198-222 Dominion Road & 113-117 Valley Road, Mt Eden

Residential Development

Transportation Assessment Report

30 August 2024

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1 INTRODUCTION

1.1 GENERAL

Commute Transportation Consultants (Commute) has been engaged by Precinct Properties NZ Ltd to prepare a Transport Assessment (TA) for a residential development at 198-222 Dominion Road & 113-117 Valley Road, Mt Eden.

The proposed 135 dwelling development includes:

- 43x 1-bedroom apartments;
- 81x 2-bedroom apartments;
- 11x 3-bedroom townhouses;
- 316sqm GFA ground floor retail / café;
- 288sqm GFA level 1 retail / cafe;
- 106 parking spaces; and
- 143 bicycle spaces.

This report assesses the transport-related effects of the proposal, including:

- a description of the site and its surrounding traffic environment;
- a description of the key transportation-related aspects of the proposal;
- the traffic anticipated to be generated by the proposal;
- the proposed form of access and egress;
- the proposed form of vehicle and bicycle parking; and
- the proposed servicing arrangements.

These and other matters are addressed in detail in this report. This report concludes that the establishment of the proposed residential development can be undertaken in a way so that its effect on the function, capacity and safety of the surrounding road network will be minimal.

1.2 PREVIOUS CONSENT

It is noted that a previous resource consent has been approved for the site for a similar residential development. This report assesses the new proposal, with references to the consented scheme where relevant.

2 EXISTING ENVIRONMENT

2.1 SITE LOCATION

The majority of the site is zoned Business – Local Centre Zone in the Auckland Unitary Plan Operative in Part 15 November 2016 (Unitary Plan) with one property zoned as Residential – Terrace Housing & Apartment Building Zone (THAB Zone).

The site features frontage to Dominion Road and Valley Road, both of which are classified as arterial roads. The site also has frontage to Carrick Place, which is not classified as an arterial road. Dominion Road and Carrick Place feature a posted speed limit of 50km/h. Valley Road features a posted speed limit of 30km/h.

The existing site currently features several buildings and parking areas. Figure 1 below details the existing site environment.

Figure 1: Existing Environment

Dominion Road provides two lanes in each direction, separated by a flush median as well as peak hour bus lanes on both sides of the road. Valley Road and Carrick Place provide a single lane in each direction and kerbside parking on both sides of the road.

2.2 TRAFFIC VOLUMES

2.2.1 AT TRAFFIC COUNTS

Existing traffic volumes on this section of Dominion Road (between Valley Road and Bellwood Ave) were sourced from AT traffic counts. The most recent count in August 2022 recorded the following volumes:

- 5-day ADT of 17,950 vehicles per day (vpd);
- AM peak hour volume of 1,300 vehicles per hour (vph); and
- PM peak hour volume of 1,300 vph.

Existing traffic volumes on this section of Valley Road (between Sherbourne Road and Woodford Road) were sourced from AT traffic counts. The most recent count in February 2023 recorded the following volumes:

- 5-day ADT of 6,000 vehicles per day (vpd);
- AM peak hour volume of 530 vehicles per hour (vph); and
- PM peak hour volume of 620 vph.

The volumes detailed above are considered typical of arterial roads within Auckland. As will be detailed below, the effects of the traffic volume increases generated by the proposal are anticipated to be minimal.

2.2.2 TRAFFIC SURVEYS

Traffic surveys at the existing Dominion Road / Valley Road intersection were undertaken on Thursday 1 August 2024. The peak hour survey results are detailed in Table 1 below.

Table 1: Dominion Road / Valley Road Intersection

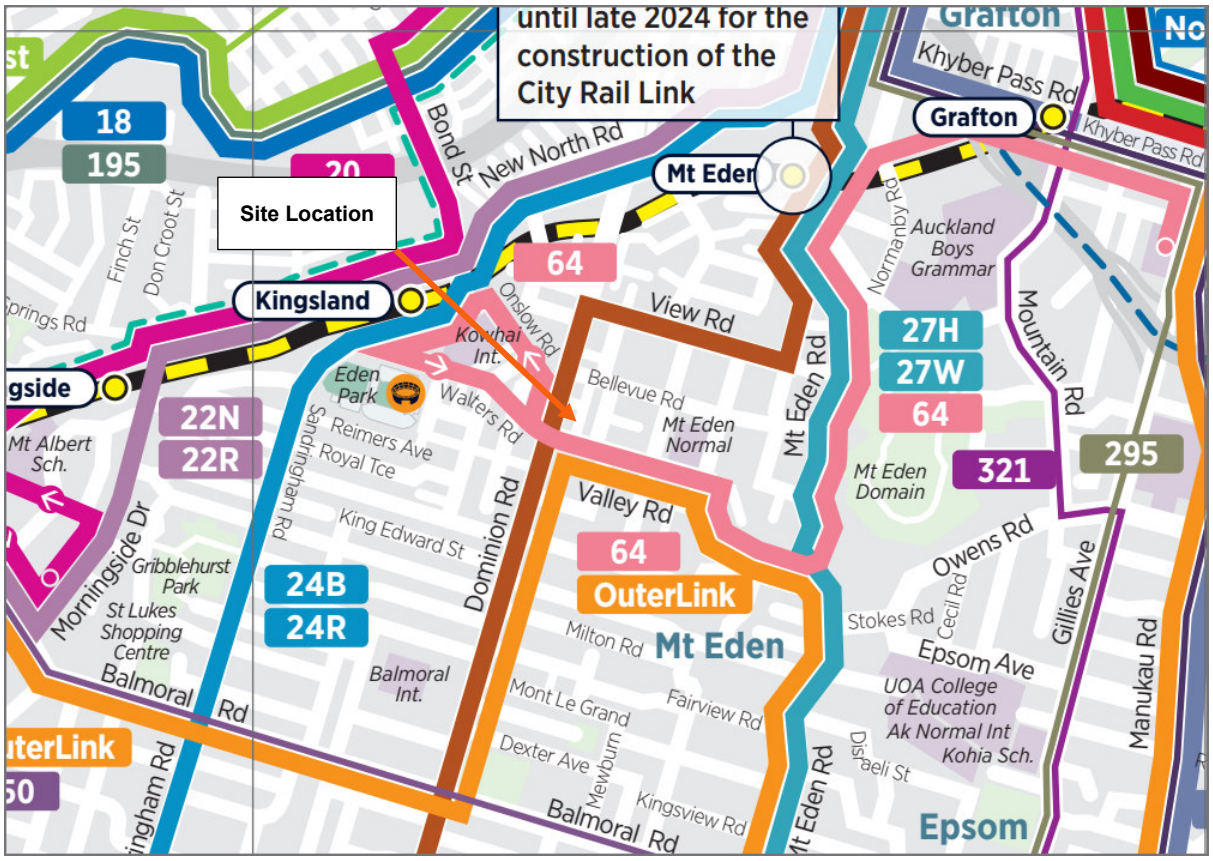
	AM					PM				
	Cars	Trucks	Buses	Cyclists	AM Total	Cars	Trucks	Buses	Cyclists	PM Total
Dominion Rd (North)	**349**	**14**	**10**	**3**	**376**	**650**	**9**	**17**	**44**	**720**
Left into Valley Rd	56	1	0	0	57	87	0	0	2	89
Thru to Dominion Rd (South)	267	13	10	3	293	518	7	17	41	583
Right into Walters Rd	26	0	0	0	26	45	2	0	1	48
Valley Rd	**229**	**3**	**9**	**6**	**247**	**419**	**2**	**8**	**1**	**430**
Left into Dominion Rd (South)	49	0	5	2	56	100	0	4	0	104
Thru to Walters Rd	90	0	0	2	92	194	1	0	0	195
Right into Dominion Rd (North	90	3	4	2	99	125	1	4	1	131
Dominion Rd (South)	**681**	**10**	**24**	**40**	**755**	**546**	**6**	**17**	**8**	**577**
Left into Walters Rd	13	0	0	0	13	22	0	0	2	24
Thru to Dominion Rd (North)	636	10	19	40	705	454	5	12	6	477
Right into Valley Rd	32	0	5	0	37	70	1	5	0	76
Walters Rd	**311**	**0**	**4**	**3**	**318**	**238**	**4**	**4**	**2**	**248**
Left into Dominion Rd (North)	97	0	0	0	97	39	0	0	0	39
Thru to Valley Rd	170	0	4	3	177	121	2	4	2	129
Right into Dominion Rd (South	44	0	0	0	44	78	2	0	0	80
Grand Total	1570	27	47	52	1696	1853	21	46	55	1975

2.3 PUBLIC TRANSPORT

The site is considered to be in an excellent location to take advantage of the public transport network. The Kingsland Station and the upgraded Mt Eden Station transport interchanges are located approximately 0.7km and 1.2km away respectively. Both stations provide both rail and bus transport throughout Auckland. Several bus stops are provided on both Dominion Road and Valley Road, providing direct access to bus transport for residents.

Figure 2 shows the public transport services in the area.

Figure 2: Public Transport



2.4 ROAD SAFETY

A search of the New Zealand Transport Agency's (NZTA) Crash Analysis System (CAS) has been carried out to identify all reported crashes in the vicinity of the site during the five-year period 2019 - 2023 as well as any available 2024 data. The search area included the Dominion Road and Valley Road site frontages and for a distance of 50m beyond the extent of the site, as well as the Dominion Road / Valley Road intersection.

The crash search recorded a total of 10 crashes:

- One crash occurred at the traffic signals and involved a pedestrian and vehicle colliding. The crash resulted in a minor injury.
- The remaining nine crashes did not result in any injury.

The number of crashes within the crash search are considered minimal for two arterial roads. The proposal is not considered to detrimentally effect the good existing crash record, with the development designed to ensure safe movements into and out of the site.

3 PROPOSAL

The proposal is for a residential development at 198-222 Dominion Road & 113-117 Valley Road, Mt Eden. The proposed 135 dwelling development includes:

- 43x 1-bedroom apartments;
- 81x 2-bedroom apartments;
- 11x 3-bedroom townhouses;
- 316sqm GFA ground floor retail / café;
- 288sqm GFA level 1 retail / cafe;
- 106 parking spaces; and
- 143 bicycle spaces.

