and waste will be kept within the construction site boundary. Should materials handling be required from the public roadway then prior approval shall be sought and obtained from Council.

3.12 Site Management

Site management will be required to notify adjacent properties of any temporary traffic restrictions and measures being implemented at least fourteen (14) days in advance.

Any Traffic Control measures necessary for these works will be submitted to RMS (TfNSW) and/or Council for approval and 14 days' notice would be provided to adjoining property owners as required by Council. Pedestrian amenities and footpaths will be kept to serviceable conditions during the construction periods. Remediation of any damaged footpaths and pedestrian facilities will be undertaken at the discretion of Council.

3.13 Sydney Bus Management

It is noted that a high number of bus routes pass along the Site's Victoria Road frontage. There are two bus stops along the northwest-bound road which are located approximately 100m from the Site. As such, the location of the construction accesses would be designed to not disrupt the operations of these bus stops. Additionally, Traffic Controllers would minimise the disruption to pedestrians by prioritising their movements as best possible against construction vehicles accessing the site.

3.14 Surrounding Residential, Retail and School Mitigation Strategies

There is a high concentration of residential, education and retail developments surrounding the construction site. Residents would be affected the most if construction accesses were to be located along Waterloo Street. As such, it proposed that no construction traffic would utilise Waterloo Street to access the Site as demonstrated in **Section 2.11**. As outlined above, all heavy vehicles would be restricted to utilise Victoria Road, therefore minimising any interaction with residential road (Waterloo Street, Terry Street and Wellington Street).

Regarding retail premises along Darling Street, no heavy vehicles are permitted along these sensitive roads. Furthermore, there is no proposed removal of on-street parking spaces throughout the construction period. Pedestrians would still have access along the Site's frontage at Victoria Road and at Darling Street. As such, pedestrian foot and cycling traffic along these key retail premises would not be obstructed and would be retained.

The Rozelle Public School (the School) is located directly opposite the Site across Victoria Road. All construction traffic will be directed to head northwest along Victoria Road to minimise the interaction of construction vehicles and school children along the School's street frontages.

The proposed construction activities are designed to minimise the construction traffic impacts to the key residential, retail and educational premises. This is managed by only limiting heavy vehicle movements along Victoria Road and permitting existing foot and cycling traffic to continue to operate along the Site's Victoria Road frontage.

4 Assessment of Traffic and Transport Impacts

4.1 Construction Vehicle Traffic Generation

4.1.1 Truck Movements

Ason Group has been advised that the excavation phase would generate the highest heavy vehicle traffic, with an indicative range of 100 – 240 heavy vehicle movements (in and out movements). During the construction phase, Laurus Projects has indicated that an average of 50 heavy vehicle movements would occur per day across a typical 10.5-hour workday. This equates to nearly 5 heavy vehicles movements per hour which is considered a low order of traffic generation.

However, as the construction programme has yet to be finalised, a worst-case scenario for heavy vehicle movements per day required for the delivery of construction materials to the Site cannot be accurately determined. Nonetheless, assuming the worst-case scenario during the peak excavation period, this would equate to approximately 240 heavy vehicle (in / out) movements daily. Over the typical 10.5-hour workday, this is some 23-heavy vehicle movements generated per hour (12 in and 11 out movements). Thus, there would be a heavy construction vehicle entering or exiting every 2.5 – 3 minutes.

Importantly, the construction traffic volumes are expected to be lower than the volumes anticipated for the proposed development once it becomes operational. The cumulative traffic impacts of this Site will be assessed in the following sections.

4.1.2 Light Vehicle Movements

Light vehicle traffic generation would be generally associated with staff movements to and from the Site. Staff would be comprised of project managers, various trades and general construction staff. Over the full construction period, the peak workforce represents the worst-case scenario for vehicle movements during the morning or evening road network peak hour.

The workforce arrival and departure periods (6.30-7.00AM and 5.00-5.30PM) represent the peak construction traffic generation periods. It is anticipated that minimal staff would travel by private vehicle due to limited on-site parking.

