16 August 2024

Aaron Grey
By email: aaron@civilplan.co.nz

3 Pigeon Mountain Road - BUN60419132

Dear Aaron

Further to our discussions, please see the following comments in relation to the residual matters pertaining to the above resource consent application.

Garage sizes of typology C2 and C3 (Lot 24-32)

The garages have been revised to a single garage. In our view it is not necessary to reduce the width of the garage door, as a wider garage door provides for improved functionality for future residents for storage and access.

As you have previously observed, the width of the garage is unlikely to be wide enough to physically accommodate two full size vehicles in any event.

However, it is also reasonable that residents may own motorbikes, scooters, or e-bikes, other large sporting equipment etc. Additionally, the bin storage for the middle units are located within the garage, so a wider door will facilitate the movement of the bins. As such it is considered that the proposed garage door has functional benefits to the future residents.

The following comments in relation to the loading space and reverse manoeuvring have been prepared with support from the project traffic engineers TPC.

Loading Space

We do not consider there is any functional benefit in providing a loading space. We understanding the Council Traffic Engineer has been requesting the provision of one loading space on the development.

A formal loading bay is likely to only be used by immediately adjoining properties. Given the size of the site, wherever a loading bay is located, it is unlikely that it is going to be functional for the majority of the development.

In the diagrams below, the red L represents a theoretical loading bay location and users would traverse along the blue paths. Given the distances, it seems unlikely that residents would use this when compared to the alternative option (discussed below).

The alternative option for loading is to temporarily park in front of the unit that is being loaded to. In terms of the potential effect of this, the following comments are noted.

The width of the majority of lots range from 5.5m to 6.6m, which means a truck fits within two frontages (although smaller trucks would fit in front of one). One of which would be the dwelling it is loading to.

As the majority of the JOAL is one way, but generally exceeding 5.5m in width (up to 5.9m in width), this can accommodate a truck pulled over, while still allowing vehicles to pass.

Therefore, the effect is the inconvenience or necessity of having the move a truck slightly to allow one vehicle to enter or exit the site that is 'blocked'. Given that the time needed for 1 vehicle to enter or exit their site is in the order of seconds, and loading by larger vehicles is also an infrequent activity, it is considered that any potential effects arising from this are minimal. Loading activities are also likely to occur outside of peak hours, and therefore unlikely to result in vehicular interaction in any event.

As vehicles can pass any truck that is pulled over on the JOAL, there are no potential queuing effects. A truck that is temporarily pulled over would not be blocking traffic from the entire development. Sightline diagrams have previously been provided by TPC, confirming that the JOAL achieves adequate sightlines for safety in all locations.

Co-ordinating with **one or two** additional properties/people, in the event they need to enter or exit the site, is considered to be a reasonable outcome which can be easily managed. It is noted that this is a common occurrence even on lower density or smaller developments.

The parking spaces off JOAL 3 serve the smaller 2-bedroom units, these are less likely to require larger trucks, and any loading can likely be accommodated by a van – which fits in a normal parking space. A van is able to transport a king size bed.

Additionally, given the common areas will be managed by a RA, and the Waste Collection will occur infrequently at specified times, it is considered that the turning bay at the end of JOAL 2 could also be utilised for temporary loading. The management and rules of the use of this area will be undertaken by the RA.

It is considered that any potential effect arising from not providing a dedicated loading bay is minimal.

Reverse manoeuvring

We understand that some of the tracking of garage spaces shows reverse in, forward out traffic movements "which are not supported from a Traffic Engineering perspective" due to being "a safety and operational matter".

The following comments are provided:

- It is important to note that either way, there is one reversing movement. You are either reversing into a garage, or reversing out of a garage.

- We have seen no evidence to suggest that reversing out of a garage is safer or has less operational effects.

- It is unclear what specifically is the safety or operational concern, however it is assumed that the concern is the reversing movement (as opposed to the forward movement).

- I note that when you are reversing into a garage or parking space, you are moving your vehicle into a private space which is not occupied by any other persons.

- When you are reversing out of a garage into the JOAL, the JOAL may be occupied with other vehicles or pedestrians. While the JOAL and pedestrian footpaths on this development have been designed to operate safely, and are largely separated, it seems obvious that reversing into a garage will always have less potential conflicts on the reversing movement- compared to the movement of reversing out in to a JOAL.

- Sight lines are significantly improved if the car is reversing into the garage compared to reversing out.

- This means it would be safer for both pedestrians and other vehicles using the access.

- In both situations, reversing to or from a common accessway typically requires the entire width of the access. Therefore, any disruption to other vehicles would be the same, so there is no difference in operational issues.

- If the concern is that people do not have the skill or ability to reverse into a parking space or driveway, again it is noted that either movement includes a reversing component. The skill or ability of drivers is also not a valid assessment matter, noting that this is not a complex or unusual movement. All road users must pass driving tests, which include a variety of reversing movements in the practical tests.

It is considered that any potential effects arising from reversing into a garage/parking space, as opposed to reversing out, are less than minor.

Parking space allocation

I understand the concern here is to optimise routes from parking spaces to dwellings.

The following condition is offered.

X. When submitting the survey plan for approval under section 223 of the RMA, the consent holder must provide to Council, for certification, a plan identifying which of the residential lots (Lots 59-86) that each of the parking lots (Lots 89-116) will be allocated to.

The allocation of parking lots to each superlot is subject to the following:

- Lots 114 to 116 are not allocated to Lots 70-86;
- Lots 108 to 113 are not allocated to Lots 59-66;
- Lots 93 to 101 are not allocated to Lots 67-69;
- Lots 89-101 are not allocated to Lots 59-66.

If you have any further queries, please don't hesitate to get in touch.

Yours sincerely

Yujie Gao

Senior Planner / BUrbPlan (Hons) / Int.NZPI

Campbell Brown Planning Limited

Job No: 220665/01
15 July 2024

Auckland Council
Private Bag 92 300
Victoria Street West
AUCKLAND 1141

Dear Sir/Madam,

EPA Consent number:	BUN60419132
Address:	3 Pigeon Mountain Road
Description:	87 Residential Dwelling Development

We respond to your s92 RFI dated 10/July/2024 requesting further information with respect to the above development. We respond to the items relevant to our inputs as below:

Stormwater

1. TP 108 method should be used**.**

a. 10% AEP flows

As per industry practice and multiple literatures, Rational Method computes the peak flow only and is accurate for small drainage areas, being less than 20 acres (or 80,000 m²). In this instance, the subject site is 14,073 m² in area and the use of rational method is considered as acceptable. Nevertheless, TP108 (or SCS method) has been adopted with the draft CoP v4 climate change factors and temporal pattern applied to identify the **minimum** 10% AEP attenuation volume required. From SCS hydrograph, it is noted that the peak discharges for the pre-development and post-development scenarios are **0.2232 m³/s** and **0.3006 m³/s** respectively. The **minimum mitigation volume** to be provided is hence the total difference in runoff volumes for the time intervals where the post-development peak runoff exceeds or is close to the pre-development peak runoff. From our assessment, the minimum mitigation required is hence 59.11 m³, let say **60.0 m³**. Please refer to appendix for SCS calculations and hydrograph for 10% AEP runoff.

We are comfortable for stormwater mitigation be conditioned in the RC approval along the lines of:

> The consent holder must ensure that stormwater runoff from the total site area is managed to ensure that the post-development stormwater runoff does not exceeds the pre-development runoff for the 10% AEP rainfall events.

b. and c. 1% AEP flows

The request is for us to undertake an overland flow path assessment for 3.8 °C climate change, rather than 2.1 °C climate change. We note that the current operative SW COP (V3) requires calculations based on 2.1 degrees, which is what we have based the previous assessment on. There is a draft SW COP (Version 4) that is currently out for consultation, which is where the 3.8 °C reference is from. This document has not yet been adopted, and as mentioned is currently still being consulted on. However, in the interest of progressing this application, we have undertaken the **1% AEP flows assessment based on the 3.8 °C climate change numbers**. We provide this on a without prejudice basis, given the status of the document.

With the upstream overland flow path catchment is greater than 80,000m² (132,200 m²), TP108 (or SCS method) has been adopted to compute the 1% AEP Peak runoff rate to examine the effect on the downstream catchment, being Pigeon Mountain Road and Half Moon Bay Marina Business Complex. The public stormwater system has been **assumed to be 100% blocked** in our assessment. The impervious area for the catchment is based on the permitted areas of 40% building coverage and 60% imperviousness. Based on our TP108 method assessment, the peak discharges for the 1% AEP pre-development and post-development scenarios are **4.424 m³/s** and **4.567 m³/s** respectively. This is an increase of **3.23%** ((4.567-4.424)/4.424) in peak discharge only.

As per AUP E8.6.1 (3)(b), diversion and discharge must not result in or increase the inundation of buildings on other properties in events up to the 1% AEP rainfall events. Please refer to the pre and post flooding analysis for Pigeon Mountain Road and Marina Car Park (s92 queries 7 and 8). The increase in runoff has **negligible increase in flood depths (1mm)** as outlined in our reply to item 7 and 8 below. Consequently, the increase in imperviousness does not result in or increase the inundation of building on other properties for the 1% AEP rainfall event and, thus, 1% AEP attenuation is considered not necessary.

Moreover, as we discussed previously, the **GD01** suggests that detention of 10% and 1% AEP rainfall events is not required for developments that are located within the lower half of the catchment (or for which a validated flood modelling study has shown that the development does not increase downstream flooding). To satisfy your request earlier, we allowed detention for the difference between pre- and post-development runoff in a 10% AEP rainfall event in our stormwater design. Because we proposed the 10% AAEP detention, the site is located in the lower half of the catchment and the increase in 1% AEP runoff is considered minimal, it is our opinion, therefore, that the stormwater detention outcomes have been mitigated as required under the AUP.

7. All the overland flows will concentrate at the intersection of Pigeon and ATA-TAI road will flow into the Halfmoon bay parking area. It is advised to conduct overland flow path assessment at the intersection to understand that it will be safe and will not cause any flooding problem or damages. Risk and hazard need to be identified and assessed. There area a lot guidance document available to do this. It is suggested to use Australian Disaster Resilience Handbook Collection GUIDELINE 7-3 (attached). The Risk and hazard assessment shall be done for all the overland flows on all existing and developed flow paths to ensure safety**.**

Please refer to Pigeon Mountain Road Overland flow/flood assessment based on topographical survey received and **TP108 method**. The pre- and post-development flood depths are determined to be only some 230mm and 231mm, respectively. It is in our opinion, the 1mm increase in flood depth is negligible.

The depth-velocity product for flow in Ara-Tai/Pigeon Mountain Road:

Existing – 0.230 * 1.558 = 0.358 m^2/s

Post – 0.23 1* 1.562 = 0.361 m^2/s

As per GNS Science Report 2010/51 (Nov, 2010), Depth and Velocity product >0.4 m^2/s is considered significant hazard to small children. Additionally, vehicles become unstable if flood depth is greater than 0.3m. Flow depths for pre- and post-development scenarios are less than 0.3m. The DV products are determined to be less than 0.4 m^2/s.

Consequently, the post development flow does not change the hazard classification and it is considered **low hazard** for children, adults and vehicles.

8. The overland flow path assessment at Marina Carpark is only showing the post development flood level but does not includes the predevelopment flood level. Requested to add the predevelopment flood level to compare**.**

Please refer to Marina Carpark Overland flow/flood assessment based on topographical survey received and **TP108 method**. The pre- and post-development flood depths are determined to be 117mm and 118mm respectively. It is in our opinion, the 1mm increase in flood depth is negligible.

The depth-velocity product for flow for Marina Carpark:

Existing – 0.117 * 1.418 = 0.166 m^2/s

Post – 0.118 * 1.427 = 0.168 m^2/s

As per GNS Science Report 2010/51 (Nov, 2010), Depth and Velocity product >0.4 m^2/s is considered significant hazard to small children. Additionally, vehicles become unstable if flood depth is greater than 0.3m. Flow depths for pre- and post-development scenarios are less than 0.3m. The DV products are determined to be less than 0.4 m^2/s.

Consequently, the post development flow does not change the hazard classification and is considered **low hazard** for children, adults and vehicles.

I trust this meets with your approval. Please do not hesitate to contact us should you have any queries or require further information.

Yours Faithfully
AIREY CONSULTANTS LTD

Samson Weng
Civil Engineer
BE Hons (Civil)

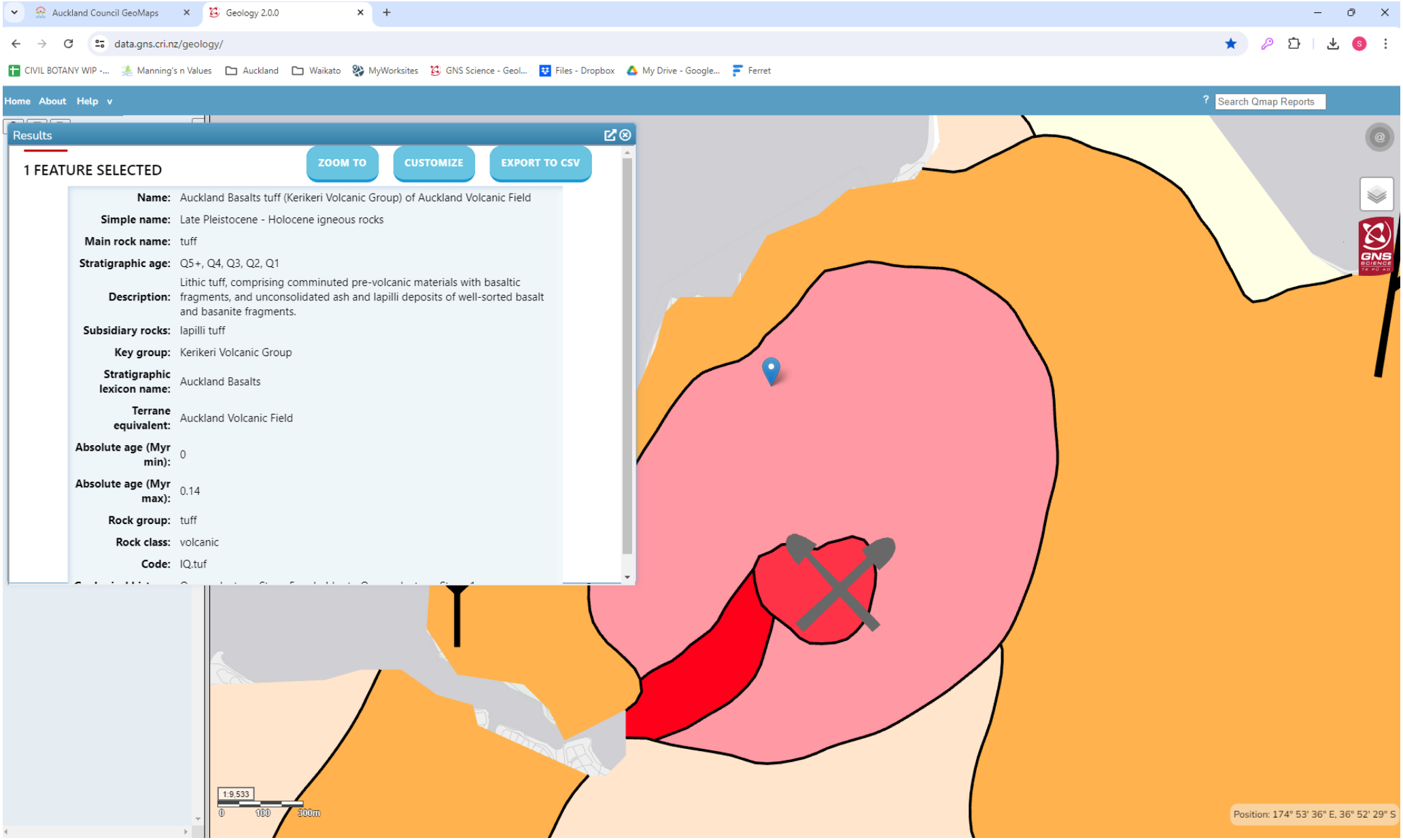
Reviewed and approved by
AIREY CONSULTANTS LTD

Royden Tsui
Associate Director
CPEng(NZ), CMEngNZ, IntPE(NZ), MEPM (hons), BE (Civil)

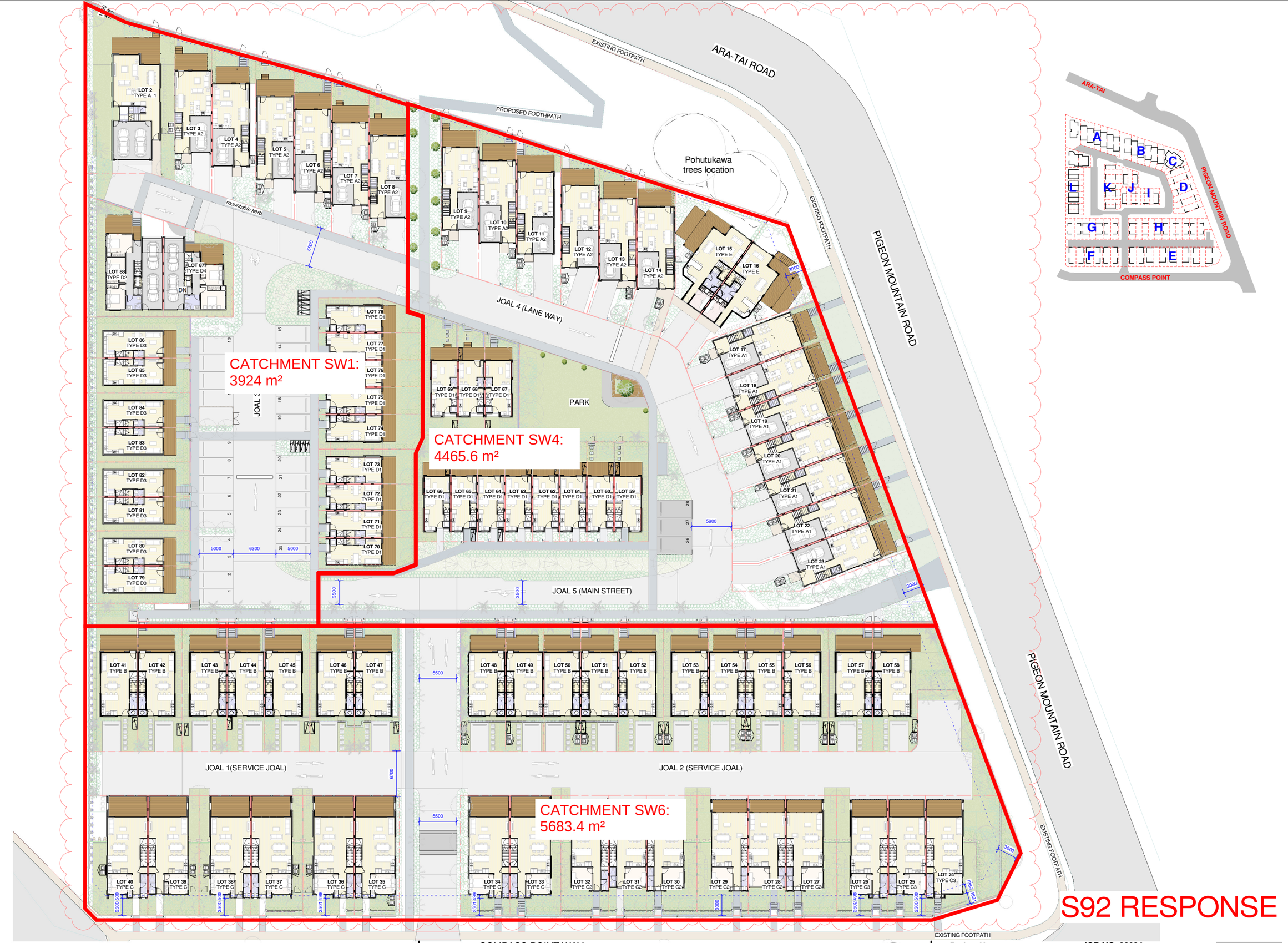
Ecl.