Access to the site will be provided via a new main vehicle crossing to Valley Road, and a separate vehicle crossing to Carrick Place. The Valley Road access provides a connection to the basement parking area for residents. Rubbish servicing will occur from within the basement parking area with a separate outdoor loading area provided for larger trucks. The Carrick Place vehicle crossing will only provide access to three visitor parking spaces. No through site vehicle connection is provided between these vehicle crossings.

The existing accesses to the site will be removed and reinstated as kerb and footpath. Pedestrian access is directly provided to the development from the Dominion Road, Valley Road and Carrick Place frontages.

Figure 3 below shows the proposed Level 0 development layout and Figure 4 shows the proposed Level 1 development layout .

Figure 3: Proposed Development Layout – Level 0

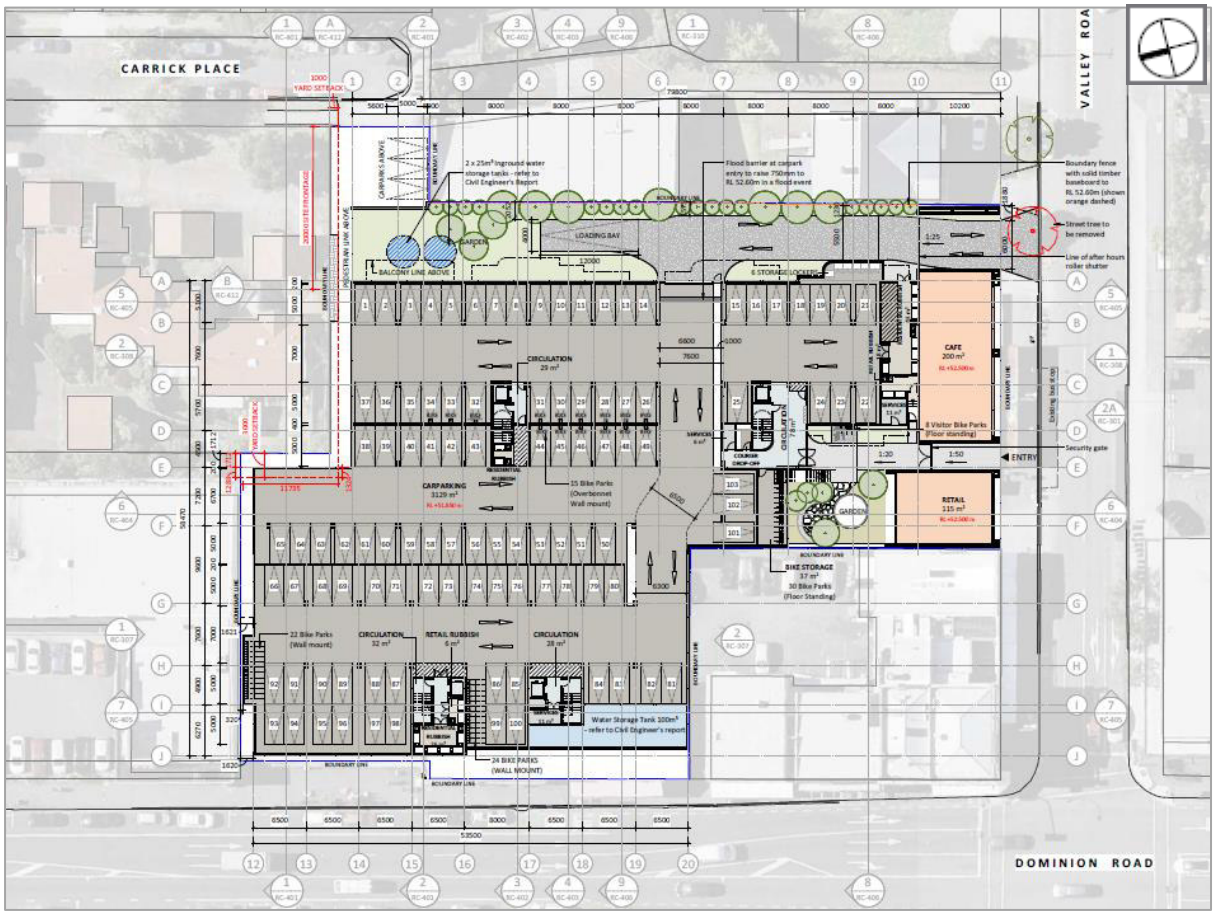


Figure 4: Proposed Development Layout – Level 1

4 TRIP GENERATION

4.1 EXISTING TRIP GENERATION

The site is currently occupied by specialty retail premises. The New South Wales Roads and Traffic Authority (now Roads and Marine Services) Guide to Traffic Generating Developments (RTA Guide) was used to calculate the sites approximate current trip generation. For retail activities, a weekday evening peak trip generation rate of 4.6vph per 100sqm GFA for specialty shops has been adopted from the RTA Guide for the weekday peak hour.

The current arrangement provides approximately 2,600sqm GFA of retail activity. This floor area calculation was based on the area of the buildings as measured from aerial photography. Upper stories were not included in the area as it is understood that these are typically back rooms that are not used for customer generating activity. Therefore, based on the 2,600sqm GFA calculation, the existing site is expected to generate approximately 120vph.

Given some of the existing activities are now vacant, and to enable a conservative assessment, the existing trip generation of the site has been discounted by 40%. This results in an estimated trip generation of the site of 72vph.

4.2 PREVIOUSLY CONSENTED TRIP GENERATION

The trip generation for the previously consented scheme is detailed in Table 3 below.

Table 2: RTA Guide Traffic Generation – Previous Consent

Activity	Typology	No. Dwellings / Area	Rate (peak hour)	Generated Trips (vph)
Residential	2 bedrooms or less	80du	0.5 trips / dwelling	40
	3 bedrooms or more	22du	0.65 trips / dwelling	14
Retail	Specialty retail	901sqm	4.6 trips / 100sqm GFA	41
TOTAL	-	-	-	**96**

As detailed above, the previous development scheme was calculated to generate 96vph in the peak hour.

4.3 DEVELOPMENT TRIP GENERATION

The peak hour trip generation of residential and retail developments is typically estimated using the predictive models within the RTA Guide. All dwellings have been assessed as 'Medium Density Residential Flat Buildings'. Dwellings with three or more bedrooms have been assessed using 0.65 trips/dwelling and dwellings with two bedrooms or less assessed using 0.5 trips/dwelling. The retail / café activities have been evenly split between retail and café trip rates, as the exact arrangements are not finalised.

Table 3 below details the peak hour trip generation for the development.

Table 3: RTA Guide Traffic Generation – Development

Activity	No. Bedrooms	No. Dwellings / Area	Rate (peak hour)	Generated Trips (vph)
Residential	2 bedrooms or less	124du	0.5 trips / dwelling	62
	3 bedrooms or more	11du	0.65 trips / dwelling	7
Retail	Specialty retail	302sqm	4.6 trips / 100sqm GFA	14
	Cafe	302sqm	5.0 trips / 100sqm GFA	15
TOTAL	**-**	**-**	**-**	**98**

As detailed above, the proposed development is expected to generate 98vph in the peak hour. This represents an increase in peak hour vehicle trips of 2vph when compared with the previously consented scheme. This increase in peak hour trips equates to approximately one trip every 30 minutes, and therefore is considered a negligible increase.

As detailed previously, the exact ratio of café to retail is at this stage unknown, however it is considered that given the respective trip rates, any changes in this ratio will have minimal effect on the trip generation volumes overall.

4.4 TRIP GENERATION DISCUSSION

Rule E27.6.1 “Trip generation” of the Unitary Plan sets out trip generation limits as to when resource consent for a restricted discretionary activity is required. For residential dwellings, this limit is 100 dwellings and 100 vehicle movements per hour. The proposal is for 135 units and 98vph therefore exceeds the dwelling threshold detailed above but not the trip generation threshold.

Importantly, it is noted that the development only features 106 parking spaces, and therefore only approximately 75% of dwellings are provided with a parking space. Further, the retail and café activities are likely to be used by residents of the development, or by other foot traffic in the area; i.e. they are unlikely to feature dedicated vehicle trips. As such, the trip generation calculation detailed above is considered to be a very conservative assessment. The development is well positioned to take advantage of the existing public transport infrastructure, features 143 bicycle spaces and has direct pedestrian connections to three road frontages thereby encouraging active mode use.

Given the volume of traffic currently catered for by Dominion Road and Valley Road and the volumes of traffic within the area, the traffic generated by the development is considered to feature have minimal impact on the operation of the surrounding road network.

From on-site observations, the Dominion Road / Valley Road signalised intersection currently operates well outside of peak hours. The intersection experiences additional delays and queueing in the peak hours, typical of a major arterial road signalised intersection in Auckland. The effects of the development traffic on the signalised intersection operation are considered to be minimal.

In summary:

- The site is calculated to currently generate 72vph in the peak hour;
- The previous development gained consent with a total trip generation of 96vph;
- The current development is calculated to generate 98vph;
- As such, the proposed scheme features essentially the same trip generation as that consented;
- The proposed development does not exceed the trip generation threshold of 100vph; and
- The development is well placed to take advantage of public transport and active modes.

The effects of the development on the peak hour operation of the signalised intersection are considered to be minimal. As such, the proposal is considered acceptable.

4.5 VEHICLE QUEUEING

The proposal features an access gate set back 10.2m from the property boundary. The access gate has been set back to ensure queued vehicles are contained on-site and not extend over the pedestrian footpaths or onto the arterial roads. The 10.2m setback enables two vehicles to queue During peak periods, particularly the evening peak period where residents will be returning home, the access gate will remain open to ensure queuing does not occur. Overnight, the gate will be closed and will require a key card to gain entry.

Given the setback from the boundary and the peak period gate operation, the proposed design is considered acceptable.

5 ACCESS

5.1 GENERAL

Access to the site will be provided via a new main vehicle crossing to Valley Road, and a separate vehicle crossing to Carrick Place. The Carrick Place vehicle crossing only provides access to three parking spaces, and therefore additional development traffic on Carrick Place will be minimal.