Importantly, it is anticipated that the majority of contractor staff would use public transport within the area due to the limited on-site parking spaces available.

4.1.3 Cumulative Traffic Impacts

The following details the key major construction projects that are currently occurring or will be occurring at a future date:

- Iron Cove Link (and associated Victoria Road works);
- WestConnex Stage 3b (Also known as M4-M5 Link and Rozelle Interchange);
- Western Harbour Tunnel;
- Sydney Metro West;
- Elements of the Bays Precinct Redevelopment;
- Glebe Island concrete batching works.

It is understood that these major projects would generate a high volume of construction traffic throughout the Rozelle. Currently, some of these projects have not provided their estimated construction traffic generation, so it is difficult assess cumulative traffic impacts to the local road networks.

The M4-M5 Link project Environmental Impact Statement (EIS) carried out construction traffic modelling which included the Iron Cove Link, WestConnex and the future Western Harbour Tunnel. Under this construction scenario, the modelling suggests that the key intersection of The Crescent / James Craig Road would continue to operate at a Level of Service (LoS) B and the performance of The Crescent / City West Link intersection would slightly dip from LoS D to E. The mid-block assessment of City West Link indicates slight decline in performance from LoS D to E during PM peak hours. The key Victoria Road intersection and mid-block assessments indicate little changes in LoS except at Victoria Road / Evans Street where is was predicted to fall from LoS C to E.

As such, with the additional future construction works from Sydney Metro West, Bays Precinct and the Glebe Island concrete batching works, it is probable that the performance of the local road network would deteriorate.

Considering that there will be an assumed worst-case scenario of 23 heavy vehicles movements per hour during an excavation period of 8 months and minimal light vehicle generation (due to the lack of on-site parking), it is unlikely that key intersection performances would further worsen. Furthermore, this is a comparatively smaller amount of construction traffic compared with the large construction traffic generation of the major construction worksites which each individually could generate 10 to 350 light vehicle trips per peak hour and 4 to 46 heavy vehicle trips per peak hour.

Importantly, the suggested construction traffic routes aim to avoid the critical intersections and roads heavily used by the major construction activities occurring nearby.

However, this CPTMP framework provides the following construction traffic mitigation strategies to reduce the traffic impacts on the local road network:

- Staggering or rescheduling shift times to avoid large generation of light vehicles during peak periods.
- Maximising heavy vehicle movements outside of peak hours which could include earlier start times.
- Develop construction staging timeframes that minimises traffic generation and conflicts with periods of intense construction traffic from nearby construction sites.
- Continual involvement in discussions with key stakeholders to minimise any potential impacts during critical stages of works

4.1.4 Cumulative Traffic and Pedestrian Impacts at Key Intersections

The key intersection for this CPTMP is at the Victoria Road / Darling Street signalised intersection. With a peak of 23 heavy vehicle movements per hour, this intersection's performance would be impacted at a minor level from the low amount of construction traffic volume passing through. The intersection would likely continue to operate a similar Level of Service resulting from the cumulative construction traffic generation.

The Site is afforded excellent pedestrian connectivity with footpaths on both sides of the roads and signalised crossing at each of the key intersection. Pedestrians in this area will continue to have good pedestrian connectivity during construction as the proposed works noting that the main heavy vehicle access locations will be monitored by Traffic Controller.

4.2 Vehicle Management

4.2.1 General Principles

In accordance with Road and Maritime Services (TfNSW) requirements, all vehicles transporting loose materials would have the entire load covered and/or secured to prevent any large items, excess dust or dirt particles depositing onto the roadway during travel to and from the site. All drivers are to be familiar with the Driver Code of Conduct before attending the Site. A copy of the Code is included in **Appendix A**.

Further to covering/securing the load to prevent deposits onto the roadway, a device should be proposed to be installed at the point of vehicle egress to minimise the risk of dirt tracking out onto Victoria Road. The responsibility of the driver to ensure that the device is driven over would be included as part of the Driver Code of conduct.