- Revised calculations based on TP108/SCS Calculation Methods

GNS Geology Map – Accessed 10/07/2024



Site underlain by Auckland Volcanic Field (Tuff/Basalts) – TP108 Group A Soil – Urban Lawns – Curve Number 39



S92 RESPONSE

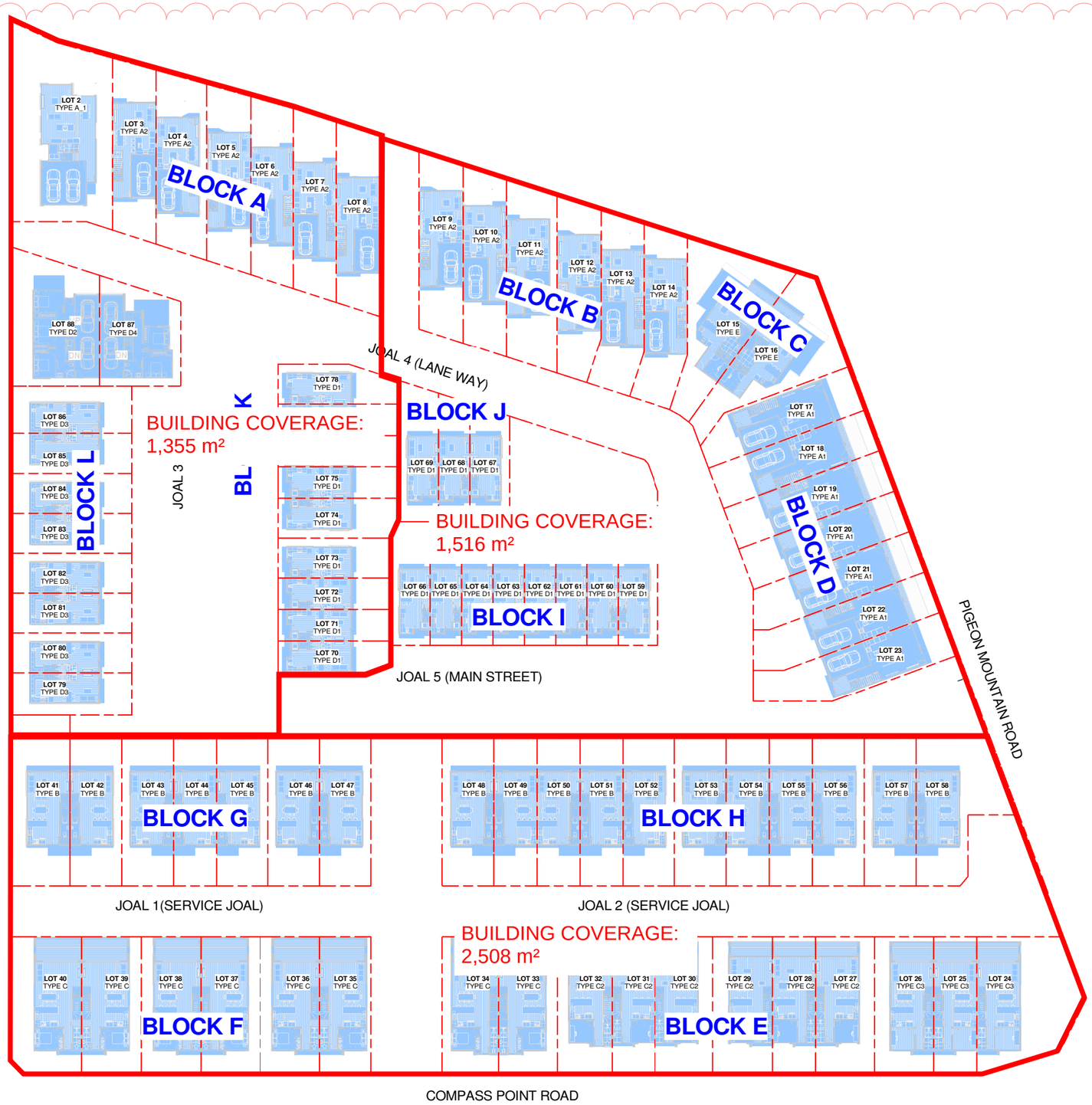
asc architects

3 PIGEON MOUNTAIN ROAD

PROPOSED GROUND LEVEL FLOOR PLAN

Project No. :	JOB NO. 22924
Scale:	As indicated@ A1
Date:	15/05/2024
Revison:	H

RA0151



BUILDING COVERAGE BY...

UNIT	AREA	TOTAL UNITS
BLOCK A		
A2	70 m²	1
A2	70 m²	1
A2	70 m²	1
A2	71 m²	1
A2	71 m²	1
A2	72 m²	1
A2	100 m²	1
	524 m²	7
BLOCK B		
A2	70 m²	1
A2	70 m²	1
A2	71 m²	1
A2	71 m²	1
A2	72 m²	1
A2	72 m²	1
	426 m²	6
BLOCK C		
E	83 m²	1
E	83 m²	1
	167 m²	2
BLOCK D		
A1	73 m²	1
A1	73 m²	1
A1	73 m²	1
A1	73 m²	1
A1	73 m²	1
A1	73 m²	1
A1	73 m²	1
	511 m²	7
BLOCK E		
C	73 m²	1
C	74 m²	1
C	74 m²	1
C	74 m²	1
C	79 m²	1
C	81 m²	1
C3	73 m²	1
C3	74 m²	1
C3	91 m²	1
C3	91 m²	1
C-2	81 m²	1
	866 m²	11
BLOCK F		
C	91 m²	1
C	91 m²	1
C	91 m²	1
C	91 m²	1
C	91 m²	1
C	91 m²	1
	548 m²	6
BLOCK G		
B	60 m²	1
B	61 m²	1
B	61 m²	1
B	61 m²	1
B	61 m²	1
B	61 m²	1
B	61 m²	1
	426 m²	7

BUILDING COVERAGE BY...

UNIT	AREA	TOTAL UNITS
BLOCK H		
B	60 m²	1
B	60 m²	1
B	60 m²	1
B	60 m²	1
B	60 m²	1
B	61 m²	1
B	61 m²	1
B	61 m²	1
B	61 m²	1
B	61 m²	1
B	61 m²	1
	668 m²	11
BLOCK I		
D	37 m²	1
D	37 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
	300 m²	8
BLOCK J		
D	37 m²	1
D	37 m²	1
D	38 m²	1
	112 m²	3
BLOCK K		
D	37 m²	1
D	37 m²	1
D	37 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
	337 m²	9
BLOCK L		
D	38 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
D	38 m²	1
D	92 m²	1
D	99 m²	1
	494 m²	10
TOTAL AREA:	5379 m²	87

3 PIGEON MOUNTAIN TOTAL AREA: 14070㎡

BUILDING COVERAGE:		COMPLIANCE
MIX HOUSING SUB-URBAN ZONE REQUIREMENT:	40% MAX NET SITE AREA (5628㎡)	
PROPOSED AREA:	38.2% (5376㎡)	YES
PREVIOUS BUILDING COVERAGE:	*40.5%(5702m²)*	

S92 RESPONSE

asc architects

3 PIGEON MOUNTAIN ROAD

SITE PLANNING AREA (BUILDING COVERAGE)

N

Project No. :	JOB NO. 22924
Scale:	1 : 300@ A1
Date:	15/05/2024
Revison:	H

RA0200

IMPERVIOUS PAVING COVERAGE:
1,233 m²

IMPERVIOUS PAVING COVERAGE:
1,613 m²

IMPERVIOUS SPACE	
NAME	AREA
BIKE STORAGE AREA	
BIKE STORAGE AREA	12 m²
BINS	
BINS	26 m²
BLOCK A	
TYPE A_1	112 m²
TYPE A-2	440 m²
FOOTPATH	11 m²
DRIVEWAYS / CAR PARK	86 m²
BLOCK B	
TYPE A-2	441 m²
FOOTPATH	14 m²
DRIVEWAYS / CAR PARK	96 m²
BLOCK C	
TYPE E-1	180 m²
BLOCK D	
TYPE A-1	505 m²
FOOTPATH	13 m²
DRIVEWAYS / CAR PARK	121 m²
BLOCK E	
TYPE C-3	348 m²
TYPE C-2	81 m²
TYPE C-1	457 m²
BLOCK F	
TYPE C-1	557 m²

IMPERVIOUS SPACE	
NAME	AREA
BLOCK G	
TYPE B-1	529 m²
BLOCK H	
TYPE B-1	828 m²
BLOCK I	
TYPE D-1	311 m²
FOOTPATH	9 m²
DRIVEWAYS / CAR PARK	120 m²
BLOCK J	
TYPE D-1	117 m²
FOOTPATH	5 m²
BLOCK K	
TYPE D-1	351 m²
DRIVEWAYS / CAR PARK	143 m²
BLOCK L	
TYPE D-1	520 m²
DRIVEWAYS / CAR PARK	118 m²
COMMON FOOTPATH	
FOOTPATH	568 m²
FOOTPATH	
IMPERVIOUS AREA	121 m²
ROAD	
DRIVEWAYS	2354 m²
AREA TOTAL	9595 m²

3 PIGEON MOUNTAIN TOTAL AREA: 14070㎡

IMPERVIOUS AREA:		COMPLIANCE
MIX HOUSING SUB-URBAN ZONE REQUIREMENT:	60% MAX NET SITE AREA (8442㎡)	
PROPOSED AREA:	68.2% (9595㎡)	NO
PREVIOUS AREA:	67.2% (9457㎡)	

S92 RESPONSE

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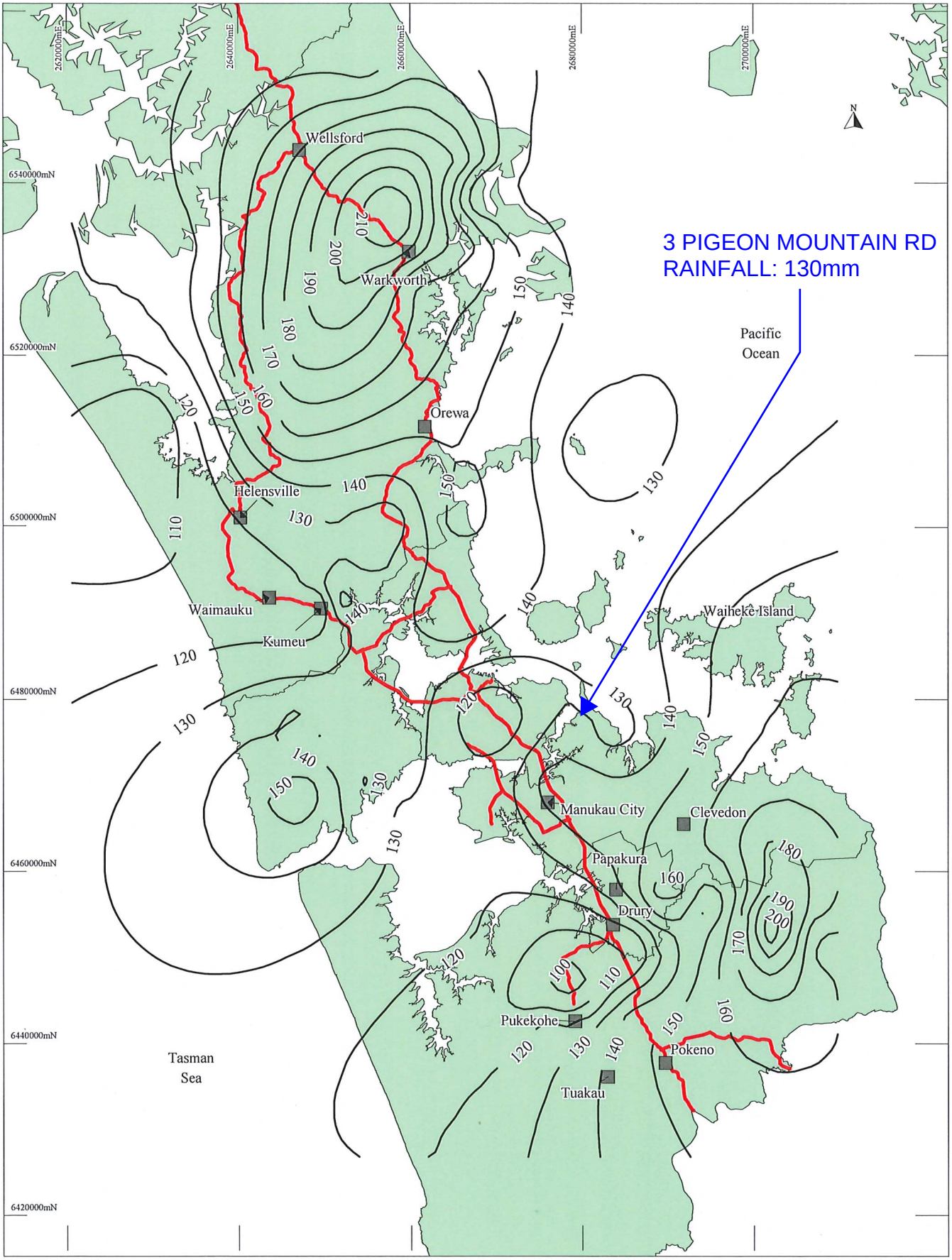
3 PIGEON MOUNTAIN ROAD

SITE PLANNING AREA (IMPERVIOUS AREA)

N

Project No. :	JOB NO. 22924
Scale:	1 : 300@ A1
Date:	15/05/2024
Revison:	H

RA0201



A

Auckland *Regional* Council

Legend: — 90 — Rainfall Contour (mm)

State Highways

Figure A.3
10 Year ARI
Daily Rainfall Depth

Scale: 1:600,000 (at A4)
(Revised 25/08/1999)

Workspace: N:(civil)\2512507757\gis\mapinfo\wor\10yrari.wor Date: 25/08/1999

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Rd Half Moon Bay		**Job No:** 220571/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	10/07/2024

TP108 Rainfall

Rainfall Depth 130 mm
ARI 10 years

Duration hr	**Duration** mins	**Depth** mm	**Intensity** mm/hr (Q_{10})
0.166	10.0	17.52	**105.56**
0.333	20.0	26.95	80.92
0.5	30	33.23	66.47
1	60	46.85	46.85
2	120	63.27	31.64
6	360	96.74	16.12
12	720	124.11	10.34
24	1440	**152.10**	6.39

ARI	Ratio	
2	15.1%	2.1d CC
5	16.4%	2.1d CC
10	17.0%	2.1d CC
20	17.2%	2.1d CC
50	17.6%	2.1d CC
100	32.7%	3.8d CC

ARI: 10
Ratio: 17.0%

As per SW CoP V4

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:** HND HMB Ltd		**Sheet No:** 1
	Job: 3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By: SW **Reviewed** I RCHT	**Phone:** 09 534 6523	**Date:** 15/07/2024

TP108 Worksheet 1: Runoff Parameters and Time of Concentration

Project	87 New Dwellings	**By**	SW	**Date**	15/07/2024
Location	3 Pigeon Mountain Road	**Checked**	RCHT	**Date**	15/07/2024

Circle One **Present** **Developed**

FROM SITE ONLY

1. Runoff Curve Number (CN) and Initial Abstraction (Ia)

Soil name and Classification	Cover Description (cover, type, treatment, and hydrologic condition)	Curve Number CN*	Area (ha)	Product of CN x area
				0.00
	Impervious areas - Roof	98	0.298	29.20
	Impervious areas - Paving	98	0.265	25.99
Volcanic Basalt	Pervious areas	39	0.8441	32.92
				0.00
				0.00
			1.4073	88.12

$$CN_{(weighted)} = \frac{\textit{total product}}{\textit{total area}} = \frac{88.12}{1.41} = 62.61$$

$$Ia_{(weighted)} = \frac{\textit{5 x pervious area}}{\textit{total area}} = \frac{4.2203}{1.41} = 3.00$$

2. Time of Concentration

Channelisation factor, **C** = 0.8 (from Table 4.2)
Catchment length, **L** = 0.087 km (along drainage path, see Sheet 4)
Catchment slope, S_c = 0.104 (see Sheet 4)

$$\text{Runoff factor, } \frac{CN}{200-CN} = \frac{62.61}{137.39} = 0.46$$

$$t_c = 0.14\ C\ L^{0.66} \left[\frac{CN}{200-CN}\right]^{-0.55} Sc^{-0.30} = 0.17 \text{ hrs}$$

SCS Lag for HEC-HMS $t_p = 2/3\ t_c = 0.17$ hrs

Airey Civil, Structural and Fire Engineers	Client:	HND HMB Ltd		Sheet No: 2
	Job:	3 Pigeon Mountain Road Half Moon Bay		Job No: 220571/01
Takapuna **Botany** Queenstown	Calc's By: SW Reviewed I RCHT		Phone: 09 534 652	Date: 15/07/2024

TP108 Worksheet 2: Graphical Peak Flow Rate

Project	87 New Dwellings	**By**	SW	**Date**	15/07/2024
Location	3 Pigeon Mountain Road	**Checked**	RCHT	**Date**	15/07/2024

Status **Present** **Developed**

1. Data

Catchment area, **A** =	0.0141	km^2
Runoff curve number, **CN** =	62.61	(from Worksheet 1)
Initial abstraction, **Ia** =	3.00	mm (from Worksheet 1)
Time of concentration, t_c =	0.17	hrs (from Worksheet 1)

2. Calculate storage

S = [(1000/CN)-10] 25.4 = 151.66 mm

		Storm #1	Storm#2	Storm#3	
3. Average recurrence interval,	**ARI** =	10	100		yr
4. 24hr rainfall depth	P_{24} =	152.1	272.04		mm
5. Compute	**c*** = $(P_{24}-2Ia)/(P_{24}-2Ia+2S)$ =	0.33	0.47		
6. Specific flow rate,	**q*** (from figure 5.1) =	0.088	0.115		
7. Peak flow rate,	$q_p = q^* A P_{24}$ =	0.188	0.440		m^3/s
8. Runoff depth,	$Q_{24} = (P_{24}-Ia)^2/[(P_{24}-Ia)+S]$ =	73.92	172.05		mm
9. Runoff volume,	$V_{24} = 1000\ Q_{24}\ A$ =	1040	2421		m^3