The two proposed vehicle accesses are assessed below.

5.2 SIGHT DISTANCE

The Austroads Guide to Road Design is considered the appropriate guideline for sight distance for driveways on arterial roads. The Austroads sight distance requirement for a 50km/h design speed, 2.0s reaction time and 2.0s observation time is 83m.

Photographs 1 and 2 show the sight distance to the east and west from the proposed access point on Valley Road.

Photograph 1: Sight Distance to the East – Valley Road

Photograph 2: Sight Distance to the West – Valley Road

The available sight distance is over 200m to the east and 150m to the west and therefore satisfies Austroads requirements. It is noted that on-street parking removal will be required to establish the new vehicle crossing. The closure of the existing vehicle crossings and reinstatement to kerb and footpath will result in the availability of additional on-street parking space being created, if desired by AT. It is recommended that No Stopping At All Times lines are provided for approximately 10m either side of the new vehicle crossing to ensure sightlines are available for exiting vehicles.

Photograph 3 below shows the sight distance to the north from the proposed access point on Carrick Place.

Photograph 3: Sight Distance to the North – Carrick Place

The available sight distance is over 120m to the north and therefore satisfies Austroads requirements. It is noted that only sight distance to the north is provided, as the driveway is located at the cul-de-sac head.

5.3 UNITARY PLAN REQUIREMENT – E27 TRANSPORTATION

5.3.1 VEHICLE ACCESS RESTRICTIONS

Unitary Plan Rule E27.6.4.1 (3) requires that vehicle crossings should not be provided if they are located within 10m of an intersection, are subject to a Vehicle Access Restriction, located with frontage to an arterial road or if they are located within 30m of a railway crossing. The Valley Road access features frontage to an arterial road and therefore consent is required for a restricted discretionary activity.

An assessment against the relevant assessment criteria is set out in Table 4 below.

Table 4: Assessment Criteria

Assessment Criteria	Comment
(11) construction or use of a vehicle crossing where a Vehicle Access Restriction applies under Standard E27.6.4.1(3):	
E27.8.2 (11) (a)	
i) effects of the location and design of the access on the safe and efficient operation of the adjacent transport network having regard to:	
• **visibility and safe sight distances;**	Sight distances from the proposed vehicle crossing satisfy relevant requirements.
• **existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring.**	There is no evidence of existing safety issues associated with vehicle movements in and out of driveways within the vicinity of the site. Vehicle volumes and speeds are not expected to change in the vicinity of the site as a result of the proposed development, as the area is already well developed. All vehicles will enter and exit the site in a forwards direction.
• **proximity to and operation of intersections**	The nearest intersection is located over 60m to the west.
• **existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in this Plan;**	The volume of pedestrians travelling along the frontage of the site is expected to increase as a result of the proposed development. The development provides several pedestrian connections to the three frontage roads and is therefore considered appropriate.
• **existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes and cycleway;**	No existing community or public infrastructure will be affected by the development.
ii) the effects on the continuity of activities and pedestrian movement at street level in the Business – City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone and Business – Local Centre Zone;	
	The volume of pedestrians travelling along the frontage of the site is expected to increase as a result of the proposed development. The development provides several pedestrian connections to the three frontage roads and is therefore considered appropriate. The development only provides one vehicle connection to an arterial road, and therefore effects on pedestrian movement at street level are considered to be minimal.
iii) the practicability and adequacy of the access arrangements considering site limitations, arrangement of buildings and activities, user requirements and operational requirements, proximity to and operation of intersections, having regard to:	
• **the extent to which the site can reasonably be served by different access arrangements including:** ○ **access from another road;** ○ **shared or amalgamated access with another site or sites;** ○ **via a frontage road, such as a slip lane or service road;**	The site has frontage onto Dominion Road, Valley Road and Carrick Place. Therefore any access to the site from Dominion Road would trigger an access restriction. The Carrick Place frontage is not considered appropriate for the main access to the site, given the scale of development and the local road nature of Carrick Place The proposal will result in a net reduction of two accesses on Dominion Road and one access on Valley Road and therefore is considered to have positive safety effects for pedestrians.

Assessment Criteria	Comment
• **the extent to which the need for access can reasonably be avoided by entering into a shared parking and/or loading arrangement with another site or sites in the immediate vicinity.**	There are no other sites in the vicinity of the site by which a shared parking arrangement could be entered, as all sites in the immediate vicinity of the site are residential dwellings or retail buildings with private parking.

As detailed above, the proposal aligns well with the assessment criteria. The proposal will result in a net reduction of two accesses on Dominion Road and one access on Valley Road and therefore is considered to have positive safety effects for pedestrians. As such, the proposed accesses are considered acceptable.

5.3.2 SEPARATION AND NUMBER OF VEHICLE CROSSINGS

Rule E27.6.4.2.1 (T143 and T146) states that no crossings are permitted to that part of a site subject to a Key Retail Frontage as shown on the planning maps, and specifies that a minimum separation distance of 6m for vehicle crossings serving the same site be provided. A minimum separation for crossings serving adjacent sites of 2m is also required.

- The development provides one vehicle crossing to Valley Road. The crossing provides 1.8m separation to the crossing to the east, and therefore only features a 0.2m shortfall. Given the driveway is essentially flat and straight, and all vehicles enter and exit the site in a forwards direction, this minor shortfall is considered acceptable.
- The development provides one vehicle crossing to Carrick Place and is separated by more than 2m to adjacent crossings and therefore satisfies Unitary Plan requirements.

Table E27.6.4.2.1 specifies that one driveway per 50m of frontage (or part thereof) can be provided for residential sites on arterial roads and one driveway per 25m of frontage (or part thereof) can be provided for residential sites on local roads. The site features one access to Valley Road and one access to Carrick Place and therefore satisfies requirements.

5.3.3 WIDTH OF VEHICLE ACCESS

Table E27.6.4.3.2 of the Unitary Plan outlines rules regarding vehicle crossing and vehicle access widths.

For Centre zones serving 10 or more parking spaces (T153), the Unitary Plan requires the following:

- '*A minimum width of 5.5m (two-way) at the site boundary'; and*
- '*A maximum width of 6.0m (two-way) at the site boundary*'.

The Valley Road vehicle crossing serves a total of 103 parking spaces and measures 6.0m wide at the site boundary and therefore satisfies Unitary Plan requirements.

For THAB zones serving 3 to 9 parking spaces (T151), the Unitary Plan requires the following:

- '*A minimum width of 3.0m (one-way) at the site boundary'; and*
- '*A maximum width of 3.5m (one-way) at the site boundary*'.

The Carrick Place vehicle crossing serves 3 parking spaces and measures 3.8m wide at the site boundary and therefore exceeds Unitary Plan requirements by 0.3m. It is noted that this is a reduction from the existing 8.0m wide crossing, and therefore is considered to have positive safety effects. The driveway is located at the end of a cul-de-sac, and therefore effects on pedestrians are considered minimal. As such, the additional 0.3m width is considered acceptable.

The existing vehicle crossings will be redundant, and will removed and reinstated with berm, footpath and kerb by the Applicant, compliant with Rule E27.6.4.2(5).

5.3.4 GRADIENT OF VEHICLE ACCESS

Rule E27.6.4.4.1 of the Unitary Plan outlines the requirements for vehicle access gradients. The requirements are detailed below:

- Maximum gradient of 1 in 5 (20%) for residential activities;
- Maximum gradient of 1 in 8 (12.5%) for accesses serving heavy vehicles;
- Gradient changes exceeding 1 in 8 (12.5%) at the summit or 1 in 6.7 (15%) at a sag must include transition sections. Transition sections are typically a minimum of 2m long; and
- A 4m long platform with maximum gradient of 1 in 20 (5 per cent) is required adjacent to and within the property boundary.

The Valley Road vehicle crossing and carpark feature maximum grades of 1 in 25 and therefore satisfy all requirements above.

The Carrick Place vehicle crossing and carpark feature maximum grades of 1 in 20 and therefore satisfy all requirements above.

5.4 VERTICAL CLEARANCE

Rule E27.6.3.5 of the Unitary Plan details rules regarding vertical clearance.

- The minimum clearance between the formed surface and the structure must be 2.1m where access and/or parking for cars is provided for residential activities.
- The minimum clearance between the formed surface and the structure must be 3.8m where loading is required.

The basement parking area features a minimum of 2.2m vertical clearance, and therefore satisfies the Unitary Plan.

The loading bay does not feature any vertical clearance restrictions, and therefore satisfies the Unitary Plan. The vertical clearance of the parking area where the waste truck is shown to reverse is 2.7m. This is suitable to accommodate both truck types as detailed in the WMP, and is further detailed in Section 7.2 below.

5.5 PEDESTRIANS / CYCLISTS

Pedestrian footpaths are provided along both sides of all the frontage roads. As such, the development provides direct pedestrian access to the development and future residents are considered to be well catered for. The development has been designed to enable efficient internal pedestrian movement.

Cyclists are provided for on Dominion Road and Valley Road on-street, with Dominion Road providing for cyclists in the bus lane. Provision of cycle facilities on the wider network is good and provides suitable access to the development. As will be discussed, bike spaces are provided on-site to satisfy relevant requirements and anticipated demands. Cyclists are able to gain direct access to the development from the road frontages.

The accessible routes are detailed in Figure 5 below and the pedestrian routes are detailed in Figure 6 below.