All subcontractors must be inducted by the Contractor to ensure that the procedures are met for all vehicles entering and exiting the construction site. The Head Contractor will monitor the roads leading to and from the site and take all necessary steps to rectify any road deposits caused by site vehicles.

Vehicle movements to, from and within the Site shall do so in a manner, which does not create unreasonable or unnecessary noise or vibration. No tracked vehicles will be permitted or required on any paved roads. Public roads and access points will not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances.

4.2.2 Queuing

It is expected that a schedule for deliveries of materials and goods will be established prior to that day, with Traffic Controllers maintaining radio contact with construction vehicles at all times. Thus, at no stage shall queueing occur on the public road network. No trucks are to be queued on local roads.

4.3 Contractor Parking

As previously mentioned, there will be limited parking provided on-site and therefore would be discouraged. Contractors would be encouraged to utilise the available public transport services within the area.

4.4 Pedestrian and Cyclist Access

Hoardings shall be provided along all the site frontages accessible by the public to prevent unwanted pedestrian and cyclist access. All construction activities would occur off Victoria Road and be wholly contained within the Site's boundaries. Although construction activities occur off-road, the pedestrian and cycle connections on Victoria Road would be managed by traffic controllers and expandable gates during construction activities. It is proposed that traffic controllers be at each vehicle access to control the pedestrian expandable gates at the vehicle access to control the pedestrian flow.

Pedestrians and cyclists using the footpath fronting the Site will be halted by an accredited Traffic Controller using an expandable gate while construction vehicles are entering or exiting the Site. An expandable barrier (pedestrian boom gate or equivalent) would be installed on both sides of the driveway, to be operated when construction vehicles are on approach / ready to depart from the Site. Once the construction vehicles are clear from the footpath, the Traffic Controller can allow the pedestrians and cyclists to continue along their journey.

The Contractor shall make clear to Traffic Controllers that pedestrians have right of way and, as far as reasonable (mostly associated with exit vehicle movements). An on-Site waiting bay and stopping

location is proposed for all Heavy Vehicle exiting movements. This will allow co-ordination and management of pedestrian/cyclist right of Way and interaction with traffic controllers.

In addition, it will provide Traffic Controllers the ability to advise drivers the appropriate time to approach the Site's boundary. The Traffic Controllers would use these extendable gates to create a physical barrier that would restrict pedestrians walking across the driveway, while maintaining radio communication with the construction vehicle driver at all times.

4.5 Traffic Control

The RMS guide "Traffic Control at Worksites" (TCAW) manual contains standard traffic control plans (TCPs) for a range or work activities. The manual's objective is to maximise safety by ensuring traffic control at worksites complies with best practice. The RMS TCAW outlines the requirements for a Vehicle Movement Plan (VMP).

A VMP is a diagram showing the preferred travel paths for vehicles associated with a work site entering, leaving or crossing the through traffic stream. A VMP should also show travel paths for trucks at key points on routes remote from the work site such as places to turn around, accesses, ramps and side roads.

It is likely to involve a variant of the TCP 195. Traffic Control Plans (TCPs) shall be prepared by an accredited person, in accordance with the RMS Traffic Control at Worksites Manual and AS1742.3.

All TCPs involving signage or impacts to public roads shall be approved by RMS Traffic Management Centre, prior to the works for which they relate. These TCPs shall be updated to respond to any changes to prevailing traffic conditions throughout the life of the works.

4.6 Authorised Traffic Controller

An authorised Traffic Controller is to be present on-site throughout the construction stage of the project. Responsibilities include:

- Supervision of all construction vehicle movements into and out of site at all times,
- Supervision of all loading and unloading of construction materials during the deliveries in the construction phase of the project, and
- Pedestrian management, to ensure that adverse conflicts between vehicle movements and pedestrians do not occur, while maintaining radio communication with construction vehicles at all times.

5 Monitoring and Communication Strategies

5.1 Development of Monitoring Program

The development of a program to monitor the effectiveness of this CPTMP shall be established by the lead contractor. We note the following items to consider when developing the processes and tasks involved within monitoring the CPTMP.