Figure 5.1 Specific Flow Rate

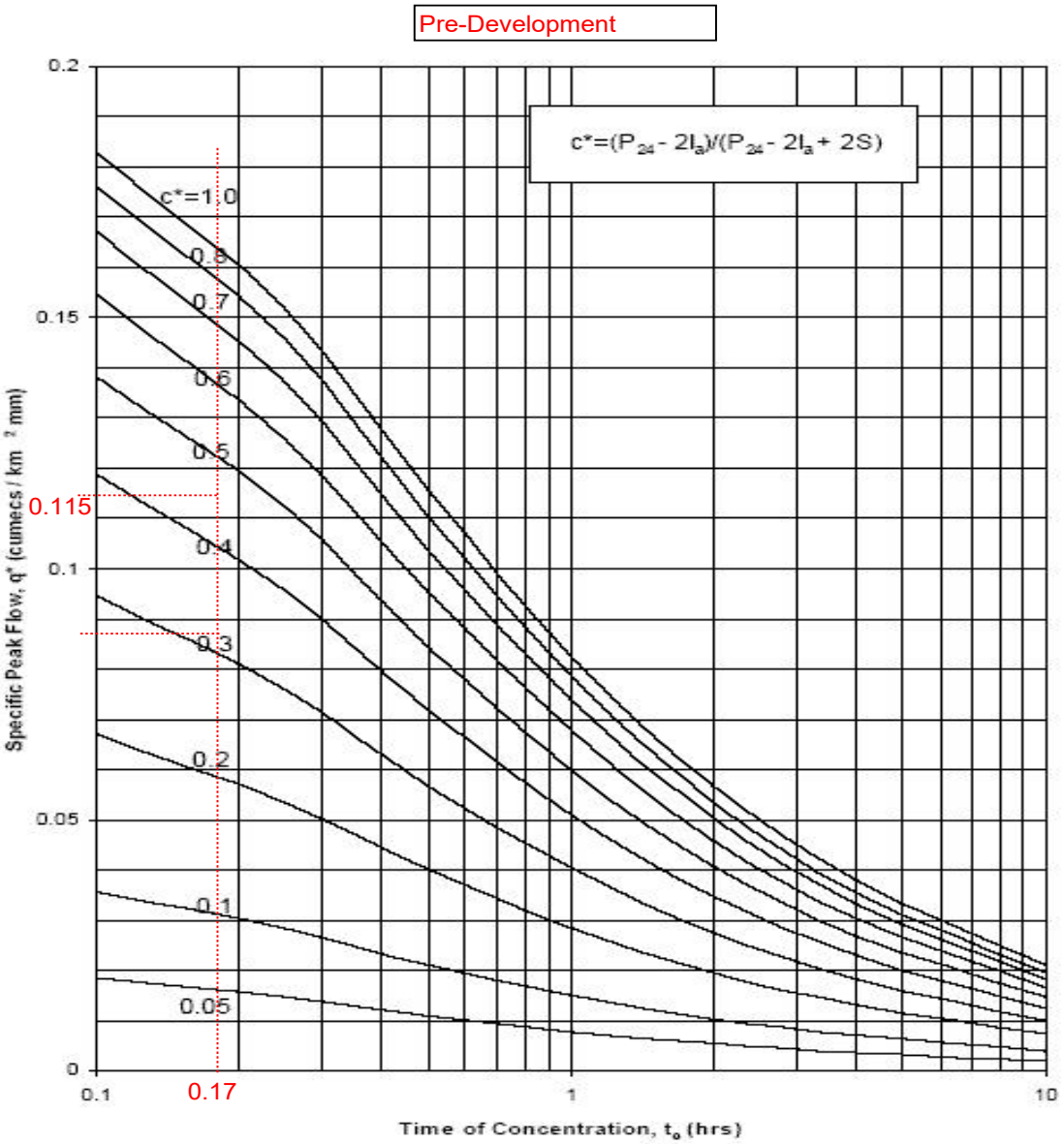


Figure 5.1 - Specific Peak Flow Rate

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:** HND HMB Ltd		**Sheet No:** 7
	Job: 3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By: SW	**Phone:**	**Date:**
	Reviewed RCHT	09 534 6523	15/07/2024

TP108 Worksheet 1: Runoff Parameters and Time of Concentration

Project	87 New Dwellings	**By**	SW	**Date**	15/07/2024
Location	3 Pigeon Mountain Road	**Checked**	RCHT	**Date**	15/07/2024

Circle One **Present** **Developed**

1. Runoff Curve Number (CN) and Initial Abstraction (Ia)

Soil name and Classification	Cover Description (cover, type, treatment, and hydrologic condition)	Curve Number CN*	Area (ha)	Product of CN x area
				0.00
	Impervious areas - Roof	98	0.538	52.68
	Impervious areas - Paving	98	0.422	41.35
Volcanic Basalt	Pervious areas	39	0.4478	17.46
				0.00
				0.00
			1.4073	111.50

$$CN_{(weighted)} = \frac{\textit{total product}}{\textit{total area}} = \frac{111.50}{1.41} = 79.23$$

$$Ia_{(weighted)} = \frac{\textit{5 x pervious area}}{\textit{total area}} = \frac{2.239}{1.41} = 1.59$$

2. Time of Concentration

Channelisation factor, **C** = 0.8 (from Table 4.2)
Catchment length, **L** = 0.087 km (along drainage path, see Sheet 4)
Catchment slope, S_c = 0.104 (see Sheet 4)

$$\text{Runoff factor, } \frac{CN}{200-CN} = \frac{79.23}{120.77} = 0.66$$

$$t_c = 0.14\ C\ L^{0.66} \left[\frac{CN}{200-CN}\right]^{-0.55} Sc^{-0.30} = 0.17 \text{ hrs}$$

SCS Lag for HEC-HMS $t_p = 2 / 3\ t_c = 0.17$ hrs

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:** HND HMB Ltd		**Sheet No:** 5
	Job: 3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By: SW	**Phone:**	**Date:**
	Reviewed RCHT	09 534 652	15/07/2024

TP108 Worksheet 2:Graphical Peak Flow Rate

Project	87 New Dwellings	**By**	SW	**Date**	15/07/2024
Location	3 Pigeon Mountain Road	**Checked**	RCHT	**Date**	15/07/2024

Status **Present** **Developed**

1. Data

151

Catchment area, **A** =	0.0141	km^2	(see Sheet 4)
Runoff curve number, **CN** =	79.23		(from Worksheet 2)
Initial abstraction, **Ia** =	1.59	mm	(from Worksheet 1)
Time of concentration, t_c =	0.17	hrs	(from Worksheet 1)

2. Calculate storage

S = [(1000/CN)-10] 25.4 = 66.60 mm

		Storm #1	Storm#2	Storm#3	
3. Average recurrence interval,	**ARI** =	10	100		yr
4. 24hr rainfall depth	P_{24} =	152.1	272.04		mm
5. Compute	**c*** = $(P_{24}-2Ia)/(P_{24}-2Ia+2S)$ =	0.53	0.67		
6. Specific flow rate,	**q*** (from figure 5.1) =	0.125	0.145		
7. Peak flow rate,	$q_p = q^* A P_{24}$ =	0.268	0.56		m^3/s
8. Runoff depth,	$Q_{24} = (P_{24}-Ia)^2/[(P_{24}-Ia)+S]$ =	104.34	217.01		mm
9. Runoff volume,	$V_{24} = 1000\ Q_{24}\ A$ =	1468	3054		m^3

Figure 5.1 Specific Flow Rate

Post-Development

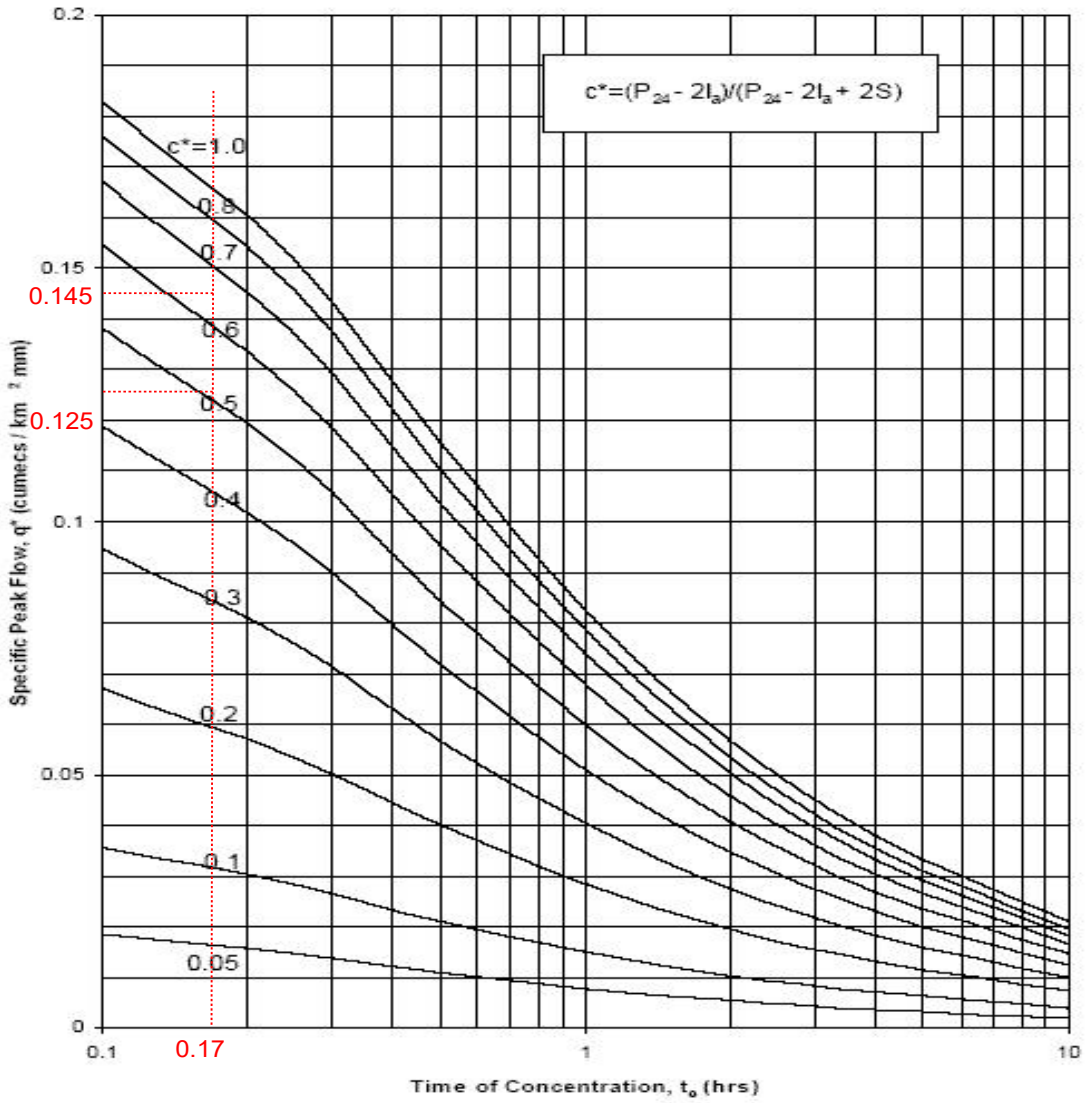


Figure 5.1 - Specific Peak Flow Rate

Airey	Civil, Structural and Fire Engineers	Client:	HND HMB Ltd		Sheet No: 7
		Job:	3 Pigeon Mountain Road Half Moon Bay		Job No: 220571/01
		Calc's By:	SW	Phone:	Date:
Takapuna **Botany** Queenstown		Reviewed	RCHT	09 534 6523	15/07/2024

Slope by Equal Area Method

Elevation (m)	Increment x (m)	Total x (m)	h (m)	Δx (m)	h (m)	ΔA (m2)
16	0		10			
15	9.22	9.22	9	9.22	9.5	87.59
14	5.55	14.77	8	5.55	8.5	47.175
13	2.7	8.25	7	2.7	7.5	20.25
12	7.73	10.43	6	7.73	6.5	50.245
11	4.2	11.93	5	4.2	5.5	23.1
10	5.61	9.81	4	5.61	4.5	25.245
9	22.01	27.62	3	22.01	3.5	77.035
8	22.16	44.17	2	22.16	2.5	55.4
7	3.74	25.9	1	3.74	1.5	5.61
6	4.13	7.87	0	4.13	0.5	2.065

Total:	87.05		393.715
Slope =	10.39%	$\frac{\Delta A}{\Delta x}$	

Airey	Civil, Structural and Fire Engineers	Client:	HND HMB Ltd		Sheet No: 1
		Job:	3 Pigeon Mountain Road Half Moon Bay		Job No: 220571/01
		Calc's By:	SW	Phone:	Date:
Takapuna	Botany Queenstown	Reviewed By:	RCHT	09 534 6523	15/07/2024

Hydrographs- SCS Method:

Pre-dev Site Runoff

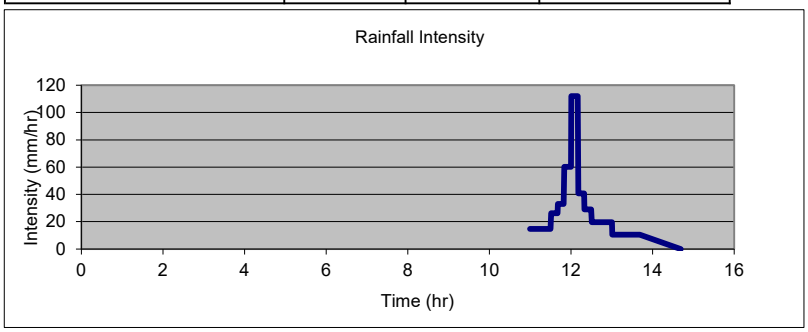
Rainfall Depth (mm) 152.1 10 YEAR ARI

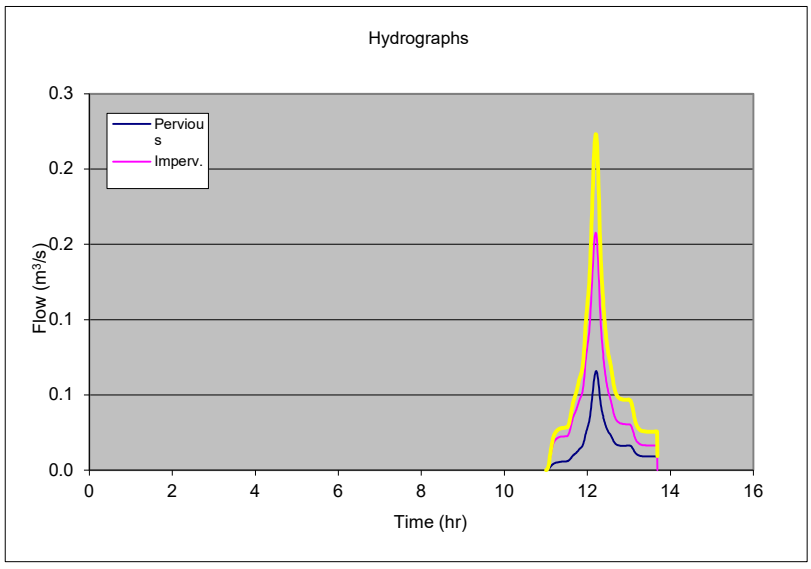
Notes:

1. Inputs
2. Typical inputs for CN, Ia, CF are in 'Typical Inputs' Sheet.
3. Method based on ARC TP108.
4. Maximum Impervious area = 65% for Urban areas to AUP H2.

Catchment Data	Pervious Are	Impervious A
Area (ha)	0.84	0.56
Runoff No (CN)	39	98
Initial Loss (Ia-mm)	5	0
Channel Length (L-m)	87	87
Channel Slope (Sc-m/m)	0.104	0.104
Channel Factor (CF-0.6 to 1.0)	0.8	0.6
Time of Concentration (tc-min)	10.0	10.0
Soil storage (S-mm)	397.3	5.2

Outputs			Total
Runoff (mm)	39.7	147.1	82.7
Peak Flow (m^3/s)	0.066	0.158	**0.2232**
Time (hr) at Peak Flow	12.21	12.20	12.20
Rainfall (mm/h) over tc	102.48	102.48	102.48
Runoff Coefficient - Peak	0.27	0.98	0.56
Runoff Coefficient - Volume	0.26	0.97	0.54



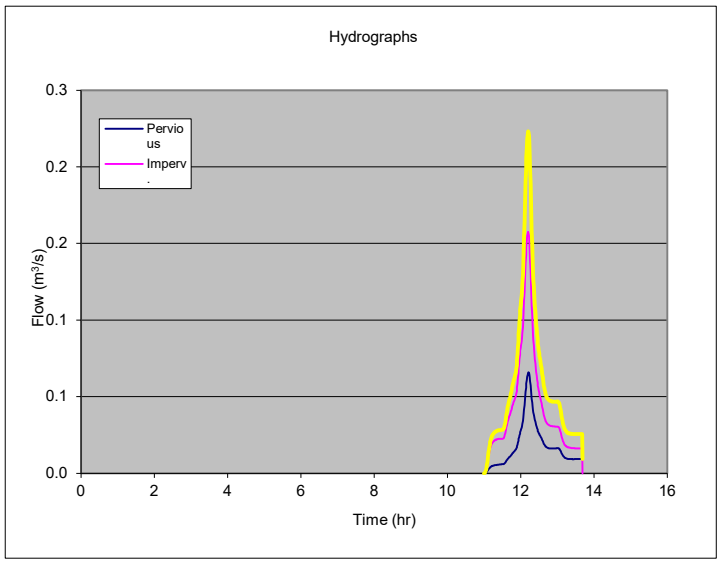


Airey	Civil, Structural and Fire Engineers	Client:	HND HMB Ltd		Sheet No: 1
		Job:	3 Pigeon Mountain Road Bombay		Job No: 220571/01
		Calc's By:	SW	Phone:	Date:
Takapuna	**Botany** Queenstown	Reviewed By:	RCHT	09 534 6523	15/07/2024

Hydrographs- SCS Method:

Total Hydrograph in tabular form: (based on simualtion from above)

Volumetric error in scaling 1.94%



Time (hr)	Flow (m^3/s)	Volume (m^3)
11.001	0.000	0.000
11.347	0.028	17.217
11.491	0.028	14.459
11.601	0.037	12.866
11.694	0.048	14.144
11.776	0.057	15.445
11.850	0.064	16.084
11.918	0.080	17.590
11.981	0.104	20.912
12.040	0.122	24.157
12.096	0.159	28.440
12.150	0.202	34.716
12.201	0.223	39.057
12.230	0.217	22.921
12.259	0.196	21.952
12.290	0.168	19.762
12.320	0.143	17.224
12.352	0.124	15.105
12.384	0.111	13.647
12.417	0.100	12.542
12.451	0.089	11.532
12.486	0.081	10.683
12.522	0.075	10.107
12.559	0.070	9.715
12.597	0.063	9.227
12.637	0.057	8.592
12.678	0.052	8.057
12.721	0.049	7.818
12.767	0.048	7.864
12.814	0.047	8.095
12.864	0.047	8.474
12.917	0.047	8.989
12.975	0.047	9.656
13.037	0.046	10.439
13.106	0.039	10.556
13.184	0.030	9.677
13.277	0.027	9.421
13.398	0.026	11.350
13.690	0.009	18.348