Figure 5: Accessible Routes

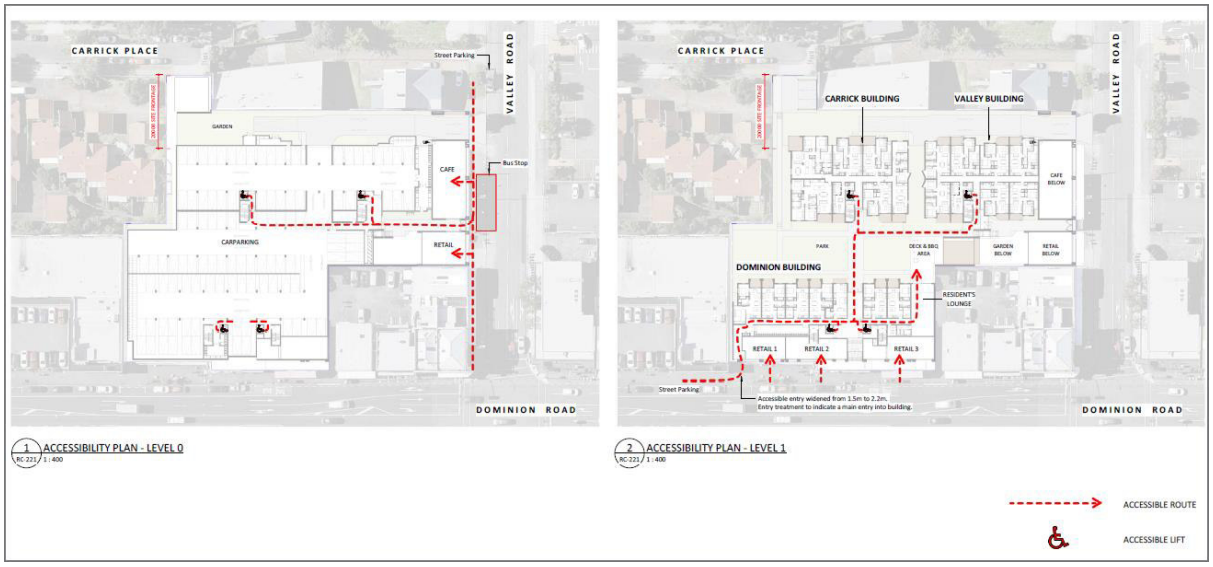


Figure 6: Pedestrian Routes

As detailed above, the development provides direct cycle access to the development and future residents are considered to be well catered for

6 PARKING

6.1 GENERAL

The development provides 103 parking spaces in a basement carpark and three at grade spaces accessed from Carrick Place. The development features stacked parking spaces, with each pair assigned to a single unit.

6.2 UNITARY PLAN REQUIREMENTS

Table E27.6.2.3 of the Unitary Plan sets out the parking requirement for various activities in the Business – Local Centre Zone and the THAB Zone. No minimum or maximum requirements are detailed for residential units or retail activities.

The development provides 106 parking spaces and therefore satisfies requirements.

6.3 UNITARY PLAN DIMENSIONS

Table E27.6.3.1.1 of the Unitary Plan sets out the minimum car parking space and manoeuvring dimensions.

For 90-degree (regular user) spaces, the following requirements are set out.

For a 2.5m wide parking space, the Unitary Plan requires:

- '5.0m depth of parking space'; and
- '6.7m manoeuvring space'.

The parking spaces (with the exception of Spaces 100 and 103, assessed below) measure 2.5m wide by 5.0m long and feature at least 6.7m manoeuvring space, with the majority of spaces provided 7.0m manoeuvring space, and therefore satisfy requirements.

For a 2.6m wide parking space, the Unitary Plan requires:

- '5.0m depth of parking space'; and
- '6.3m manoeuvring space'.

Spaces 100 and 103 measure 2.6m wide by 5.0m long and feature 6.3m manoeuvring space and therefore satisfy requirements.

Vehicle tracking of the Unitary Plan 85th percentile design vehicle is provided in **Attachments A1 – A5**. As shown in the attachments, vehicles can safely and efficiently manoeuvre through the parking areas, and enter and exit the site in a forwards direction, and therefore the design is considered acceptable.

6.4 CYCLE PARKING

Table E27.6.2.5 of the Unitary Plan details bicycle parking requirements.

Table 5 below details the Unitary Plan bicycle parking requirements for residential developments.

Table 5: Unitary Plan Bicycle Parking Requirements

Activity	Parking Requirement (short stay)	Parking Requirement (long stay)	Number	No. Required
Residential	1 per 20 dwellings	1 per dwelling	135 dwellings	7 short stay 135 long stay
Retail – Food and beverage	0 – (less than 350sqm GFA)	1 per 300sqm GFA of office	200sqm GFA	0 short stay 0 long stay
Retail – All other retail	0 – (less than 500sqm GFA)	1 per 300sqm GFA of office	410sqm GFA	0 short stay 0 long stay
TOTAL	-	-	-	**7 short stay** **135 long stay**

The development features 8 visitor spaces and 135 resident spaces and therefore satisfies cycle parking provision.

7 LOADING AND SERVICING

7.1 LOADING SPACE

For all activities other than retail and industrial use, developments with GFA between 5,000sqm and 20,000sqm require one loading space. The development features a total GFA of approximately 15,000sqm and therefore requires one loading space. The development provides one loading space and therefore satisfies requirements.

For all retail activities, developments with GFA between 300sqm and 5,000sqm require one loading space. The development features a total retail GFA of approximately 610sqm and therefore requires one loading space. The retail activities will share the loading space with the residential activities, this is considered an appropriate arrangement given the majority of residential loading will occur from the resident parking spaces.

The loading space measures 12.0m long by 4.0m wide and therefore satisfies requirements.

7.2 SERVICING

Private rubbish collection will occur from several communal rubbish areas. It is understood that the rubbish bins will be wheeled from the communal rubbish areas to the residential rubbish area adjacent to the loading bay. The rubbish will then be loaded into the rubbish truck from this rubbish area.

The Waste Management Plan (WMP) provided for the development details a 7.4m truck or a 6.4m truck will service the site. The vehicle tracking of a 7.4m waste truck is shown in **Attachment B1**. As shown, the truck can safely and efficiently access and egress the rubbish areas and exit the site in a forward direction. The height of the parking area where the waste truck is shown to reverse is 2.7m. This is suitable to accommodate both truck types as detailed in the WMP.

The vehicle tracking of a general 8m rigid truck using the loading bay is shown in **Attachment B2**. As shown, the truck can safely and efficiently access and egress the loading bay and exit the site in a forward direction.

As such, the proposed design is considered acceptable. It is recommended that servicing activities occur outside of peak traffic periods.

8 PLAN CHANGE 79

Proposed Plan Change 79 Council Decision version became public on 9 August 2024. This Plan Change includes amendments to the transport provisions of the Unitary Plan. The decision is now subject to an appeal period (appeals close on 20 September 2024).

Table 6 below provides an assessment against the changes to rules in e27 (Transport) resulting from the Decision Version of PC79.

Table 6: Plan Change 79 Assessment

<table>
<tr><th>PC 79 ID</th><th>Standard</th><th>Assessment</th></tr>
<tr><td>18</td><td>E27.6.1 Trip generation

1) Where a proposal (except where excluded in Standard E27.6.1(2)) exceeds one of the following thresholds:

(a) a new development or subdivision in Table E27.6.1.1;

(b) 100 v/hr (any hour) for activities not specified in Table E27.6.1.1 requiring a controlled or restricted discretionary land use activity consent in the applicable zone where there are no requirements for an assessment of transport or trip generation effects. This standard does not apply to development activities provided for as permitted in the applicable zone.</td><td>The proposal is for 135 residential units and therefore exceeds the development threshold of 100 dwellings (threshold 2 as per Table E27.6.1.1).

An assessment against the relevant assessment criteria is provided in Table 7 below.</td></tr>
<tr><td>20</td><td>E27.6.2 Number of parking and loading spaces

(6) Bicycle parking:

(e) the activities specified in Table E27.6.2.5 must provide the minimum number of bicycle parking spaces specified.

Table E27.6.2.5 Required bicycle parking rates
<table><tr><th colspan="3">Activity</th><th>Visitor (short-stay) Minimum rate</th><th>Secure (long-stay) Minimum rate</th></tr><tr><td>(T81)</td><td>Residential</td><td>All residential developments ~~Developments of 20 or more dwellings~~</td><td>1 per 20 for developments of 20 or more dwellings</td><td>1 per dwelling without a dedicated garage or basement car parking space</td></tr><tr><td>…</td><td>…</td><td>…</td><td>…</td><td>…</td></tr></table></td><td>The development is for 135 dwellings and features 135 secure bicycle spaces and 8 visitor spaces. Complies.</td></tr>
<tr><td>21</td><td>Standard E27.6.2(8)

(8) Number of loading spaces:

(a) all activities must provide loading as specified in Table E27.6.2.7.</td><td>The development features frontage to an arterial road and greater than 5,000sqm GFA. Therefore small loading space requirements are not applicable.

The large loading space provided satisfies loading requirements for</td></tr>
</table>

<table>
<tr><th>PC 79 ID</th><th>Standard</th><th>Assessment</th></tr>
<tr><td></td><td>(b) residential activities where part of the site has frontage to an arterial road as identified on the planning maps, must provide loading as specified in Table E27.6.2.7A.

<u>Add New Table E27.6.2.7A Minimum small loading space requirements</u>
<table><tr><th><u>Activity</u></th><th><u>GFA/Number of dwellings</u></th><th><u>Minimum rate</u></th></tr><tr><td><u>(T111B)</u></td><td><u>Developments where all dwellings have individual pedestrian access directly from a public road</u></td><td><u>No loading space required</u></td></tr><tr><td></td><td><u>Up to 9 dwellings without individual pedestrian access directly from a public road</u></td><td><u>No loading space required</u></td></tr><tr><td></td><td><u>Greater than 9 dwellings up to 5,000m²</u> <u>without individual pedestrian access directly from a public road</u></td><td><u>1*</u></td></tr><tr><td></td><td><u>Greater than 5,000m²</u></td><td><u>NA</u></td></tr></table><u>* Refer to T137A of Table E27.6.3.2.1 Minimum loading space dimensions</u></td><td>retail activities, as detailed in Section 7 of this report.

Complies.</td></tr>
<tr><td>22</td><td>Standard E27.6.2.(9)

(9) Fractional spaces:

(a) where the calculation of the permitted parking results in a fractional space, any fraction that is less than one-half will be disregarded and any fraction of one-half or more will be counted as one space. If there are different activities within a development, the parking permitted for each activity must be added together prior to rounding.</td><td>No minimum parking rates provided for THAB or Business – Local Centre zones.