This CPTMP shall be subject to ongoing review and will be updated accordingly. Regular reviews will be undertaken by the on-site coordinator. As a minimum, review of the CPTMP shall occur monthly, however a weekly review would be preferred.

- All and any reviews undertaken should be documented, however key considerations regarding the review of the CPTMP shall be:
- Tracking deliveries against the estimated volumes.
- To identify any shortfalls and develop an updated action plan to address issues that may arise during construction (Parking and access issues)
- To ensure TCP's are updated (if necessary) by "Prepare a Work Zone Traffic Management Plan" card holders to ensure they remain consistent with the set-up on-site.
- Regular checks undertaken to ensure all loads are leaving site covered as outlined within this CPTMP.

5.2 Communications Strategy

A communications strategy shall be established by the Head Contractor and is included in the overarching CEMP. The communications strategy outlines the most effective communication methods to ensure adequate information within the community and assist the project team to deliver the traffic changes with minimal disruption to the road network. It shall include:

- Erection of signs providing advanced notice of works and any traffic control measures to be implemented.
- Written notices to surrounding landowners (and tenants) likely to be directly affected by the works, prior to commencement.

Ongoing communication is also required so that all stakeholders are kept up to date of works and potential impacts.

Appendix A

Driver Code of Conduct

- Driver Code of Conduct -

Drivers Code of Conduct

Safe Driving Policy for 138-156 Victoria Road, Rozelle.

Objectives of the Drivers Code of conduct

- To minimise the impact of earthworks and construction on the local and regional road network;
- Minimise conflict with other road users;
- Minimise road traffic noise; and
- Ensure truck drivers use specified routes

Code of Conduct

All vehicle operators accessing the site must:

- Take reasonable care for his or her own personal health and safety.
- Not adversely, by way of actions or otherwise, impact on the health and safety of other persons.
- Notify their employer if they are not fit for duty prior to commencing their shift.
- Obey all applicable road rules and laws at all times.
- In the event an emergency vehicle behind your vehicle, pull over and allow the emergency vehicle to pass immediately.
- Obey the applicable driving hours in accordance with legislation and take all reasonable steps to manage their fatigue and not drive with high levels of drowsiness.
- Obey all on-site signposted speed limits and comply with directions of traffic control supervisors in relation to movements in and around temporary or fixed work areas.
- Ensure all loads are safely restrained, as necessary.
- Drive over cattle grids – located at the Site's access – to vibrate off any loose material attached to construction vehicles.
- Operate their vehicles in a safe and professional manner, with consideration for all other road users.
- Hold a current Australian State or Territory issued driver's licence.
- Notify their employer or operator immediately should the status or conditions of their driver's license change in any way.

- Comply with other applicable workplace policies, including a zero tolerance of driving while under the influence of alcohol and/or illicit drugs.
- Not use mobile phones when driving a vehicle or operating equipment. If the use of a mobile device is required, the driver shall pull over in a safe and legal location prior to the use of any mobile device.
- Advise management of any situations in which you know, or think may, present a threat to workplace health and safety.
- Drive according to prevailing conditions (such as during inclement weather) and reduce speed, if necessary.
- Have necessary identification documentation at hand and ready to present to security staff on entry and departure from the site, as necessary, to avoid unnecessary delays to other vehicles.

Crash or incident Procedure

- Stop your vehicle as close to it as possible to the scene, making sure you are not hindering traffic. Ensure your own safety first, then help any injured people and seek assistance immediately if required.
- Ensure the following information is noted:
    - Details of the other vehicles and registration numbers
    - Names and addresses of the other vehicle drivers
    - Names and addresses of witnesses
    - Insurers details
- Give the following information to the involved parties:
    - Name, address and company details
- If the damaged vehicle is not occupied, provide a note with your contact details for the owner to contact the company.
- Ensure that the police are contacted should the following circumstances occur:
    - If there is a disagreement over the cause of the crash.
    - If there are injuries.
    - If you damage property other than your own.
- As soon as reasonably practical, report all details gathered to your manager.