Airey	Civil, Structural and Fire Engineers	Client:	HND HMB Ltd		Sheet No: 1
		Job:	3 Pigeon Mountain Road Half Moon Bay		Job No: 220571/01
		Calc's By:	SW	Phone:	Date:
Takapuna	Botany Queenstown	Reviewed By:	RCHT	09 534 6523	15/07/2024

Hydrographs- SCS Method:

Post-dev Site Runoff

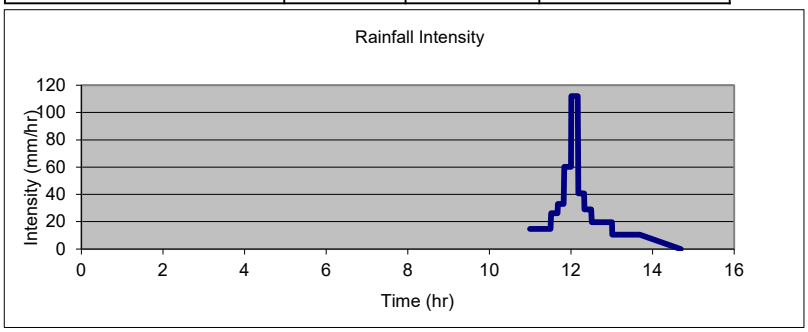
Rainfall Depth (mm) 152.1 10 YEAR ARI

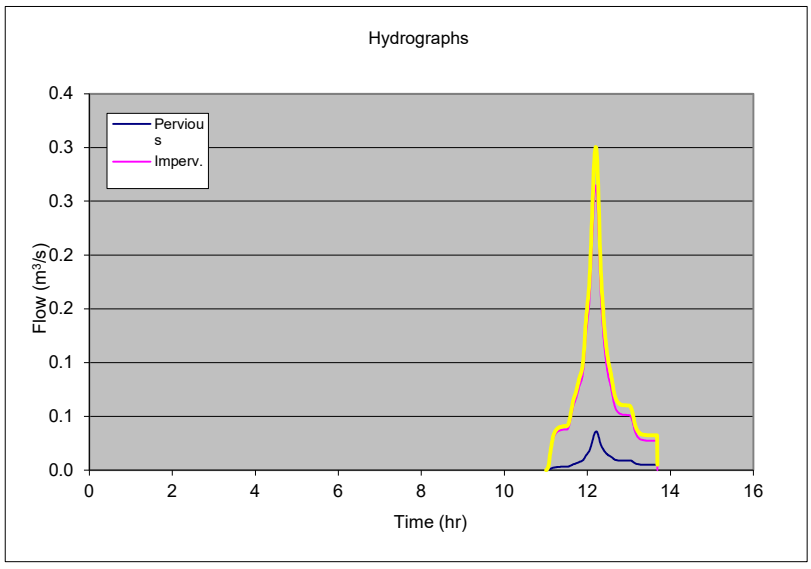
Notes:

1. Inputs
2. Typical inputs for CN, Ia, CF are in 'Typical Inputs' Sheet.
3. Method based on ARC TP108.
4. Maximum Impervious area = 65% for Urban areas to AUP H2.

Catchment Data	Pervious Are	Impervious A
Area (ha)	0.46	0.95
Runoff No (CN)	39	98
Initial Loss (Ia-mm)	5	0
Channel Length (L-m)	87	87
Channel Slope (Sc-m/m)	0.104	0.104
Channel Factor (CF-0.6 to 1.0)	0.8	0.6
Time of Concentration (tc-min)	10.0	10.0
Soil storage (S-mm)	397.3	5.2

Outputs			Total
Runoff (mm)	39.7	147.1	111.9
Peak Flow (m^3/s)	0.036	0.265	**0.3006**
Time (hr) at Peak Flow	12.21	12.20	12.20
Rainfall (mm/h) over tc	102.48	102.48	102.48
Runoff Coefficient - Peak	0.27	0.98	0.75
Runoff Coefficient - Volume	0.26	0.97	0.74



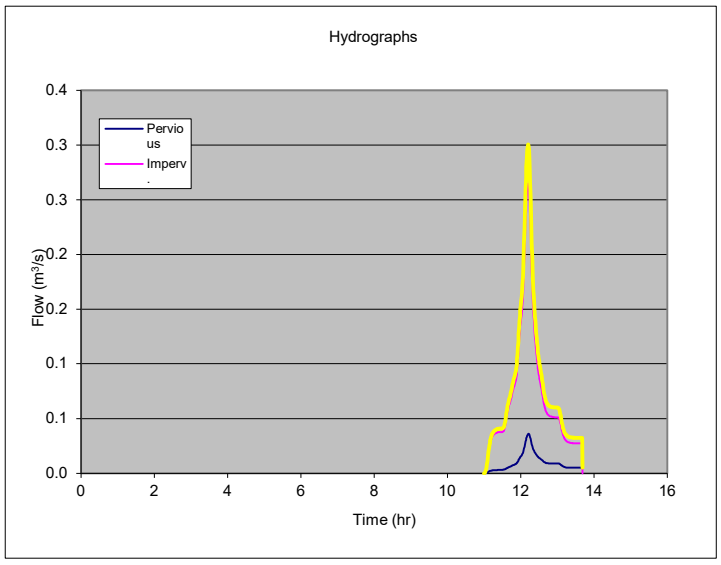


Airey	Civil, Structural and Fire Engineers	Client:	HND HMB Ltd		Sheet No: 1
		Job:	3 Pigeon Mountain Road Bombay		Job No: 220571/01
		Calc's By:	SW	Phone:	Date:
Takapuna **Botany** Queenstown		Reviewed By:	RCHT	09 534 6523	15/07/2024

Hydrographs- SCS Method:

Total Hydrograph in tabular form: (based on simualtion from above)

Volumetric error in scaling 2.36%

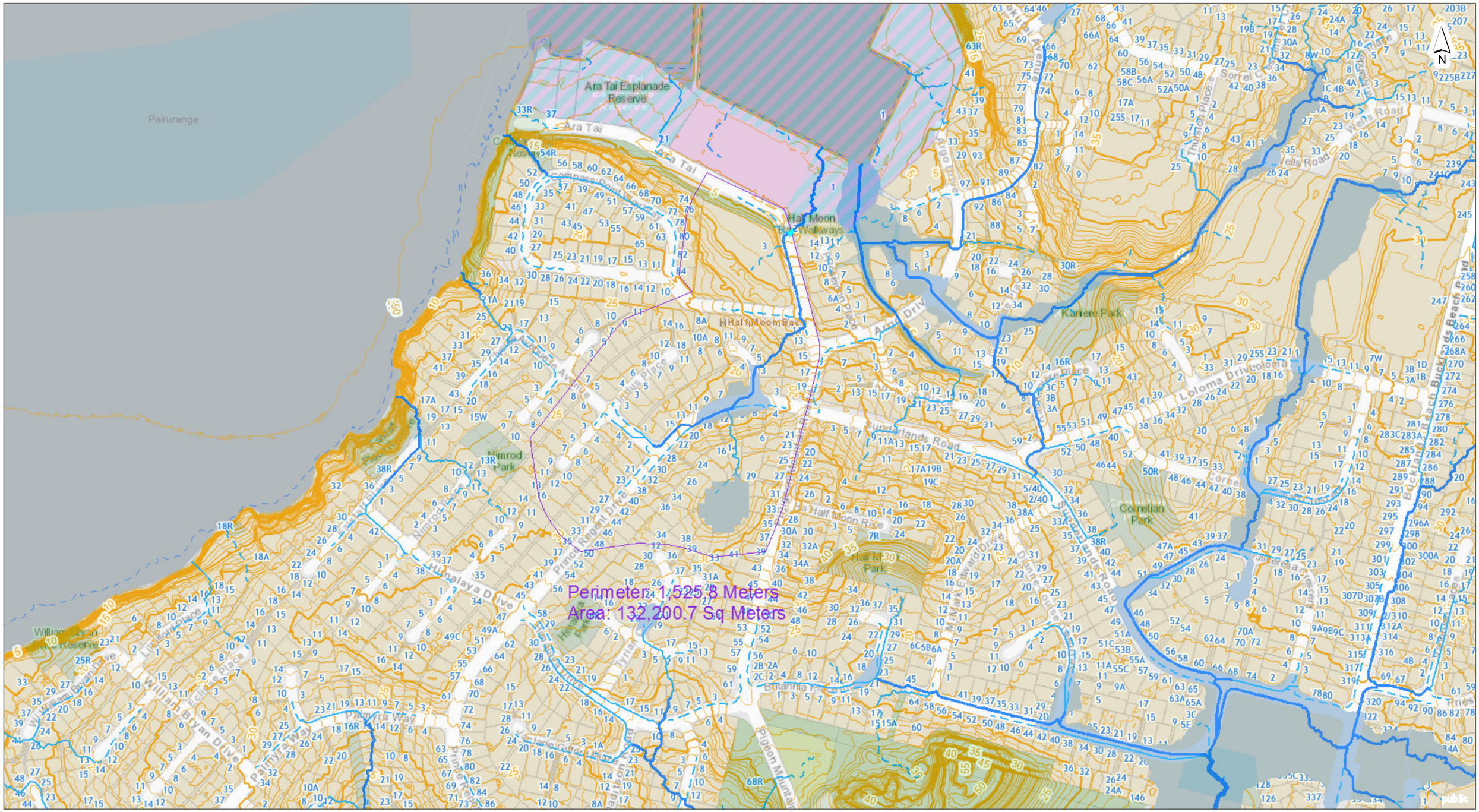


Time (hr)	Flow (m^3/s)	Volume (m^3)
11.001	0.000	0.000
11.347	0.040	25.031
11.491	0.041	20.960
11.601	0.053	18.542
11.694	0.069	20.274
11.776	0.081	22.020
11.850	0.091	22.804
11.918	0.112	24.783
11.981	0.145	29.261
12.040	0.169	33.565
12.096	0.218	39.172
12.150	0.274	47.372
12.201	0.301	52.831
12.230	0.291	30.812
12.259	0.262	29.398
12.290	0.224	26.378
12.320	0.189	22.917
12.352	0.164	20.033
12.384	0.147	18.039
12.417	0.131	16.528
12.451	0.117	15.154
12.486	0.106	14.002
12.522	0.098	13.214
12.559	0.091	12.673
12.597	0.083	12.012
12.637	0.074	11.166
12.678	0.067	10.452
12.721	0.064	10.125
12.767	0.062	10.168
12.814	0.061	10.452
12.864	0.060	10.923
12.917	0.060	11.570
12.975	0.060	12.409
13.037	0.059	13.392
13.106	0.050	13.521
13.184	0.038	12.378
13.277	0.034	12.030
13.398	0.033	14.467
13.690	0.005	19.815

Airey	Civil, Structural and Fire Engineers	Client:	HND HMB Ltd		Sheet No:
					1
		Job:	3 Pigeon Mountain Road Half Moon Bay		Job No: 220571/01
		Calc's By:	SW	Phone:	Date:
Takapuna **Botany** Queenstown		Reviewed By:	RCHT	09 534 6523	16/07/2024

Hydrographs- SCS Method Runoff Difference

Pre Devleopment			Post Development			Difference
Time (hr)	Flow (m^3/s)	Volume (m^3)	Time (hr)	Flow (m^3/s)	Volume (m^3)	Volume (m^3)
11.918	0.080	17.590	11.918	0.112	24.783	7.193
11.981	0.104	20.912	11.981	0.145	29.261	8.349
12.040	0.122	24.157	12.040	0.169	33.565	9.408
12.096	0.159	28.440	12.096	**0.218**	39.172	10.732
12.150	0.202	34.716	12.150	**0.274**	47.372	12.656
12.201	**0.223**	39.057	12.201	**0.301**	52.831	13.774
12.230	0.217	22.921	12.230	**0.291**	30.812	7.890
12.259	0.196	21.952	12.259	**0.262**	29.398	7.446
12.290	0.168	19.762	12.290	**0.224**	26.378	6.616
12.320	0.143	17.224	12.320	0.189	22.917	5.694
12.352	0.124	15.105	12.352	0.164	20.033	4.928
12.384	0.111	13.647	12.384	0.147	18.039	4.392
					Miimum Mitigation Volume (m^3)	**59.114**



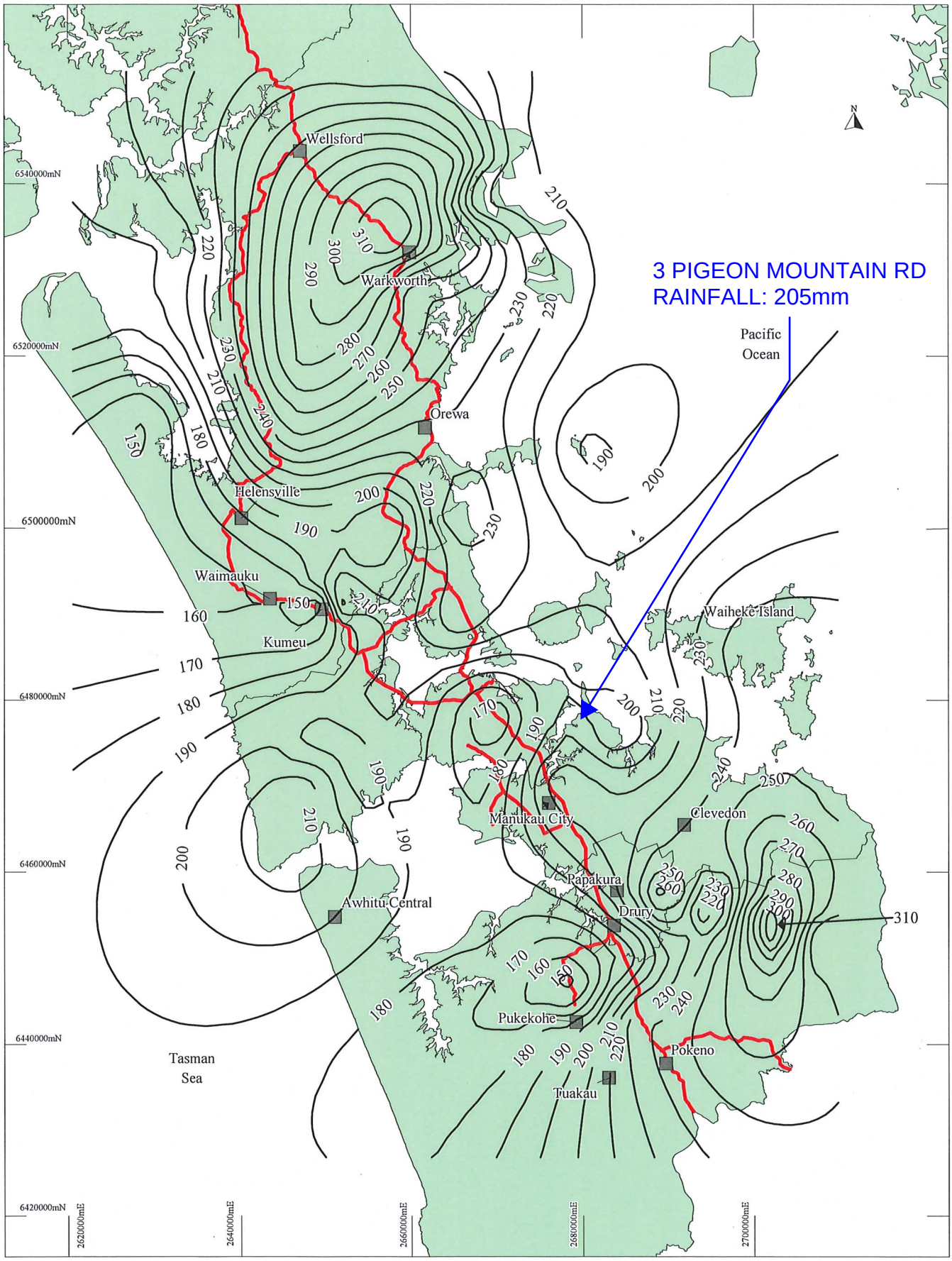
OLFP Catchment to Marina Carprt

0 50 100 150
Meters

Scale @ A3
= 1:5,000

Date Printed:
12/07/2024

Auckland Council
Te Kaunihera o Tāmaki Makaurau



A

Auckland *Regional* Council

Legend: — 90 — Rainfall Contour (mm)

State Highways

Figure A.6
100 Year ARI
Daily Rainfall Depth

Scale: 1:600,000 (at A4)
(Revised 25/08/1999)

Workspace: N:(civil)\25\2507757\gis\mapinfo\wor\100yrari.wor Date: 25/08/1999

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Rd Half Moon Bay		**Job No:** 220517/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	15/07/2024

TP108 Rainfall

Rainfall Depth 205 mm
ARI 100 years

Duration hr	**Duration** mins	**Depth** mm	**Intensity** mm/hr (Q_{10})
0.166	10.0	31.34	**188.79**
0.333	20.0	48.19	144.72
0.5	30	59.44	118.88
1	60	83.79	83.79
2	120	113.17	56.58
6	360	173.01	28.84
12	720	221.98	18.50
24	1440	**272.04**	11.43

ARI	Ratio	
2	15.1%	2.1d CC
5	16.4%	2.1d CC
10	17.0%	2.1d CC
20	17.2%	2.1d CC
50	17.6%	2.1d CC
100	32.7%	3.8d CC

ARI: 100
Ratio: 32.7%

As per SW CoP V4

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:** HND HMB Ltd		**Sheet No:** 1
	Job: 3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By: SW	**Phone:**	**Date:**
	Reviewed RCHT	09 534 6523	15/07/2024

TP108 Worksheet 1: Runoff Parameters and Time of Concentration

Project	Marina Carpark OLF	**By**	SW	**Date**	15/07/2024
Location	3 Pigeon Mountain Road	**Checked**	RCHT	**Date**	15/07/2024

Circle One **Present** **Developed**

Whole Catchment

1. Runoff Curve Number (CN) and Initial Abstraction (Ia)

Soil name and Classification	Cover Description (cover, type, treatment, and hydrologic condition)	Curve Number CN*	Area (ha)	Product of CN x area
				0.00
	Impervious areas - Roof (Site + 40% of rest of catchment (MHSU Zone))	98	5.020	491.91
	Impervious areas - Paving (Site + 20% of rest of catchment (MHSU Zone, 60%-40%))	98	2.628	257.52
Tuff/Basalt	Pervious areas	39	5.573	217.34
				0.00
				0.00
			13.220	966.77

$$CN_{(weighted)} = \frac{\textit{total product}}{\textit{total area}} = \frac{966.77}{13.22} = 73.13$$

$$Ia_{(weighted)} = \frac{\textit{5 x pervious area}}{\textit{total area}} = \frac{27.86384}{13.22} = 2.11$$