Complies.</td></tr>
<tr><td>23</td><td>E27.6.3.1. Size and location of parking spaces

(2) Every parking space must:

(b) comply with the minimum dimensions given in Table E27.6.3.1.1 and Figure E27.6.3.1.1; except accessible parking dimensions and accessible route requirements must be designed in accordance with the New Zealand Standard for Design for Access and Mobility – Buildings and Associated Facilities (NZS: 41212001); and</td><td>All parking spaces comply with the Unitary Plan dimensional requirements.

Complies.

Accessible space requirements are assessed further below.</td></tr>
<tr><td>24</td><td>E27.6.3.2. Size and location of loading spaces

(2) Every loading space must:

(d) comply with the following when any yard of a site is used to provide the loading space (where it is permitted within the zone):

…

(ii) the use of the loading space does not create a traffic hazard on the road at any time<u>; and</u>

(e) have a maximum crossfall of 1:50 (2%) in all directions.</td><td>The loading space provided complies with Unitary Plan dimensional, location and gradient requirements.

Complies.</td></tr>
<tr><td>25</td><td>E27.6.3.2(A) Accessible Parking

(1) Accessible parking must be provided for all new activities, changes of activity type, and / or the expansion or intensification of an existing activity in all zones, except for those listed below in E27.6.3.2(A)(2);

(2) For residential developments in residential zones (excluding the Terrace Housing and Apartment Buildings Zone unless car</td><td>The development provides 135 residential dwellings, therefore 7 accessible spaces required.

The development does not provide any accessible spaces. An assessment against the relevant assessment criteria is provided in Table 7 below.</td></tr>
</table>

<table>
<tr><th>PC 79 ID</th><th>Standard</th><th>Assessment</th></tr>
<tr><td></td><td>parking is provided on site), accessible parking spaces must be provided for developments of 10 or more dwellings on a site.

Table 1 – Number of accessible parking spaces – Non-Residential land uses
<table><tr><th>Total number of parking spaces provided or theoretical parking spaces, whichever is the higher</th><th>Number of accessible parking spaces</th></tr><tr><td>1 – 20</td><td>Not less than 1</td></tr><tr><td>21 – 50</td><td>Not less than 2</td></tr><tr><td>For every additional 50 parking spaces or part of a parking space</td><td>Not less than 1</td></tr></table>
Table 2 – Number of accessible parking spaces – Residential land uses
<table><tr><th>Number of dwellings</th><th>Number of accessible parking spaces</th></tr><tr><td>10 - 19</td><td>Not less than 1</td></tr><tr><td>20 – 29</td><td>Not less than 2</td></tr><tr><td>30 – ~~39~~50</td><td>Not less than 3</td></tr><tr><td>For every additional ~~10~~-25 dwellings or units</td><td>Not less than 1</td></tr></table></td><td></td></tr>
<tr><td>26</td><td>E27.6.3.3 Access and manoeuvring

(2A) For every loading space required by Table E27.6.3.2.1.(T137A) the access and manoeuvring areas associated with that loading space must accommodate the 6.4m van tracking curves set out in Figure E27.6.3.3.3.</td><td>A residential loading space is not required.

Not applicable.</td></tr>
<tr><td>27</td><td>E27.6.3.4 Reverse manoeuvring

(1) Sufficient space must be provided on the site so vehicles do not need to reverse off the site or onto or off the road from any site where any of the following apply:

(a) four or more parking spaces are served by a single access;

(b) there is more than 30m between the parking space and the road boundary of the site; or

(c) access would be from an arterial road or otherwise within a Vehicle

Access Restriction covered in Standard E27.6.4.1</td><td>All parking spaces can manoeuvre onsite and exit and enter in a forward direction.

Complies.</td></tr>
<tr><td>28</td><td>E27.6.3.4A Heavy vehicle access

(1) Where a site in a residential zone provides heavy vehicle access it must:

(a) provide sufficient space on the site so an 8m heavy vehicle does not need to reverse onto or off the site or road, with a maximum reverse manoeuvring distance within the site of 12m.</td><td>An 8m heavy vehicle can manoeuvre onsite and exit and enter in a forward direction.

Complies.</td></tr>
<tr><td>29</td><td>E27.6.3.5 Vertical Clearance</td><td>The basement parking area serves only residential spaces and features 2.1m vertical clearance. It is noted that accessible parking is required,</td></tr>
</table>

PC 79 ID	Standard	Assessment
	(1) To ensure vehicles can pass safely under overhead structures to access any parking and loading spaces, the minimum clearance between the formed surface and the structure must be: (a) 2.1m where access and/or parking for cars is provided for residential activities; (b) 2.3m where access and/or parking for cars is provided for all other activities; (c) 2.5m where access and/or accessible parking is provided and/or required; (ca) 2.8m where loading is required for residential activities denoted with an asterisk (*) in Table E27.6.2.7A; (cb) 3.8m where heavy vehicle access in Standard E27.6.3.4A is provided; or (d) 3.8m where loading is required in Table E27.6.2.7.	but no accessible spaces are provided, and therefore the vertical clearance does not technically comply. Given only residential spaces are provided, the vertical clearance is considered acceptable.
30	**E27.6.3.7 Lighting** (1) Lighting is required where there are 10 or more parking spaces which are likely to be used during the hours of darkness. The parking and manoeuvring areas and associated pedestrian routes must be adequately lit during use in a manner that complies with the rules in Section E24 Lighting. (2) Lighting is required, in residential zones to primary pedestrian access, vehicle access, parking and manoeuvring areas, where any of the following apply: (a) There are four or more dwellings accessible from a primary pedestrian access which is not adjacent to a vehicle access; (b) There are 10 or more parking spaces; or (c) There are 10 or more dwellings. Adequate lighting must be provided during the hours of darkness in a manner that complies with the rules in Section E24 Lighting.	Refer to B&A Planning rules assessment. Given the subject carparking is located in a basement parking area, the lighting will comply with requirements. In terms of E24 compliance overall, a condition of consent for a detailed lighting plan of the outdoor lighting can be included. E27.6.3.7(2) applies to residential zones. It is noted: • There is no “primary pedestrian access” from Carrick Place. • There are less than 10 carparks within the residentially zoned part of the site. • There are less than 10 dwellings within the residentially zoned part of the site. As such, this rule is not applicable.
31	**E27.6.4.3 Width of vehicle access, queuing and speed management requirements** (1) Every on-site parking and loading space must have vehicle access from a road, with the vehicle access complying with the following standards (a) passing bays are provided in accordance with Table E27.6.4.3.1; and	No passing bays are provided or required. The access width to Valley Road complies with the updated requirements. The majority of the site including the vehicle access to Valley Road, is Zoned Business- Local Centre. Therefore speed

PC 79 ID	Standard	Assessment
	(b) meeting the minimum formed access width specified in Table E27.4.3.2; and (c) meeting the minimum speed management measure spacing specified in Table E27.6.4.3.3.	management measures are not required. Complies.
32	**E27.6.6 Design and location of pedestrian access in residential zones** (1) Where two or more dwellings are proposed in residential zones, primary pedestrian access must be provided which meets the following: (a) have the minimum pedestrian access width and separation specified in Table E27.6.6.1 for its full length; (c) have a gradient no greater than: (i) 1 in 12 for pedestrian access which is not adjacent to vehicle access; (ii) the maximum vehicle access gradient as specified in Table E27.6.4.4.1 where the pedestrian access is adjacent to vehicle access; (f) provide direct and continuous access to the dwellings from a public footpath; (g) be free from permanent obstructions and have a clear height of at least 2.1m for its full length. (2) A minimum clear width of 3m and a minimum clear height of 2.1m for its full length is required for primary pedestrian access where not adjacent to vehicle access and serving: (a) up to three dwellings and has a length greater than 50m; or (b) four or more dwellings. (3) For the purposes of (2) above, the clear width may include: (a) the minimum 1.8m formed primary pedestrian access width; (b) landscape treatment with a maximum mature height of 600mm; (T156CD) | | Serves 20 or more parking spaces or 20 or more dwellings, whichever is the greater. ~~excluding any dwellings which have separate pedestrian access provided directly from the front door to the road~~ | 1.8m | 1.8m (including the kerb) which must be vertically separated from trafficable areas ~~and designed to be clear of obstructions.~~ as shown in Figure E27.6.4.3.1 ~~and connected to every dwelling~~ 28 PC 79 Transport Plan Change	The pedestrian accesses comply with the relevant requirements.
	Note: Emergency responder access requirements are further controlled by the Building Code. Plan users should refer to the Building Code to ensure compliance can be achieved at building consent stage. Granting of a resource consent does not imply that waivers of Building Code	A fire truck or similar emergency vehicle can access the site directly from Valley Road and reverse onto the road network in the event of an emergency. This

PC 79 ID	Standard	Assessment
	requirements will be granted. Fire and Emergency New Zealand publishes guidance in the context of Building Code requirements.	is considered an acceptable arrangement.
33	**E27.6.7 Provision for electric vehicle charging** (1) Any new dwellings with car parking (with the exception of new detached dwellings) must provide each undercover car park with the capability to install Electric Vehicle Supply Equipment with designated space for the necessary conduit, circuit and metering between the car park and an electrical distribution board on the same building storey, or ground level if the car parking space is at ground level.	All residential carparks have the ability to provide electric vehicle charging in future. Complies.

An assessment against the relevant assessment criteria is detailed in Table 7 below.