2. Time of Concentration

Channelisation factor, **C** = 0.8 (from Table 4.2)
Catchment length, **L** = 0.576 km (along drainage path, see Sheet 4)
Catchment slope, S_c = 0.048 (see Sheet 4)

$$\text{Runoff factor, } \frac{CN}{200-CN} = \frac{73.13}{126.87} = 0.58$$

$$t_c = 0.14\ C\ L^{0.66} \left[\frac{CN}{200-CN}\right]^{-0.55} Sc^{-0.30} = 0.26 \text{ hrs}$$

SCS Lag for HEC-HMS $t_p = 2 / 3\ t_c = 0.17$ hrs

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:** HND HMB Ltd		**Sheet No:** 2
	Job: 3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By: SW **Reviewed I** RCHT	**Phone:** 09 534 652	**Date:** 15/07/2024

TP108 Worksheet 2:Graphical Peak Flow Rate

Project	Marina Carpark OLF	**By**	SW	**Date**	15/07/2024
Location	3 Pigeon Mountain Road	**Checked**	RCHT	**Date**	15/07/2024

Status **Present** **Developed**

1. Data

Catchment area, **A** =	0.1322	km^2
Runoff curve number, **CN** =	73.13	(from Worksheet 1)
Initial abstraction, **Ia** =	2.11	mm (from Worksheet 1)
Time of concentration, t_c =	0.26	hrs (from Worksheet 1)

2. Calculate storage

S = [(1000/CN)-10] 25.4 = 93.33 mm

		Storm #1	Storm#2	Storm#3	
3. Average recurrence interval,	**ARI** =	10	100		yr
4. 24hr rainfall depth	P_{24} =	152.1	272.04		mm
5. Compute	**c*** = $(P_{24}-2Ia)/(P_{24}-2Ia+2S)$ =	0.44	0.59		
6. Specific flow rate,	**q*** (from figure 5.1) =	0.102	0.123		
7. Peak flow rate,	$q_p = q^* A P_{24}$ =	2.051	4.424		m^3/s
8. Runoff depth,	$Q_{24} = (P_{24}-Ia)^2/[(P_{24}-Ia)+S]$ =	92.46	200.58		mm
9. Runoff volume,	$V_{24} = 1000\ Q_{24}\ A$ =	12223	26517		m^3

Figure 5.1 Specific Flow Rate

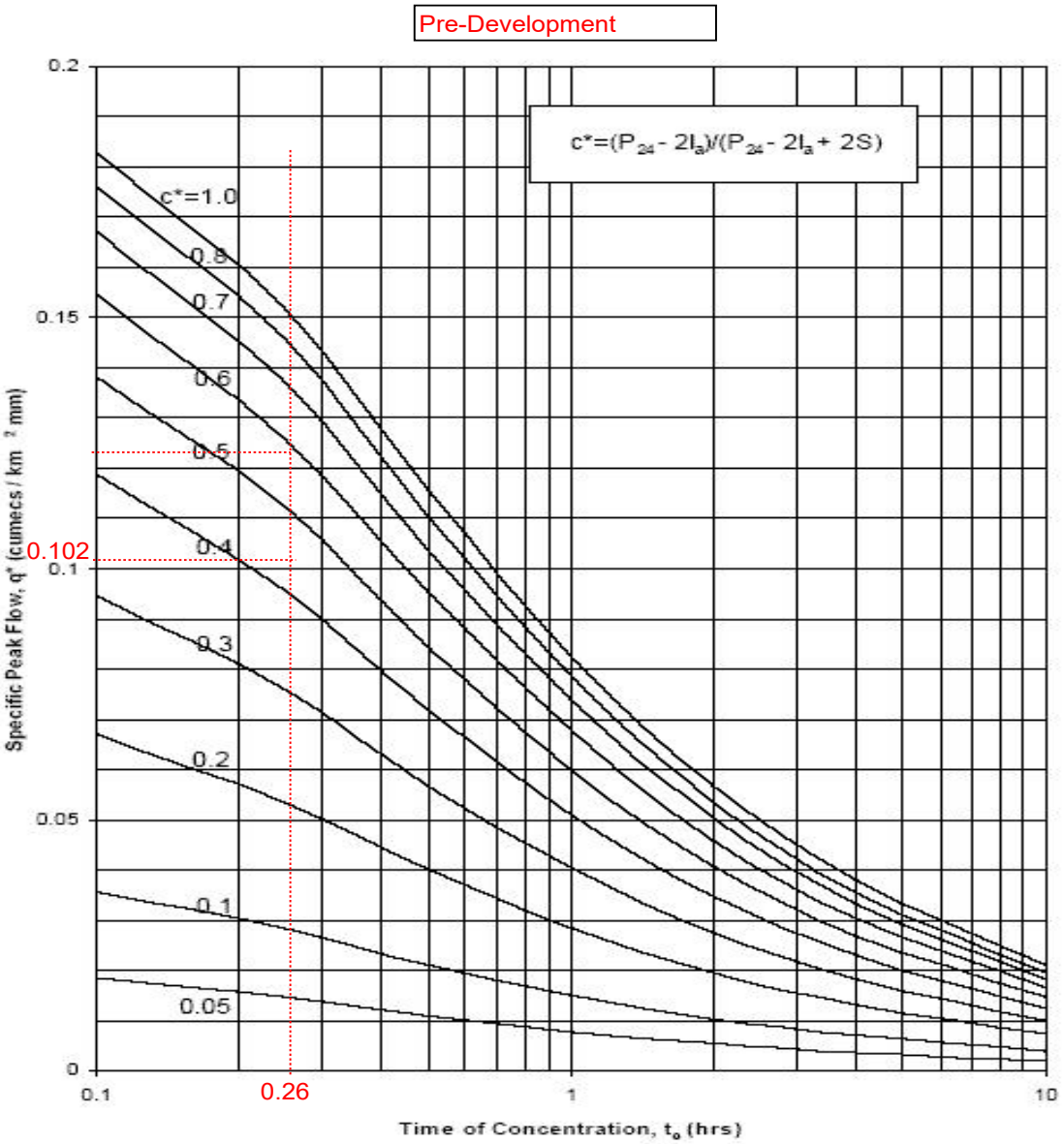


Figure 5.1 - Specific Peak Flow Rate

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:** HND HMB Ltd		**Sheet No:** 7
	Job: 3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By: SW	**Phone:**	**Date:**
	Reviewed RCHT	09 534 6523	15/07/2024

TP108 Worksheet 1: Runoff Parameters and Time of Concentration

Project	Marina Carpark OLF	**By**	SW	**Date**	15/07/2024
Location	3 Pigeon Mountain Road	**Checked**	RCHT	**Date**	15/07/2024

Circle One **Present** **Developed**

1. Runoff Curve Number (CN) and Initial Abstraction (Ia)

Soil name and Classification	Cover Description (cover, type, treatment, and hydrologic condition)	Curve Number CN*	Area (ha)	Product of CN x area
				0.00
	Impervious areas - Roof (Site + 40% of rest of catchment (MHSU Zone))	98	5.263	515.75
	Impervious areas - Paving (Site + 20% of rest of catchment (MHSU Zone, 60%-40%))	98	2.784	272.88
Tuff/Basalt	Pervious areas	39	5.1729	201.74
				0.00
				0.00
			13.2201	990.37

$$CN_{(weighted)} = \frac{\textit{total product}}{\textit{total area}} = \frac{990.37}{13.22} = 74.91$$

$$Ia_{(weighted)} = \frac{\textit{5 x pervious area}}{\textit{total area}} = \frac{25.86454}{13.22} = 1.96$$

2. Time of Concentration

Channelisation factor, **C** = 0.8 (from Table 4.2)
Catchment length, **L** = 0.576 km (along drainage path, see Sheet 4)
Catchment slope, S_c = 0.048 (see Sheet 4)

$$\text{Runoff factor, } \frac{CN}{200-CN} = \frac{74.91}{125.09} = 0.60$$

$$t_c = 0.14\ C\ L^{0.66} \left[\frac{CN}{200-CN}\right]^{-0.55} Sc^{-0.30} = 0.26 \text{ hrs}$$

SCS Lag for HEC-HMS $t_p = 2/3\ t_c = 0.17$ hrs

Airey Civil, Structural and Fire Engineers	Client:	HND HMB Ltd		Sheet No: 5
	Job:	3 Pigeon Mountain Road Half Moon Bay		Job No: 220571/01
Takapuna **Botany** Queenstown	Calc's By: SW Reviewed RCHT		Phone: 09 534 652	Date: 15/07/2024

TP108 Worksheet 2:Graphical Peak Flow Rate

Project	Marina Carpark OLF	**By**	SW	**Date**	15/07/2024
Location	3 Pigeon Mountain Road	**Checked**	RCHT	**Date**	15/07/2024

Status **Present** **Developed**

1. Data

Catchment area, **A** =	0.1322	km^2	(see Sheet 4)
Runoff curve number, **CN** =	74.91		(from Worksheet 2)
Initial abstraction, **Ia** =	1.96	mm	(from Worksheet 1)
Time of concentration, t_c =	0.26	hrs	(from Worksheet 1)

2. Calculate storage

S = [(1000/CN)-10] 25.4 = 85.06 mm

		Storm #1	Storm#2	Storm#3	
3. Average recurrence interval,	**ARI** =	10	100		yr
4. 24hr rainfall depth	P_{24} =	152.1	272.04		mm
5. Compute	**c*** = $(P_{24}-2Ia)/(P_{24}-2Ia+2S)$ =	0.47	0.61		
6. Specific flow rate,	**q*** (from figure 5.1) =	0.105	0.127		
7. Peak flow rate,	$q_p = q^* A P_{24}$ =	2.111	4.567		m^3/s
8. Runoff depth,	$Q_{24} = (P_{24}-Ia)^2/[(P_{24}-Ia)+S]$ =	95.85	205.40		mm
9. Runoff volume,	$V_{24} = 1000\ Q_{24}\ A$ =	12671	27154		m^3

Figure 5.1 Specific Flow Rate

Post-Development

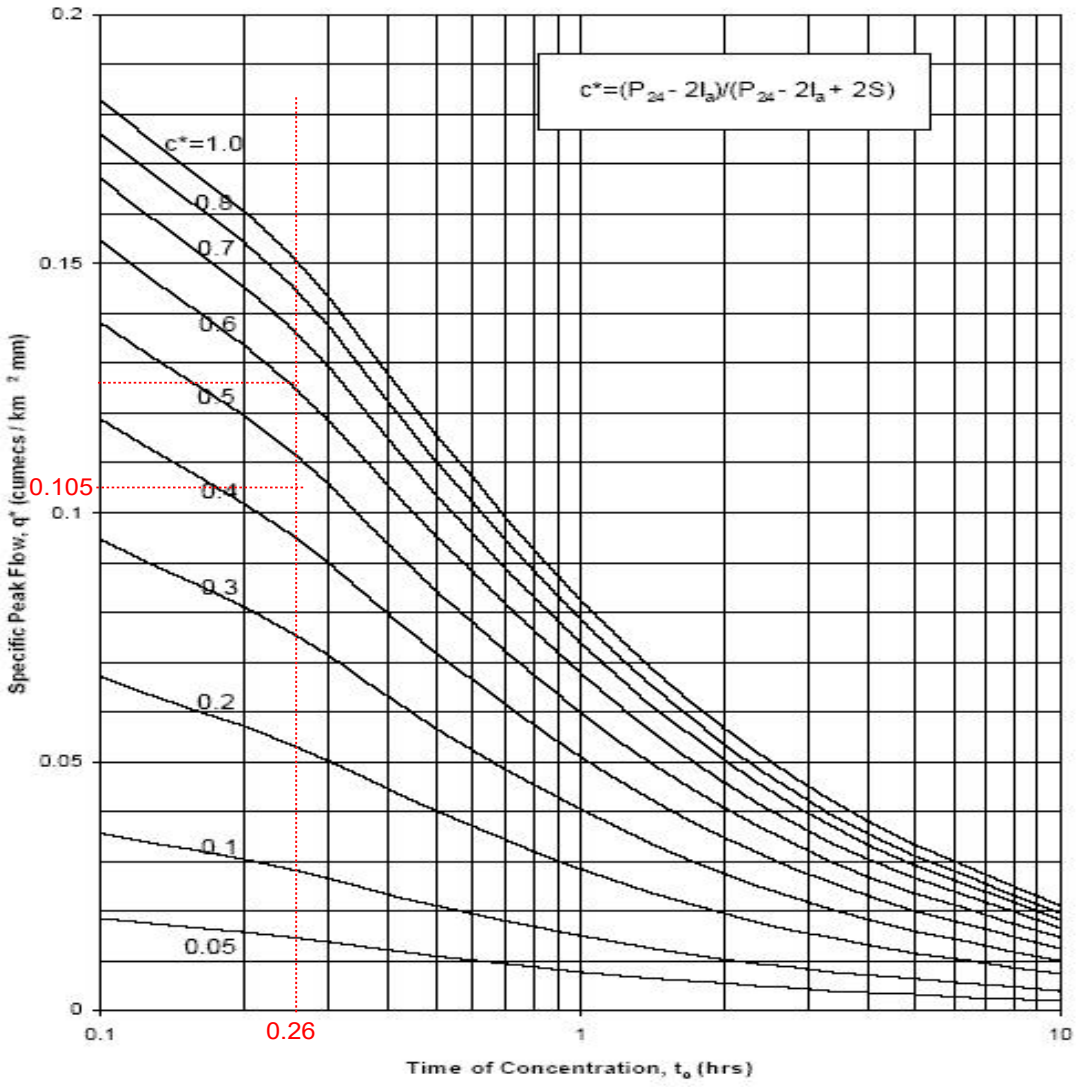


Figure 5.1 - Specific Peak Flow Rate

Airey Civil, Structural and Fire Engineers	Client:	HND HMB Ltd		Sheet No: 7
	Job:	3 Pigeon Mountain Road Half Moon Bay		Job No: 220571/01
	Calc's By:	SW	Phone:	Date:
Takapuna **Botany** Queenstown	Reviewed	RCHT	09 534 6523	15/07/2024

Slope by Equal Area Method

Elevation (m)	Increment x (m)	Total x (m)	h (m)	Δx (m)	h (m)	ΔA (m2)
30	0		25			
25	131.1	131.1	20	131.1	22.5	2949.75
20	106.1	237.2	15	106.1	17.5	1856.75
19.5	9.8	115.9	14.5	9.8	14.75	144.55
18	78.9	88.7	13	78.9	13.75	1084.875
18.5	17.7	96.6	13.5	17.7	13.25	234.525
19	42	59.7	14	42	13.75	577.5
18	17.5	59.5	13	17.5	13.5	236.25
11	65.3	82.8	6	65.3	9.5	620.35
10.5	6.2	71.5	5.5	6.2	5.75	35.65
10	19.2	25.4	5	19.2	5.25	100.8
5	82.3	101.5	0	82.3	2.5	205.75
Total:	576.1					8046.75
Slope =	4.85%	$\frac{\Delta A}{\Delta x}$				

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	15/07/2024

CHANNEL CAPACITY CALCULATIONS — EXISTING Ara-Tai/PMR Carriageway

INPUTS

Case (A or B): B

Case A

Flow (m^3/s): 4.424

Case B

Slope (S_o): 0.008

Water level (m): 4.23 — 0.230

MFFL: 4.73

Channel Geometry x (m)	y (m)	Mannings "n" value	Sinuosity	
0	4.38	0.013		Carriageway
0	4.38	0.013		Carriageway
8	4.44	0.013		Carriageway
26	4.27	0.013		Carriageway
28	4.27	0.013		Carriageway
54	4	0.013		Carriageway
56	4.15	0.013		Carriageway
58	4.25	0.013		Carriageway
60	4.28	0.013		Carriageway
-1				

The table can input 10 (x,y) co-ordinates.
The (x,y) pairs should be in order
Terminate list by making x = -1.0

Flow distribution is based on velocity and energy gradient common to all parts of the channel. i.e.
$n=(\sum(P_1 n_1^{1.5}+....)/P)^{0.67}$

Sinuosity is the relative length of that flow channel element compared to other elements and input S_o.
Default value is 1.0.

OUTPUTS

Normal Flow Conditions

Flow (m^3/s)	4.550	OK
Velocity (m/s)	1.558	
S_o or S_f	0.0076	
Energy (m)	4.354	
Froude No	1.477	
Bed Stress (Pa)	8.433	
Equivalent "n"	0.013	
Equivalent k_s(mm)	1.64	

Geometry for wetted conditions

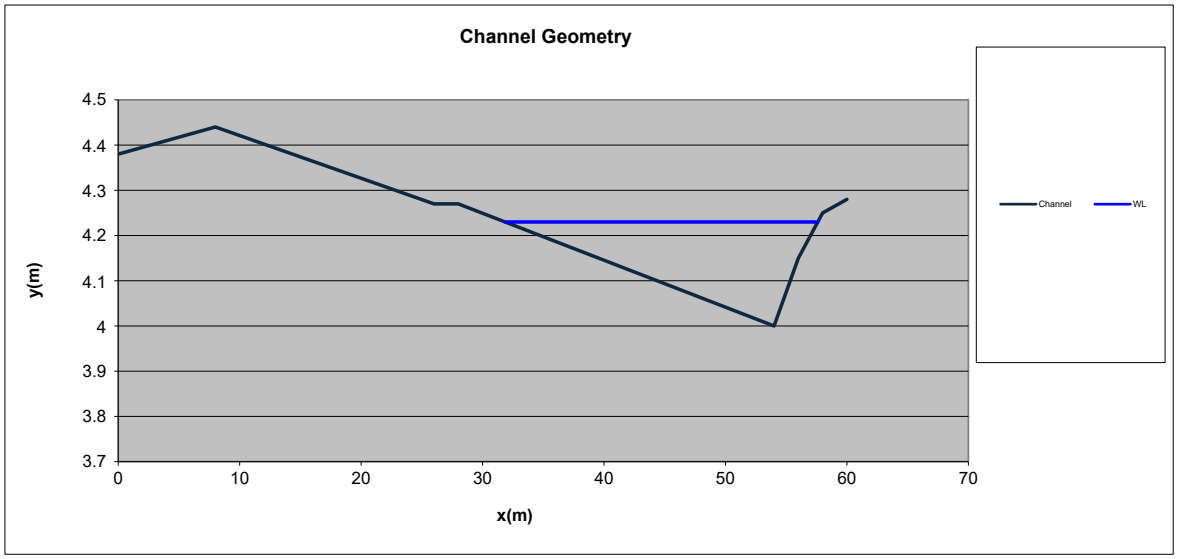
Depth (d-m)	4.230
Area (A-m^2)	2.921
Width (B-m)	25.748
Perimeter (P-m)	25.757

Critical Flow Conditions

Flow (m^3/s)	3.082	INCREASE CHANI
Velocity (m/s)	1.055	
Energy (m)	4.287	

Typical "n" values

Concrete	0.013
Gunite	0.017
Smooth earth	0.02
Clean channel	0.03
Natural Channel	0.035-0.065
Floodplain	0.05-0.15
Overland flow (grass)	0.2-0.5



Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	15/07/2024

CHANNEL CAPACITY CALCULATIONS — POST DEV Ara-Tai/PMR Carriageway

INPUTS

Case (A or B): B

Case A

Flow (m^3/s): 4.567

Case B

Slope (S_o): 0.008

Water level (m): 4.23 — 0.231

MFFL: 4.73

Channel Geometry x (m)	Channel Geometry y (m)	Mannings "n" value	Sinuosity	
0	4.38	0.013		Carriageway
0	4.38	0.013		Carriageway
8	4.44	0.013		Carriageway
26	4.27	0.013		Carriageway
28	4.27	0.013		Carriageway
54	4	0.013		Carriageway
56	4.15	0.013		Carriageway
58	4.25	0.013		Carriageway
60	4.28	0.013		Carriageway
-1				

The table can input 10 (x,y) co-ordinates.
The (x,y) pairs should be in order
Terminate list by making x = -1.0

Flow distribution is based on velocity and energy gradient common to all parts of the channel. i.e.
$n=(\sum(P_1 n_1^{1.5}+....)/P)^{0.67}$

Sinuosity is the relative length of that flow channel element compared to other elements and input S_o.
Default value is 1.0.

OUTPUTS

Normal Flow Conditions

Flow (m^3/s)	4.604	OK
Velocity (m/s)	1.562	
S_o or S_f	0.0076	
Energy (m)	4.355	
Froude No	1.478	
Bed Stress (Pa)	8.469	
Equivalent "n"	0.013	
Equivalent k_s(mm)	1.64	

Geometry for wetted conditions

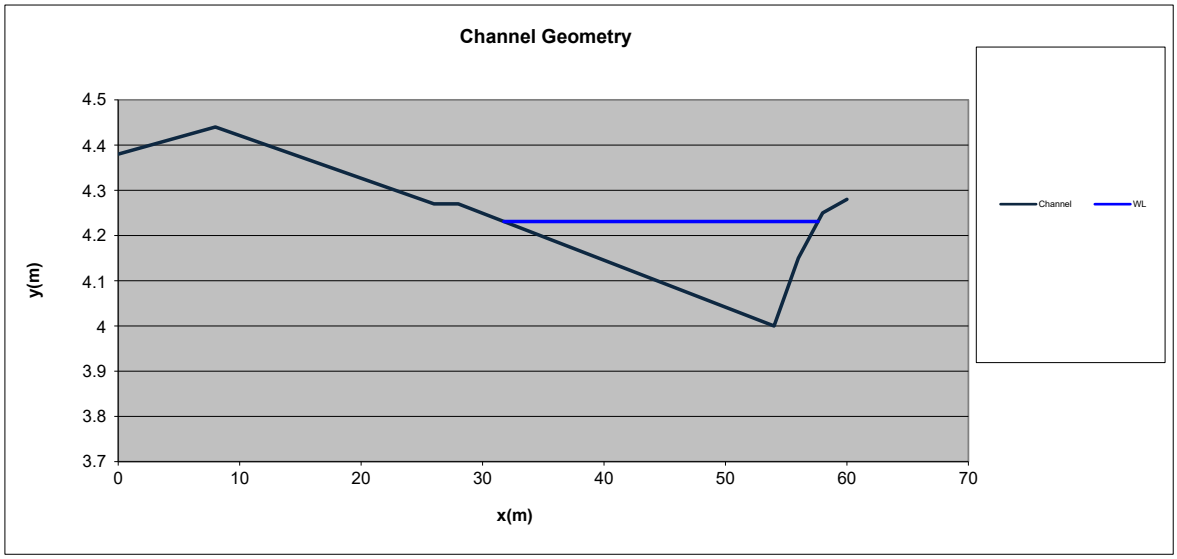
Depth (d-m)	4.231
Area (A-m^2)	2.947
Width (B-m)	25.864
Perimeter (P-m)	25.873

Critical Flow Conditions

Flow (m^3/s)	3.115	INCREASE CHANI
Velocity (m/s)	1.057	
Energy (m)	4.288	

Typical "n" values

Concrete	0.013
Gunite	0.017
Smooth earth	0.02
Clean channel	0.03
Natural Channel	0.035-0.065
Floodplain	0.05-0.15
Overland flow (grass)	0.2-0.5



Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	15/07/2024

CHANNEL CAPACITY CALCULATIONS — EXISTING Marina Carpark

INPUTS

Case (A or B): B

Case A

Flow (m^3/s): 4.424

Case B

Slope (S_o): 0.013

Water level (m): 3.87 — 0.117

MFFL: 4.37

Channel Geometry x (m)	y (m)	Mannings "n" value	Sinuosity	
0	3.94	0.013		building
8	3.76	0.013		carpark
10	3.82	0.013		carpark
18	3.89	0.013		carpark
34	3.75	0.013		carpark
36	3.75	0.013		carpark
40	3.76	0.013		carpark
56	3.83	0.013		carpark
58	4.01	0.013		carpark
-1				

The table can input 10 (x,y) co-ordinates.
The (x,y) pairs should be in order
Terminate list by making x = -1.0

Flow distribution is based on velocity and energy gradient common to all parts of the channel. i.e.
$n=(\sum(P_1 n_1^{1.5}+....)/P)^{0.67}$

Sinuosity is the relative length of that flow channel element compared to other elements and input S_o.
Default value is 1.0.

OUTPUTS

Normal Flow Conditions

Flow (m^3/s)	4.480 OK
Velocity (m/s)	1.418
S_o or S_f	0.0130
Energy (m)	3.970
Froude No	1.764
Bed Stress (Pa)	8.407
Equivalent "n"	0.013
Equivalent k_s(mm)	1.75

Geometry for wetted conditions

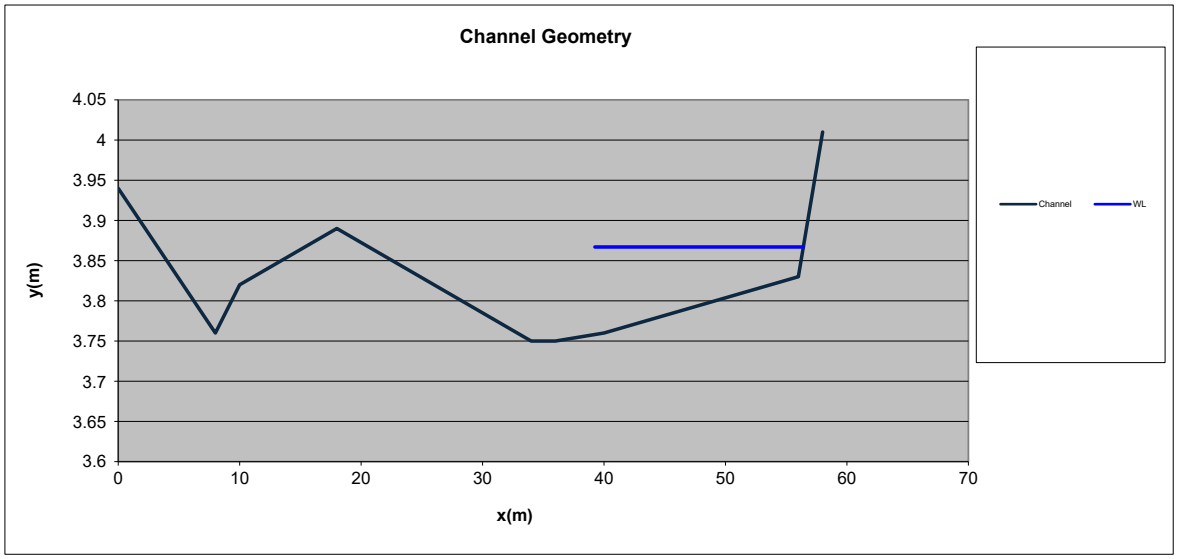
Depth (d-m)	3.867
Area (A-m^2)	3.158
Width (B-m)	47.910
Perimeter (P-m)	47.914

Critical Flow Conditions

Flow (m^3/s)	2.540 INCREASE CHANI
Velocity (m/s)	0.804
Energy (m)	3.900

Typical "n" values

Concrete	0.013
Gunite	0.017
Smooth earth	0.02
Clean channel	0.03
Natural Channel	0.035-0.065
Floodplain	0.05-0.15
Overland flow (grass)	0.2-0.5



Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	15/07/2024

CHANNEL CAPACITY CALCULATIONS — POST DEV Marina Carpark

INPUTS

Case (A or B): B

Case A

Flow (m^3/s): 4.567

Case B

Slope (S_o): 0.013

Water level (m): 3.87 — 0.118

MFFL: 4.37

Channel Geometry x (m)	y (m)	Mannings "n" value	Sinuosity	
0	3.94	0.013		building
8	3.76	0.013		carpark
10	3.82	0.013		carpark
18	3.89	0.013		carpark
34	3.75	0.013		carpark
36	3.75	0.013		carpark
40	3.76	0.013		carpark
56	3.83	0.013		carpark
58	4.01	0.013		carpark
-1				

The table can input 10 (x,y) co-ordinates.
The (x,y) pairs should be in order
Terminate list by making x = -1.0

Flow distribution is based on velocity and energy gradient common to all parts of the channel. i.e.
$n=(\sum(P_1 n_1^{1.5}+....)/P)^{0.67}$

Sinuosity is the relative length of that flow channel element compared to other elements and input S_o.
Default value is 1.0.

OUTPUTS

Normal Flow Conditions

Flow (m^3/s)	4.576 OK
Velocity (m/s)	1.427
S_o or S_f	0.0130
Energy (m)	3.972
Froude No	1.766
Bed Stress (Pa)	8.484
Equivalent "n"	0.013
Equivalent k_s(mm)	1.75

Geometry for wetted conditions

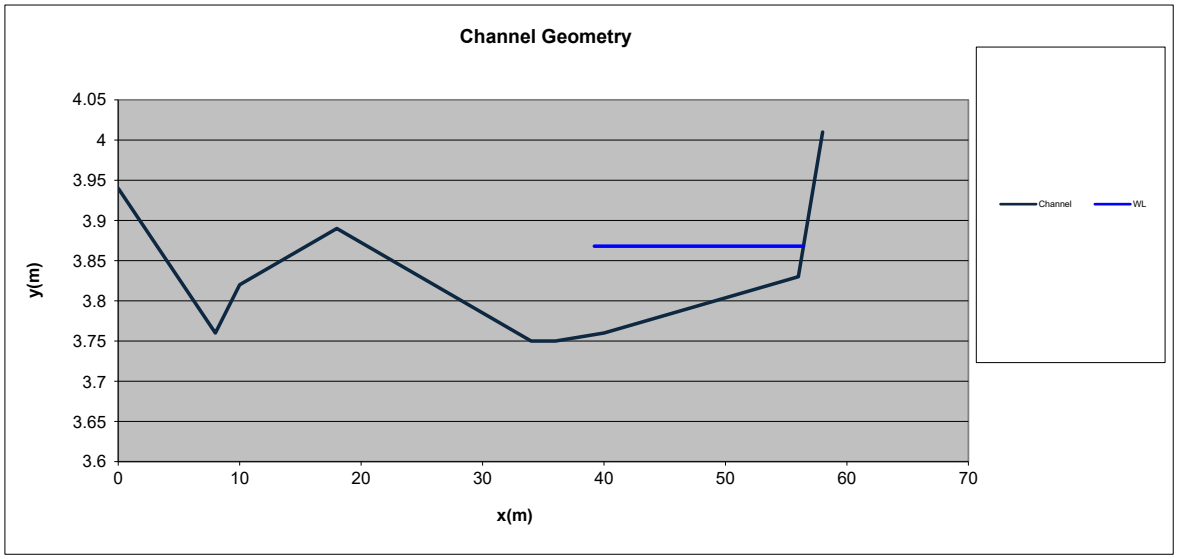
Depth (d-m)	3.868
Area (A-m^2)	3.207
Width (B-m)	48.194
Perimeter (P-m)	48.198

Critical Flow Conditions

Flow (m^3/s)	2.591 INCREASE CHANI
Velocity (m/s)	0.808
Energy (m)	3.901

Typical "n" values

Concrete	0.013
Gunite	0.017
Smooth earth	0.02
Clean channel	0.03
Natural Channel	0.035-0.065
Floodplain	0.05-0.15
Overland flow (grass)	0.2-0.5



Aaron Grey

From: Yujie Gao <yujie@campbellbrown.co.nz>
Sent: Monday, 15 July 2024 12:17 pm
To: Aaron Grey
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road - Section 92 update

Hi Aaron

Hope you had a good weekend.

Thanks for providing the below comments, our engineers have been working through a response and we expect to have a response to the highlighted matters today/tomorrow.

I make the following general comments for your consideration.

- 1(b). We have updated calcs to use TP108 method rather than the rational method, as requested.

- 1(c). The request is for us to undertake an overland flow path assessment for 3.8 degrees climate change, rather than 2.1 degrees. HW have not made this clear from the queries however I note that the current operative SW COP (V3) requires calculations based on 2.1 degrees climate change, which is what the previous assessment was based on.

  There is a draft SW COP (Version 4) that is currently out for consultation, which is where the 3.8 degree reference is from. This document has not yet been adopted, and as mentioned is currently still being consulted on. The consultation period closes 31 October 2024. We understand Council is aiming for V4 to be operative by 3 February 2025.

  Auckland Council's notice confirms that the operative version is V3:
  https://www.aucklanddesignmanual.co.nz/media/dlce2qsx/cop4-notice-and-feedback-form.pdf

  At this stage it is a non-statutory document and should be afforded little weight, given the consultation period has not even closed. I do not consider there is any ability for HW to require us to undertake assessments against this draft working document, however in the interests of progressing this application, we will provide results based on the 3.8 degree numbers. We provide this on a without prejudice basis, given the status of the document.

- 7 & 8. Same comments as above, as the requests relate to updated assessments in relation to 1(b) and 1(c).

Cheers
Yujie

Yujie Gao | Senior Planner | B.UrbPlan (hons) | Int.NZPI

Campbell Brown Planning Limited

Level 2, 46 Brown Street, Ponsonby | PO Box 147001, Ponsonby, Auckland 1144

Cell 021 0265 9036 | DDI 09 394 1697| Ph 09 378 4936 | yujie@campbellbrown.co.nz | www.campbellbrown.co.nz

Aaron Grey

From: Yujie Gao <yujie@campbellbrown.co.nz>
Sent: Tuesday, 11 June 2024 1:03 pm
To: Aaron Grey
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road - Section 92 update [Filed 12 Jun 2024 11:24]
Attachments: 1 - 9 Pigeon Mountain Road, Half Moon Bay - Scheme - Rev 07.pdf

Categories: Filed by Mail Manager

Hi Aaron

Please see attached updated scheme plan and comments below.
Note that the project surveyor has confirmed car parking allocation can be changed up until s223, so this may be further refined based on market feedback.

Cheers
Yujie

- Item 95 (Communal land maintenance):

  Was previously identified as closed.

  The latest scheme plan confusingly identifies that Lot 200 will be owned by an incorporated society, but then specifies that Lot 200 is to be held in 87 shares by the owners of Lots 2 to 88. Please clarify which approach is being taken, and both cannot occur simultaneously.

- amalgamation condition has been removed

- Item 96 (In accordance with LUC condition):

  Was previously identified as closed.

- Item 97 (road vesting):

  Was previously identified as closed.

- Item 98 (Land in COAL not used for access):

No response has been provided. However, if it is confirmed that Lot 200 is to be owned by an incorporated society and will not be held in shares (i.e. would not be a COAL), then this RFI item will no longer be relevant.

- amalgamation condition has been removed

Then, within the scope of Item 99, can you please respond to the following new RFI items:

- Item 99g:

  Please provide commentary regarding the appropriateness of the proposed car park allocations for Units 62 to 68. For some of these allocations, the parking spaces would be located over 50 m and up to 75 m walking distance (along the proposed paths) from the relevant dwelling, often passing other closer parking spaces.

- we can change these allocations up until 223 application.

- Item 99h:

  Please identify how legal access will be provided to Lots 89 to 116 and how stormwater will legally drain from Lots 89 to 116. This is expected to require right of way and right to drain water easements over Lot 200.

- added ROW and stormwater easement over Lot 200.

- Item 99i:

  If Lot 200 is to be owned by an incorporated society and not in shares by the owners of Lots 2 to 88, please identify how legal access will be provided to Lots 2 to 88. This is expected to require a right of way easement over Lot 200.

- ROW added to lot 200

- Item 99j:

  If Lot 200 is to be owned by an incorporated society and not in shares by the owners of Lots 2 to 88 and Lots 2 to 88 will not be provided with public stormwater connections, please how stormwater will legally drain from Lots 2 to 88. This is expected to require a right to drain water easement over Lot 200.

- easement added

- Item 99k:

  Please clarify why the boundary of Lots 2 and 3 is subject to a party wall easement rather than a maintenance easement.

- ive moved the boundary to the west 150mm so it runs down the outside of the building, and changed easement AC to a maintenance easement. easement AD removed.

- Item 99k:

  Please clarify why the maintenance easements in favour of Lots 8, 9 and 23 are over all of Lot 200 (area Z) rather than just that part of Lot 200 adjoining those sites.

- no need to create more easement areas.

- Item 99k:

  Please clarify whether a maintenance easement in favour of Lots 34, 35, 47 and/or 48 over part of Lot 200 is required.

- 34,47,48 have enough room, have added an easement for Lot 35.

- Item 99l:

  Please clarify the boundaries between Lots 41 & 42, 43 & 44, 48 & 49, 50 & 51 and 54 & 55, given that the architectural plans have been updated to remove the offset bin areas.

- boundaries updated

- Item 99m:

  Please demonstrate that all required vehicle tracking movements from the garage of Lot 88 can be legally provided for. This is expected to require a right of way easement over Lot 2 or an increase in area to Lot 200.