Table 7: Assessment Criteria

PC 79 ID	Standard	Assessment
35	**Assessment Criteria E27.8.2** (3) any activity or subdivision which exceeds the trip generation thresholds under Standard E27.6., with the exception of the thresholds (TA1), (T1A), (T2A) and (T3A) in Table E27.6.1.1: a) the effects on the function and the safe and efficient operation of the transport network including pedestrian movement with consideration of all modes of transport, particularly at peak traffic times; b) the implementation of mitigation measures proposed to address adverse effects which may include, but are not limited to, the following measures: i. such as travel planning; ii. providing alternatives to private vehicle trips including accessibility to public transport; iii. staging development; iv. providing or contributing to improvements to the local transport network across all modes; or c) the trip characteristics of the proposed activity on the site.	An assessment of the trip generation effects is detailed in Section 4 of this report. The assessment concluded that the local road network can safely and efficiently accommodate the development with the existing network layout. Pedestrian footpaths are provided along both sides of all the frontage roads. As such, the development provides direct pedestrian access to the development and future residents are considered to be well catered for. The development has been designed to enable efficient internal pedestrian movement. Cyclists are provided for on Dominion Road and Valley Road on-street, with Dominion Road providing for cyclists in the bus lane. Provision of cycle facilities on the wider network is good and provides suitable access to the development. As will be discussed, bike spaces are provided on-site to satisfy relevant requirements and anticipated demands. Cyclists are able to gain direct access to the development from the road frontages. As such, it is considered that pedestrians and cyclists are well catered for by the development with direct connections between the site and the local network. The development features excellent connections to public transport as detailed within this report. Overall, the development provides suitable alternatives to private vehicle trips.
	Assessment Criteria E27.8.2 (4A) any activity or development that provides less than the required number of accessible parking spaces under Standard E27.6.3.2.(A): (a) the trip characteristics of the proposed activities on the site requiring accessible parking spaces;	The development is for residential apartments, and therefore it is uncertain if any accessible parking demand will exist. Parking is provided in a basement parking area, and therefore the ability to provide accessible spaces is limited. Column spacing of the building means there is limited width to provide full accessible space requirements. The depth of the basement would be required to be increased to provide the required vertical clearances,

PC 79 ID	Standard	Assessment
	(b) the extent to which it is physically practicable to provide the required accessible parking spaces on the site including in terms of the existing location of buildings, the type of the existing building(s) site dimensions, topography and the availability of access to the road; (c) the availability and capacity of alternative accessible parking in the immediate vicinity, including on street and other public accessible car parking, with an accessible route to and from the building designed in accordance with New Zealand Standard for Design for Access and Mobility – Buildings and Associated Facilities (NZS: 4121-2001), to provide the additional parking sought for the proposal; (d) mitigation measures to provide accessible parking which may include measures such as by entering into a shared accessible parking arrangement with another site or sites in the immediate vicinity (e) the availability of alternatives to private vehicle trips in the immediate vicinity with access to public transport by an accessible route designed in accordance with New Zealand Standard for Design for Access and Mobility – Buildings and Associated Facilities (NZS: 4121-2001) and a maximum distance of 200m	resulting in significant additional cost, resulting from further levels of excavation/rock-breaking, increasing the potential for adverse effects. For residential activities, the Building Act 2004 does not require accessible parking spaces for general residential dwellings. In particular any residential type of activity is not listed in either Schedule 2 of the Building Act 2004 or Appendix A of NZS4121:2001 "Design for Access and Mobility – Buildings and Associated Facilities" which lists all activities where this standard applies. It is considered that there are two issues with including a requirement to provide accessible parking spaces for residential units (and hence why they are not listed in the Building Act 2004 or NZS4120:2001): (a) Parking spaces are almost always assigned to a specific unit and therefore there is no way of ensuring an accessible resident is provided with the accessible space. The only way to ensure this occurs would be to create additional communal space(s). (b) Standard E27.6.3.2(A) would mean that a 10-lot development will need to provide an accessible space regardless of whether other parking spaces are being provided and irrespective of the location (ie even if close to public transport). As such, rather than promoting other forms of transport, this provision essentially means development over 9 units needs to provide accessible parking spaces regardless of location.. The development is well located on an arterial road intersection, with excellent connections to public transport. The development provides excellent accessible connections from the public roads.

9 CONSTRUCTION TRAFFIC

The development site is currently occupied and therefore demolition works followed by earthworks will be required. The total estimated earthworks volumes are detailed in the civil engineering drawings provided as part of this application.

To facilitate construction, it is proposed to utilise access to the site via the existing connections to Valley Road and Carrick Place. These are anticipated to operate as the primary construction accesses for the duration of the project.

As is typical with a development of this scale, it is recommended that should consent be approved, a Construction Traffic Management Plan (CTMP) should be required as a condition of consent. It is considered that this Construction Traffic Management Plan should include:

- Construction dates and hours of operation including any specific non-working hours for traffic congestion/noise etc, aligned with normally accepted construction hours in the Auckland Region;
- Truck route diagrams between the site and external road network.

- Temporary traffic management signage/details for both pedestrians and vehicles, to manage the interaction of these road users with heavy construction traffic; and
- Details of site access/egress over the entire construction period and any limitations on truck movements. All egress points should be positioned to achieve appropriate sight distances.

Based on experience of constructing similar projects, and bearing in mind capacity within the existing road network, with the appropriate Construction Traffic Management Plan in place and the above measures implemented, it is considered that construction activities can be managed to ensure any generated traffic effects are mitigated.

10 CONCLUSIONS

Following a review of the proposal for a residential development at 198-222 Dominion Road & 113-117 Valley Road, Mt Eden, the following can be concluded:

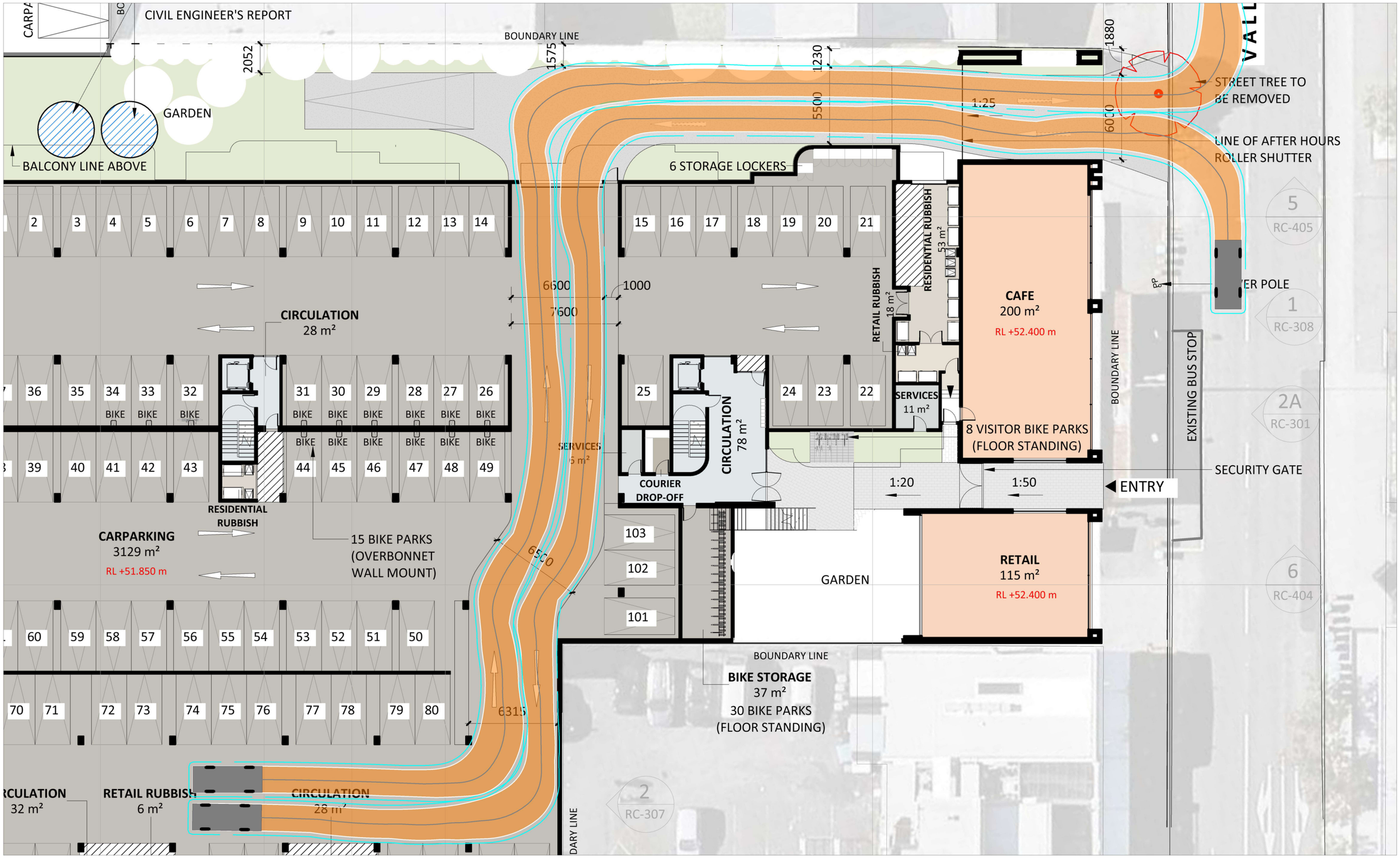
- The development is not expected to detrimentally effect the existing good safety record in the vicinity of the site;
- The site location features excellent public transport connections;
- The traffic expected to be generated by the proposed development can be accommodated within the existing road network;
- The development satisfies relevant sight distance requirements;
- The development satisfies relevant Unitary Plan vehicle access requirements in terms of both form and location, with the exception of the VAR which is considered acceptable;
- The proposal will result in a net reduction of two accesses on Dominion Road and one access on Valley Road and therefore is considered to have positive safety effects for pedestrians;
- The development satisfies relevant vehicle parking requirements in terms of both provision and dimensions;
- The development features good connections for both pedestrians and cyclists;
- The development satisfies loading and servicing requirements; and
- The proposal aligns well with the Plan Change 79 amendments.

It is recommended that:

- No Stopping At All Times marking are provided for approximately 10m either side of the new vehicle crossing on Dominion Road to ensure sightlines are available for exiting vehicles;
- The Valley Road vehicle gate remains open in the evening peak hour; and
- Servicing activities are undertaken outside of peak traffic periods.

Accordingly, subject to the recommendation detailed above, it is concluded that there are no traffic engineering or transportation planning reasons that would preclude the development of the subject site as proposed.