- easement added based on supplied vehicle tracking

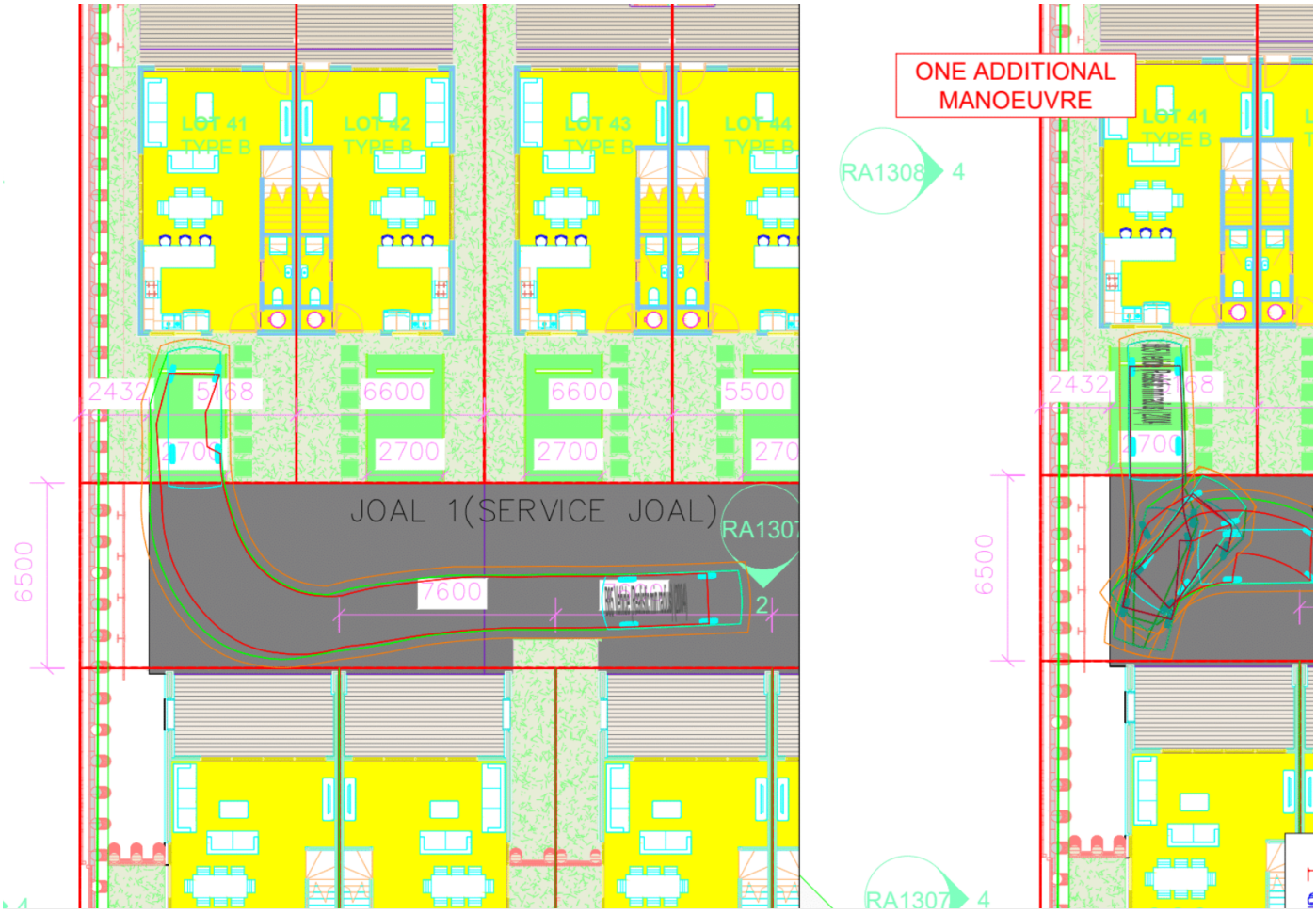
Aaron Grey

From: Yujie Gao <yujie@campbellbrown.co.nz>
Sent: Friday, 31 May 2024 3:21 pm
To: Aaron Grey
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road - Section 92 update

Hi again (last email)

Just received the below, for the avoidance of doubt.

Cheers
Yujie



From: Yujie Gao
Sent: Friday, 31 May 2024 3:01 pm
To: Aaron Grey <Aaron@civilplan.co.nz>
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road - Section 92 update

Thanks Aaron, the project surveyor is looking into those.

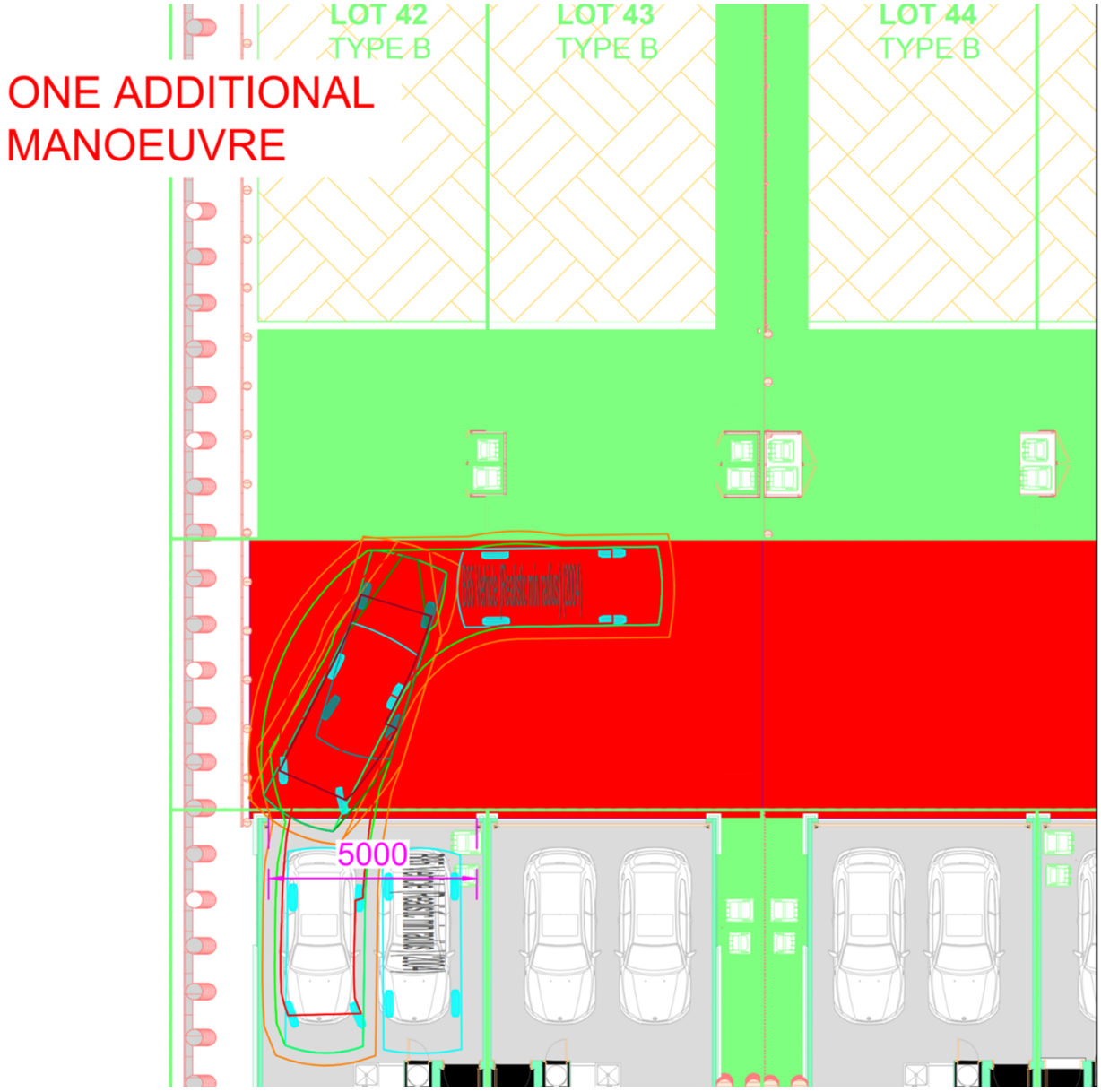
Regarding (new) Lot 41 (old Lot 42 below). Tracking for the original Lot 41 showed that it worked when we had 2 parking spaces.

So the same would work for old Lot 42 (new Lot 41).

The parking space on new Lot 41 is no different to the previous end parking space, except that it is now 2.7m wide rather than 2.5m wide (previous) so the manoeuvring is easier than previous. The parking space width and manoeuvring aisle dimension also complies.

Have a good long weekend! Talk next week

Cheers
Yujie



From: Aaron Grey <Aaron@civilplan.co.nz>
Sent: Friday, 31 May 2024 11:10 am
To: Yujie Gao <yujie@campbellbrown.co.nz>
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road - Section 92 update

Aaron Grey

From: Yujie Gao <yujie@campbellbrown.co.nz>
Sent: Thursday, 30 May 2024 11:42 am
To: Aaron Grey
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road - Section 92 update
Attachments: 20240528 s92 PMR and Marina Carpark OLF Assessment.pdf; 20240529 3PMR s92 Response.pdf; 8920-HND HMB Ltd-Pigeon Mountain Rd-Site Survey-May 24.pdf

Hi Aaron

Please see attached for the response to the below matters.
At this link is also an updated set of civil plans- 29 May

Regarding the Watercare comments, this is noted and the applicant accepts that additional investigation will be required at the EPA stage which may result in the potential for upgrades.

To provide some certainty we have done some preliminary investigations. This (and the other responses) have been peer reviewed by Phil Jaggard from MPS.

The preliminary investigations indicate that it is possible network upgrades may not necessarily be required (also noting that Watercare comments also contained many uses of the word 'likely'). Nevertheless, the applicant accepts that additional investigations will be required, and network upgrades may be required. If upgrades are required then it simply be the installation of holding tanks or additional storage facilities. The applicant is prepared to undertake this if necessary and we are not contesting the requirement for further investigation to be undertaken at EPA stage.

A number of the other stormwater matters also relate to EPA matters however we have provided some preliminary responses, and are comfortable the matters can be resolved at EPA stage.

For the OLF assessment, we undertook additional survey for the area required. Also attached this in case you wanted to see it.

Cheers
Yujie

Yujie Gao | Senior Planner | B.UrbPlan (hons) | Int.NZPI

Campbell Brown Planning Limited
Level 2, 46 Brown Street, Ponsonby | PO Box 147001, Ponsonby, Auckland 1144
Cell 021 0265 9036 | Ph 09 378 4936 | DDI 09 394 1697
yujie@campbellbrown.co.nz | www.campbellbrown.co.nz

Job No: 220665/01
29 May 2024

Auckland Council
Private Bag 92 300
Victoria Street West
AUCKLAND 1141

Dear Sir/Madam,

EPA Consent number:	BUN60419132
Address:	3 Pigeon Mountain Road
Description:	87 Residential Dwelling Development

We respond to your s92 RFI dated 15/May/2024 requesting further information with respect to the above development. We respond to the items relevant to our inputs as below:

Wastewater

"There is a likely network constraint at the Half Moon Bay Marina Pump Station, and additional flows from this development application (with a PWWF of 3.85 l/s) will likely result in a significant increase in the frequency and volume of overflows from the Engineered Overflow Point (EOP), and as such the impact of the proposed development is considered more than minor. Appropriate network upgrades will need to be identified in consultation with Watercare but are likely to involve an upgrade of the pump station (subject to sufficient capacity being available in the downstream transmission network), and/or provision of additional network storage."

The comments from WSL are noted and it is agreed that additional investigation will be undertaken at the EPA stage.

The following preliminary comments are noted.

The calculated **Existing** Peak Wastewater Design flow for the site is **0.75 L/s** and the calculated **Post-Development** Peak Wastewater Design flow for the site (87 dwellings @ 3 people each as per WSL COP) is **3.64 L/s**. This is an **increase of 2.89 L/s**.

A review of last Watercare's published Network Discharge Consent (**NDC**) **Annual Reports** from 2020 to 2023 indicates that the Half Moon Bay Marina Wastewater Pump Station (ID# DPHMB) Overflow (ID# 1168) did not overflow within the reported timeframes. Anecdotal information indicated that the DPHMB Overflow has an average annual spill frequency of less than one when the NDC application was lodged. This information suggests that the pump station is performing within the acceptable limits of the NDC (i.e. an average of two or less per annum) and is not currently constrained. In addition, the

report notes that the pump station has **4-8 hours storage** and the **public health risk and ecological risk** from an overflow is **low to very low**, respectively.

Auckland-wide Network Discharge Consent 2020-2021 Annual Report
Auckland-wide Network Discharge Consent 2021-2022 Annual Report
Auckland-wide Network Discharge Consent 2022-2023 Annual Report

It would be much appreciated if Watercare could share their wastewater pump station data for overflow frequency, pump performance, volume and flowrate…etc. with us for discussion.

At this stage, it is our belief the DPHMB is not constrained based on Watercare's published information. However, if the pump station is confirmed to be constrained and increases the public health and/or ecological risk above the consent limits, there are several different methods that can be considered to mitigate the additional peak design flows. A possibility is to install a holding tank offering additional storage with a submersible pump to capture the sewage and pump it back to the wastewater pump station during off-peak hours. This should minimize any effect from the additional sewage discharge to the transmission network.

We consider this should be further assessed during the EPA stage. Subject to the pump station data providing us, we will carry out investigation in the next phase to assess what will be the most appropriate and feasible option for the Developer, Council and Watercare.

Stormwater

1. The development is exceeding the imperviousness limit to 64.83%. Need attenuation for the additional area up to 1%AEP**.**

Note that the total impervious area is **68.4%**.

As per AUP E8.6.1 (3)(b), diversion and discharge must not result in or increase the inundation of buildings on other properties in events up to the 1% AEP rainfall events. Please refer to the pre and post flooding analysis for Pigeon Mountain Road and Marina Car Park (s92 queries 7 and 8). The increase in runoff has **negligible increase in flood depths** as outlined in our reply to item 7 below. Consequently, the increase in imperviousness does not result in or increase the inundation of building on other properties for the 1% AEP rainfall event and, thus, 1% AEP attenuation is considered not necessary.

Moreover, as we discussed previously, the **GD01** suggests that detention of 10% and 1% AEP rainfall events is not required for developments that are located within the lower half of the catchment (or for which a validated flood modelling study has shown that the development does not increase downstream flooding). To satisfy your request earlier, we allowed detention for the difference between pre- and post-development runoff in a 10% AEP rainfall event in our stormwater design.

Because we proposed the detention, the site is located in the lower half of the catchment and the increase in runoff is considered minimal, it is our opinion, therefore, that the stormwater detention outcomes have been mitigated as required under the AUP.

2. Keeping SW assets private (yellow highlighted SW lines) serving multiple properties inside the fee simple subdivision is a deviation of SW CoP. Hence not acceptable. The attenuation and treatment devices need to be separated from the main line and to be vested to council. Detail engineering can be checked at EAP stage.

The design of development has taken an inter-disciplinary approach to develop a fit for purpose stormwater management solution, taking into account the constraints of the site to deliver housing that is economically viable. This has included specialised input from land surveyors, urban designer and geotechnical experts.

As per AUP requirement, the development requires appropriate stormwater attenuation and quality treatments.

The proposed solution of Stormwater 360 filters and communal attenuation storage tanks has been determined to be the best practical option for servicing the development with stormwater. Alternative options were considered by the designers, but they did not meet the overall requirements for the development, as explained further in this s92 reply. It is noted that the stormwater quality effects of the development are mitigated by the proposed solution, as the Stormwater 360 filters are an "approved" stormwater treatment device by Auckland Council.

In addition, the use of centralised proprietary devices minimises the number of devices and land required, that subsequently minimises the carbon footprint of the development. As less material is required, there will be less construction ground disturbance and it minimises crew mobilisation for construction, maintenance, and operation. This is consistent with the requirement of **minimising of carbon footprint** as set out in the **Stormwater Bylaw 2015** (as at 30 May 2022) and consistent with **Auckland Council's climate change policy to reduce greenhouse gas emissions**.

Therefore, it is our opinion that the stormwater treatment and attenuation outcomes have been mitigated as required under the AUP.

However, as Healthy Waters will not accept the vesting of the "approved" Stormwater 360 devices or communal attenuation tanks, the proposed stormwater network is required to be remain private. As the private system will not be servicing any upstream catchment in the future, there is no risk of the system being connected to by others.

The development will have a residents' society (or similar) in place to operate and maintain the jointly owned assets. The arrangement is similar to that of looking after the jointly owned accessway or communal rubbish collection and does not hinder the development's proposed FEE SIMPLE arrangement. Therefore, the potential effects of a privately operated stormwater systems have been appropriately mitigated, as the proposed solution using Stormwater 360 filters and communal attenuation storage tanks is specifically tailored for this development.

3. The stormfilter360 is a high cost maintenance device that will impact on the occupants. It is requested to explore other more cheaper, sustainable and natural devices (like swale & tree pit combination) for water quality treatment of hardstand areas. The roof water treatment can be excluded from stormfilter 360, instead inert roof material with non-potable reuse for irrigation can be considered as BPO. This may also reduce water consumption that will be needed for the green area**.**

Noted. However, we have taken an integrated approach to the design of the stormwater system considering all of the constraints and requirements for the development. Therefore, we consider Stormwater 360 filters are preferable due to the following reasons:

- Swale needs lots of space & area which we do not have in our situation.
- Tree pits (e.g. Filterra or similar) are even going to be more expensive, as we will need to put down not just one but multiple numbers of them in the driveway (i.e. one is required at each catchpit). Eventually, they will all add up to be similar or even more expensive than stormwater 360 filters.
- Additionally, it is noted that the site has substantial common areas which will be managed by a Residents Association (including landscaped areas and hard surfaces).
- The development is also for 87 dwellings. It is considered that the cost can be easily shared by the development.

In view of the above, we consider that the treatment by stormwater 360 devices is the best practical option and is far more suitable in this instance.

4. The build over, yellow highlighted lines shown below on new pipes SW 1 and SW4 (missing from the plan but shown in the long section for SW4, the black * line shown below) are not recommended as per SW CoP and will only be considered by Auckland Council in exceptional circumstances where no suitable alternative exists. Please change the building footprint or divert the pipe or provide other solution to avoid build over**.**

This item is considered to be an EPA issue and we propose to resolve this at the EPA stage.

Building over new pipes are proposed for the following reasons:

- The proposed development is a medium intensity development to the Half Moon Bay. Consequently, no other suitable alternative exists in this circumstance.
- An alternative is to concentrate flows to one single downstream pipe, which is not recommended as this will overload the already at capacity pipes.
- The new dwellings being built over the pipes will have pile bridging to the Council's requirement to prevent loading the stormwater pipes.

To facilitate the operation & maintenance for these pipes, they will be encased within a larger concrete pipe to i) provide extra protection for the pipes, and ii) facilitate pipe replacement when needed in the future.

5. There is already public assets existing along proposed pipe SW5. Asset duplication is not acceptable. Please use the existing line to avoid duplication**.**

This item is considered to be an EPA issue and we propose to resolve this at the EPA stage.

Nevertheless, the existing 230mmØ concrete pipe to the east is at capacity and its condition is unknown. Subjected to CCTV condition survey and further investigations, we could work with the Council to look into potentially redirecting the flows from the 230mmØ concrete pipe to new stormwater pipes under the pedestrian footpath.

6. The existing public pipe on the east (installation 1975) is very old in compared to pipe on the west (installation 2003). Council data base do not have information on the pipe condition at west. It is advised to conduct a CCTV investigation from the site connection location up to the final outlet if possible or at least where maximum loading exerted such as parking area, cross-ways, roads etc. to understand the pipe condition. The pipe may need replacement/upgradation if the condition is very bad. Council may contribute depending on the budget availability and feasibility study**.**

This item is considered to be an EPA issue and we propose to resolve this at the EPA stage.