APPENDIX A: VEHICLE TRACKING – 85TH PERCENTILE CAR



Revision notes:		
Rev:	Date:	Notes:

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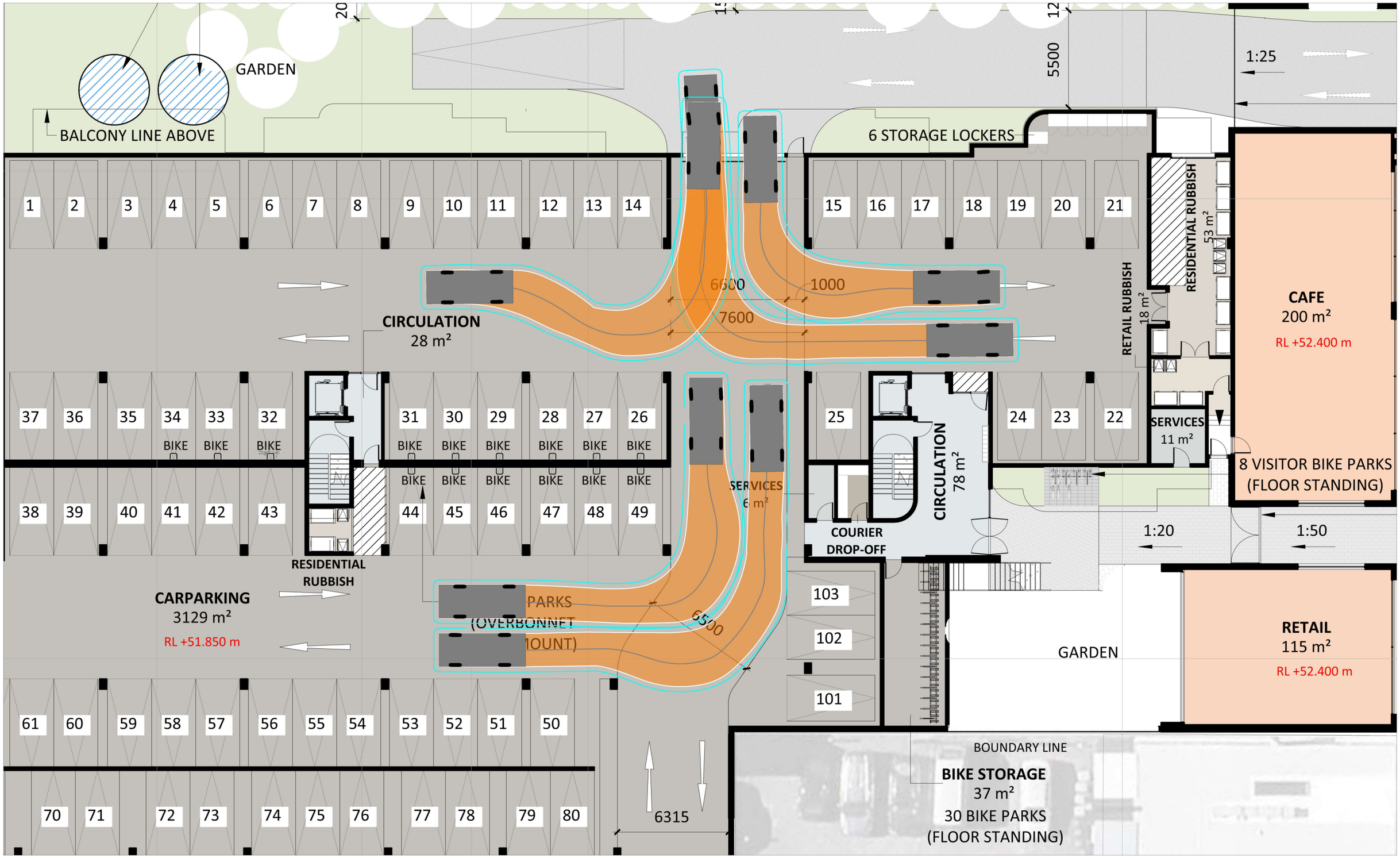
Client: Residential Development	Drawing Title: Vehicle Tracking 85th Percentile Car	Scale @ A3: 1:250 Revision: A		



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Rev:	Date:	Notes:

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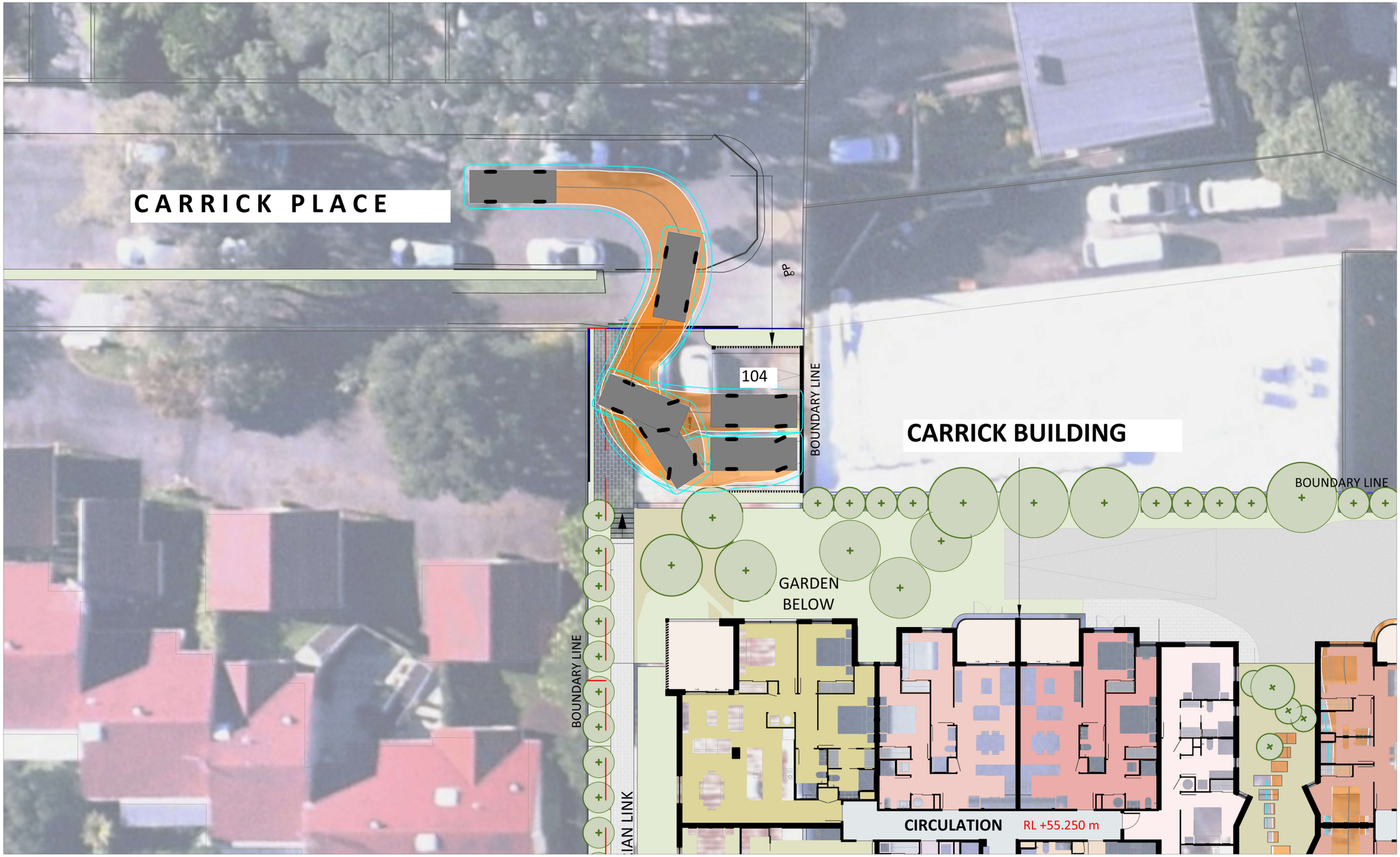
Client: Residential Development	Drawing Title: Vehicle Tracking 85th Percentile Car	Scale @ A3: 1:200 Revision: A		



Revision notes:		
Rev:	Date:	Notes:

Drawn by:
JB
Dominion Road & Valley Road

Client:
Residential Development

Project:
Dominion Rd & Valley Rd
Residential Development

Drawing Title:
Vehicle Tracking
85th Percentile Car

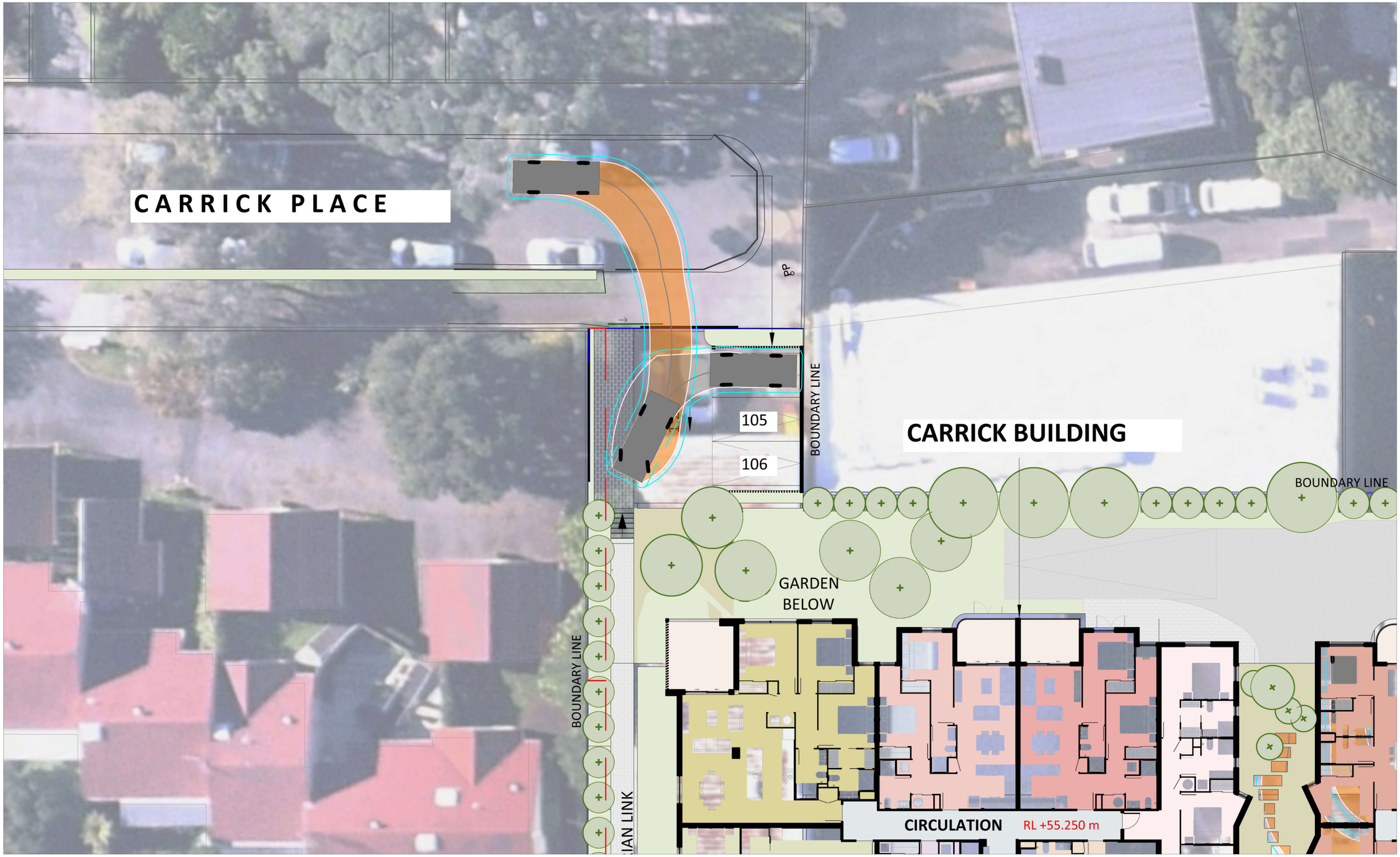
Date:
26/08/2024

Scale @ A3:
1:200

Revision:
A

commute
TRANSPORTATION CONSULTANTS

Figure:
A3



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Rev:	Date:	Notes:

Drawn by:
JB
Dominion Road & Valley Road

Client:
Residential Development

Project:
Dominion Rd & Valley Rd
Residential Development

Drawing Title:
Vehicle Tracking
85th Percentile Car

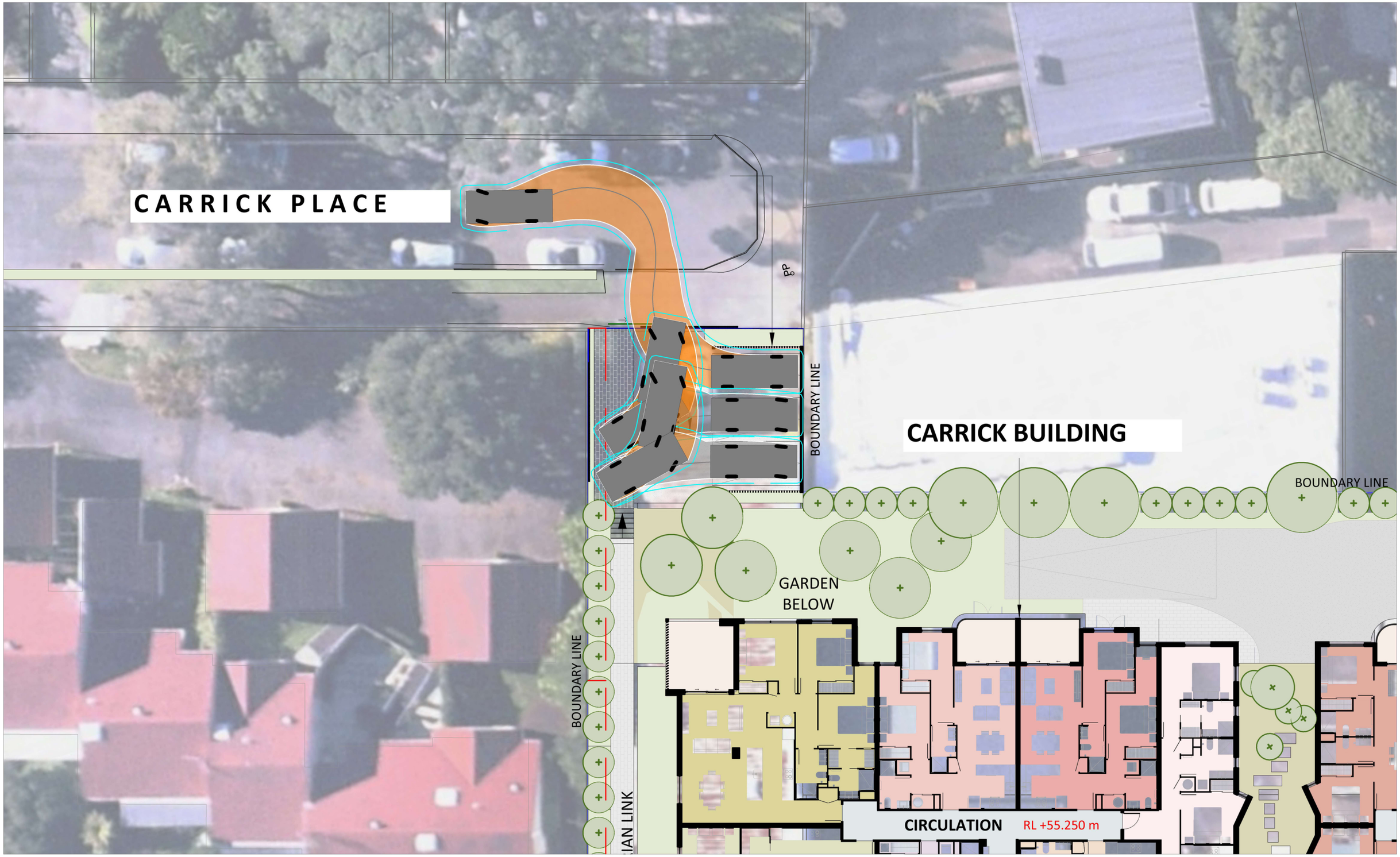
Date:
26/08/2024

Scale @ A3:
1:200

Revision:
A

commute
TRANSPORTATION CONSULTANTS

Figure:
A4



Revision notes:		
Rev:	Date:	Notes:

Drawn by:
JB
Dominion Road & Valley Road

Client:
Residential Development

Project:
Dominion Rd & Valley Rd
Residential Development

Drawing Title:
Vehicle Tracking
85th Percentile Car

Date:
26/08/2024

Scale @ A3:
1:200

Revision:
A

commute
TRANSPORTATION CONSULTANTS

Figure:
A5

APPENDIX B: VEHICLE TRACKING – 7.4M TRUCK AND 8M TRUCK

600 8000 8000 8000 8000 8000 8000 8000 8000 10200

CARPARKS ABOVE

ER RETENTION
K TBC BY CIVIL
ENGINEER

BOUNDARY LINE

BOUNDARY LINE

12000

IA.
KAGE PITS

GARDEN

4000

1:25

BALCONY LINE ABOVE

STORAGE
10 m²

RESIDENTIAL
RUBBISH

6 STORAGE LOCKERS

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

RESIDENTIAL RUBBISH
48 m²

1470 300

CIRCULATION
30 m²

7600

300 480

RETAIL RUBBISH
18 m²

CAFE
200 m²
RL +52.400 m

35 34 33 32 31 30 29 28 27 26 25 24 23 22 21

BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE

38 39 40 41 42 43 44 45 46 98

SERVICES
14 m²

CIRCULATION
82 m²

BOUNDARY LINE

8 VISITOR BIKE PARKS
(FLOOR STANDING)

COURIER
DROP-OFF

1:20 1:50

6500

101

CARPARKING
3136 m²

33 BIKE PARKS
(OVERBONNET

Revision notes:

Rev:	Date:	Notes:

Drawn by:
JB
Dominion Road & Valley Road

Client:
Residential Development

Project:
Dominion Rd & Valley Rd
Residential Development

Drawing Title:
Vehicle Tracking
7.4m Waste Truck

Date:
27/08/2024

Scale @ A3:
1:200

Revision:
B

commute
TRANSPORTATION CONSULTANTS

Figure:
B1

600 8000 8000 8000 8000 8000 8000 8000 8000 10200

CARPARKS ABOVE

ER RETENTION
K TBC BY CIVIL
ENGINEER

BOUNDARY LINE

BOUNDARY LINE

12000

4000

IA.
KAGE PITS

GARDEN

BALCONY LINE ABOVE

STORAGE
10 m²

RESIDENTIAL
RUBBISH

6 STORAGE LOCKERS

1:25

2 3 4 5 6 7 8 9 10 11 12 13 7 14 15 16 17 18 19 20

RESIDENTIAL RUBBISH
48 m²

1470 300

CIRCULATION
30 m²

7600

300 480

RETAIL RUBBISH
18 m²

CAFE
200 m²
RL +52.400 m

SERVICES
14 m²

35 34 33 32 31 30 29 28 27 26 25 24 23 22 21

BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE BIKE

38 39 40 41 42 43 44 45 46 98

CIRCULATION
82 m²

8 VISITOR BIKE PARKS
(FLOOR STANDING)

BOUNDARY LINE

COURIER
DROP-OFF

1:20 1:50

6500

CARPARKING
3136 m²

33 BIKE PARKS
(OVERBONNET

101

Revision notes:		
Rev:	Date:	Notes:

Drawn by: JB
Dominion Road & Valley Road

Client: Residential Development

Project: Dominion Rd & Valley Rd
Residential Development

Drawing Title: Vehicle Tracking
8.0m Rigid Truck

Date: 27/08/2024

Scale @ A3: 1:200

Revision: B

commute TRANSPORTATION CONSULTANTS

Figure: B2