Nevertheless, the existing 230mmØ concrete pipe to the east is at capacity and its condition is unknown. Subjected to detailed CCTV condition survey and further investigations, we could work with the Council to look into potentially redirecting the flows from the 230mmØ concrete pipe to new stormwater pipes under the pedestrian footpath.

Any pipes further downstream of stormwater manhole 2000323535 is outside the scope of our investigation, as 10% AEP stormwater attenuations are provided for the development as per the Council's request in the early stage.

7. All the overland flows will concentrate at the intersection of Pigeon and ATA-TAI road will flow into the Halfmoon bay parking area. It is advised to conduct overland flow path assessment at the intersection to understand that it will be safe and will not cause any flooding problem or damages. Risk and hazard need to be identified and assessed. There area a lot guidance document available to do this. It is suggested to use Australian Disaster Resilience Handbook Collection GUIDELINE 7-3 (attached). The Risk and hazard assessment shall be done for all the overland flows on all existing and developed flow paths to ensure safety**.**

Please refer to Pigeon Mountain Road Overland flow/flood assessment based on topographical survey received. The pre- and post-development flood depths are determined to be only some 227mm and 229mm, respectively. It is in our opinion, the 2mm increase in flood depth is negligible.

The depth-velocity product for flow in Ara-Tai/Pigeon Mountain Road:

Existing – 0.227 * 1.543 = 0.350 m^2/s

Post – 0.23 * 1.551 = 0.355 m^2/s

As per GNS Science Report 2010/51 (Nov, 2010), Depth and Velocity product >0.4 m^2/s is considered significant hazard to small children. Additionally, vehicles become unstable if flood depth is greater than 0.3m. Flow depths for pre- and post-development scenarios are less than 0.3m. The DV products are determined to be less than 0.4 m^2/s.

Consequently, the post development flow does not change the hazard classification and it is considered **low hazard** for children, adults and vehicles.

8. The overland flow path assessment at Marina Carpark is only showing the post development flood level but does not includes the predevelopment flood level. Requested to add the predevelopment flood level to compare**.**

Please refer to Marina Carpark Overland flow/flood assessment based on topographical survey received. The pre- and post-development flood depths are determined to be 116mm and 117mm respectively. It is in our opinion, the 1mm increase in flood depth is negligible.

The depth-velocity product for flow for Marina Carpark:

Existing – 0.116 * 1.409 = 0.163 m^2/s

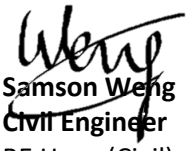
Post – 0.117 * 1.418 = 0.166 m^2/s

As per GNS Science Report 2010/51 (Nov, 2010), Depth and Velocity product >0.4 m^2/s is considered significant hazard to small children. Additionally, vehicles become unstable if flood depth is greater than 0.3m. Flow depths for pre- and post-development scenarios are less than 0.3m. The DV products are determined to be less than 0.4 m^2/s.

Consequently, the post development flow does not change the hazard classification and is considered **low hazard** for children, adults and vehicles.

I trust this meets with your approval. Please do not hesitate to contact us should you have any queries or require further information.

Yours Faithfully
AIREY CONSULTANTS LTD



Samson Weng
Civil Engineer
BE Hons (Civil)

Reviewed and approved by
AIREY CONSULTANTS LTD

Royden Tsui
Associate Director
CPEng(NZ), CMEngNZ, IntPE(NZ), MEPM (hons), BE (Civil)

SHEET 2

Lot 1
DP 74913

SHEET 3

N

Retail Shops

Carparking

Carparking

Carparking

ARA TAI

Area in Seal

Area in Seal

Part Lot 1
DP 30452

Lot 1
DP 70564

Lot 113
DP 60526

Lot 112
DP 60526

Lot 2
DP 70564

Lot 1
DP 212125

PIGEON MOUNTAIN ROAD

Lot 115
DP 60526

SHEET 4

NOTES:

1)Origin of Levels is Survey Standard SM 708 SO 57790 with a Reduced Level of 31.925 metres above mean sea level, Land Information New Zealand , Auckland Vertical Datum 1946.

2)Spot Heights are shown thus: + 3.78

3)For clarity traverse information has not been shown on this plan.

4)Parcel boundaries & legal appellations are from Grip - Accessible Cadastral Information.
Boundaries shown thus:

PREPARED FOR

HND HMB
Limited

SITE SURVEY
1 - 9 PIGEON MOUNTAIN ROAD HALF MOON BAY

Being: Lot 1 DP 74913

SCALE		DATE May 2024	
1:500	(A3)	SURVEYED JT	DRAWN MvK

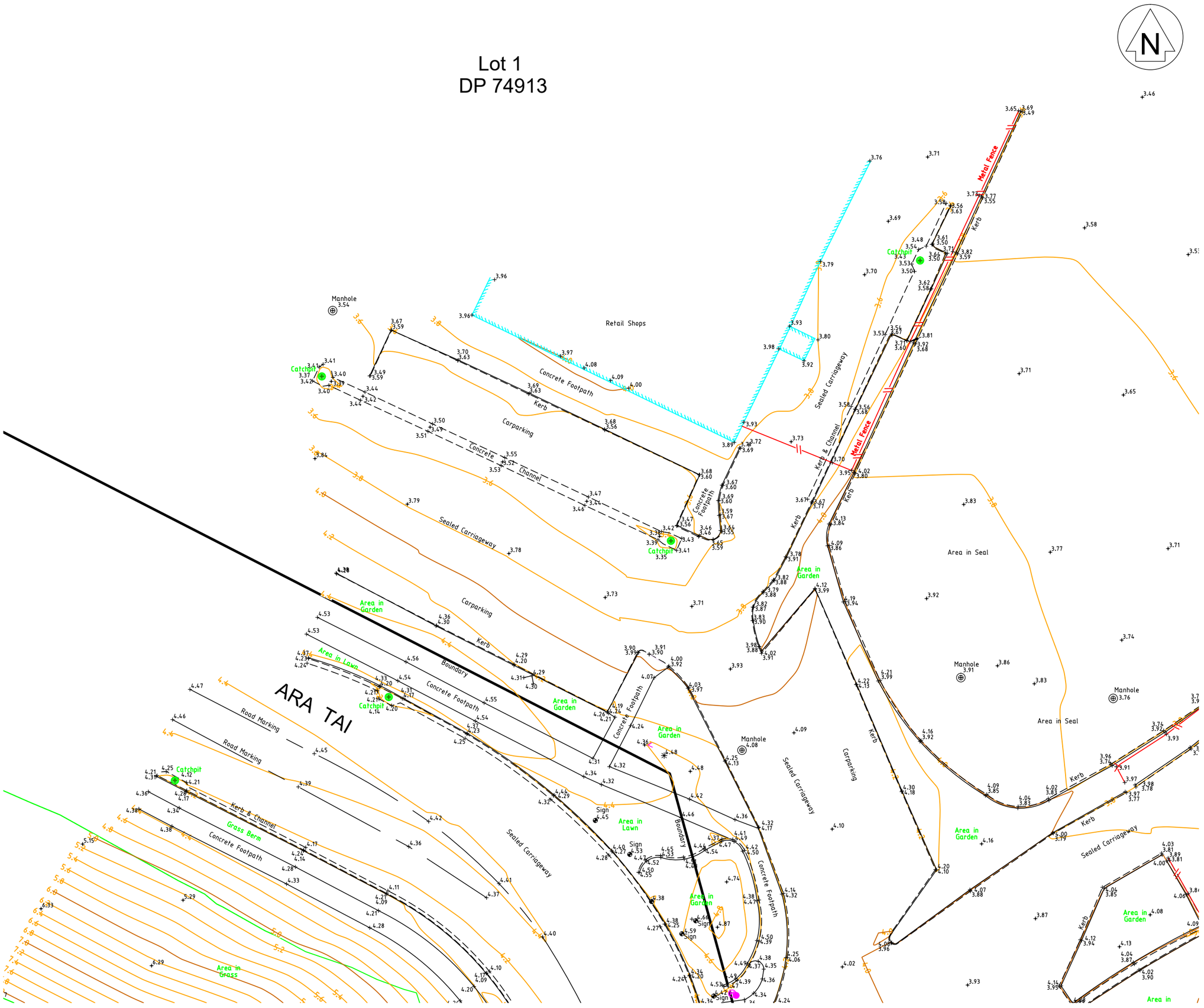
YEOMANS survey solutions

Yeomans Survey Solutions Limited
Unit 1C Level 1 29 Karaka St Newton
PO Box 7184 Auckland
p:(09) 309 0880 f:(09) 369 9210
e: info@yeomansurvey.co.nz

FILE	Drawing	Rev.
8920/S	1	
	of 4 Drawings	

R:\#Jobs\8920-HND HMB LTD- 1-9 PAGEON MOUNTAIN ROAD-HALF MOON BAY\12DTopo 8920 Mon May 20 15:05:47 2024

Lot 1
DP 74913



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Boundaries shown thus: ———

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HND HMB
Limited

SITE SURVEY
1 - 9 PIGEON MOUNTAIN ROAD HALF MOON BAY

Being: Lot 1 DP 74913

SCALE		DATE May 2024	
1:250	(A3)	SURVEYED JT	DRAWN MvK

YEOMANS survey solutions

Yeomans Survey Solutions Limited
Unit 1C Level 1 29 Karaka St Newton
PO Box 7184 Auckland
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FILE	Drawing	Rev.
8920/S	2	
	of 4 Drawings	

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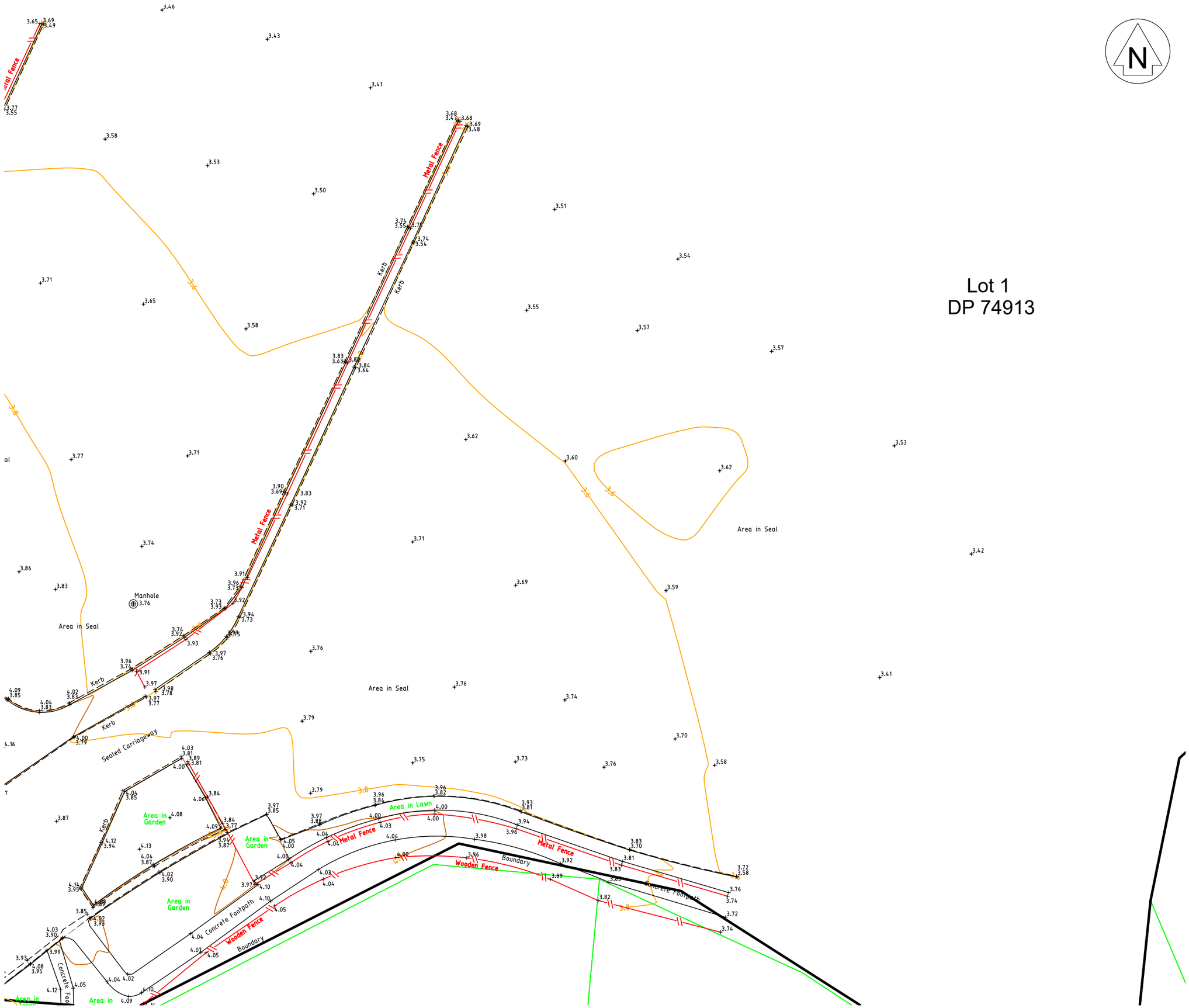

NOTES:

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Boundaries shown thus:

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HND HMB Limited

SITE SURVEY
1 - 9 PIGEON MOUNTAIN ROAD HALF MOON BAY

Being: Lot 1 DP 74913

SCALE		DATE May 2024	
1:250	(A3)	SURVEYED JT	DRAWN MvK

YEOMANS survey solutions

Yeomans Survey Solutions Limited
Unit 1C Level 1 29 Karaka St Newton
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FILE	Drawing	Rev.
8920/S	3	
	of 4 Drawings	

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Part Lot 1
DP 30452

Lot 1
DP 74913

Lot 1
DP 70564

Lot 2
DP 70564

Lot 1
DP 212125

Lot 115
DP 60526

PIGEON MOUNTAIN ROAD

Sealed Carriageway

Concrete Footpath

Kerb & Channel

Grass Berm

Area in Grass

Area in Garden

Area in Trees

Concrete Block Retaining Wall

Road Marking

Traffic Island

Boundary

Wooden Fence

Catchpit

Fire Hydrant

Comms Lid

Sign

N

NOTES:

1)Origin of Levels is Survey Standard SM 708 SO 57790 with a Reduced Level of 31.925 metres above mean sea level, Land Information New Zealand , Auckland Vertical Datum 1946.

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Boundaries shown thus: ——

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SITE SURVEY
1 - 9 PIGEON MOUNTAIN ROAD HALF MOON BAY

Being: Lot 1 DP 74913

SCALE		DATE May 2024	
1:250	(A3)	SURVEYED JT	DRAWN MvK

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FILE	Drawing	Rev.
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	of 4 Drawings	

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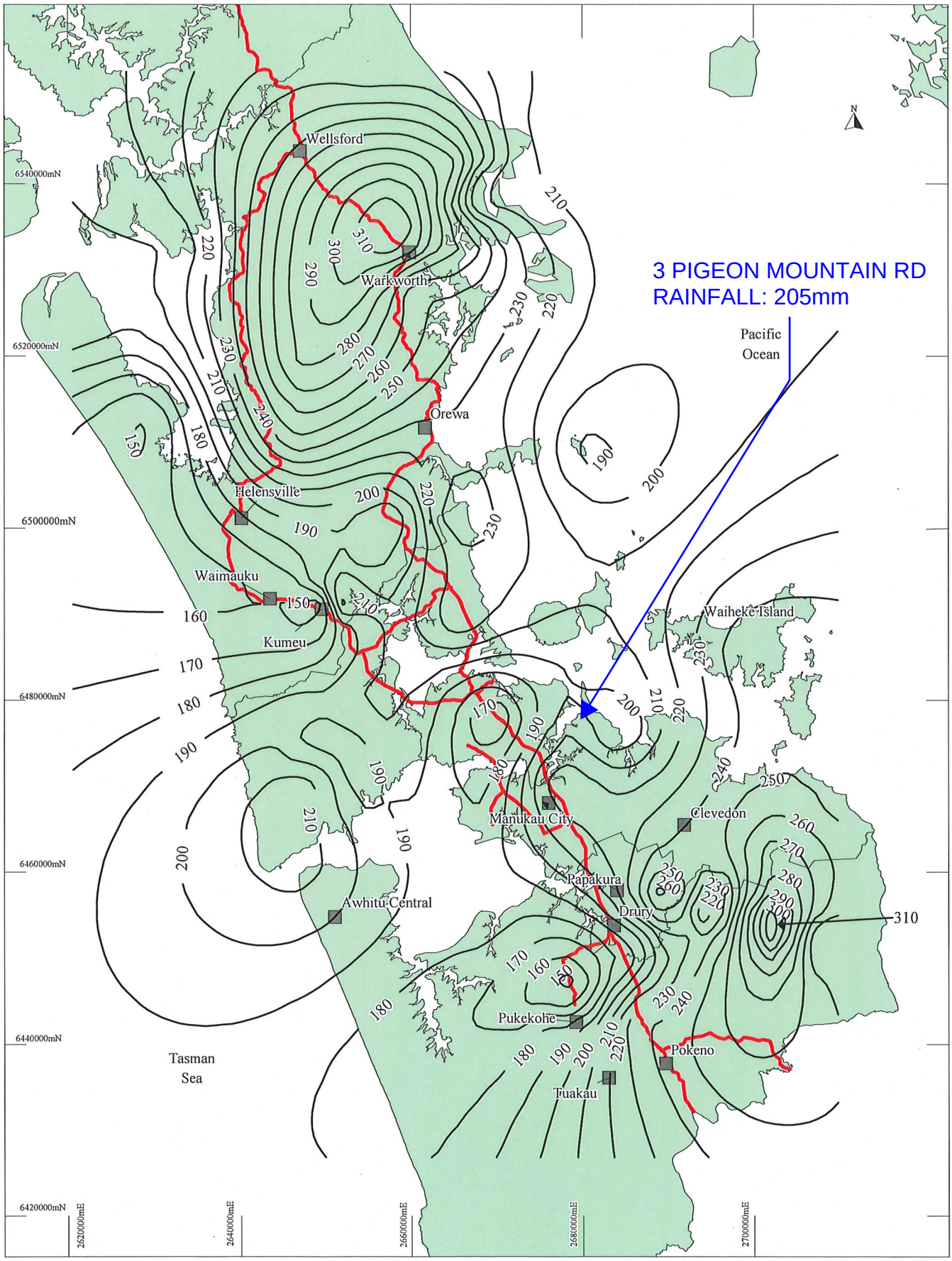


A

Auckland *Regional* Council

Legend: — 90 — Rainfall Contour (mm)

State Highways

Figure A.6
100 Year ARI
Daily Rainfall Depth

Scale: 1:600,000 (at A4)
(Revised 25/08/1999)

Workspace: N:(civil)\25\2507757\gis\mapinfo\wor\100yrari.wor Date: 25/08/1999

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Rd Half Moon Bay		**Job No:** 220517/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	17/01/2022

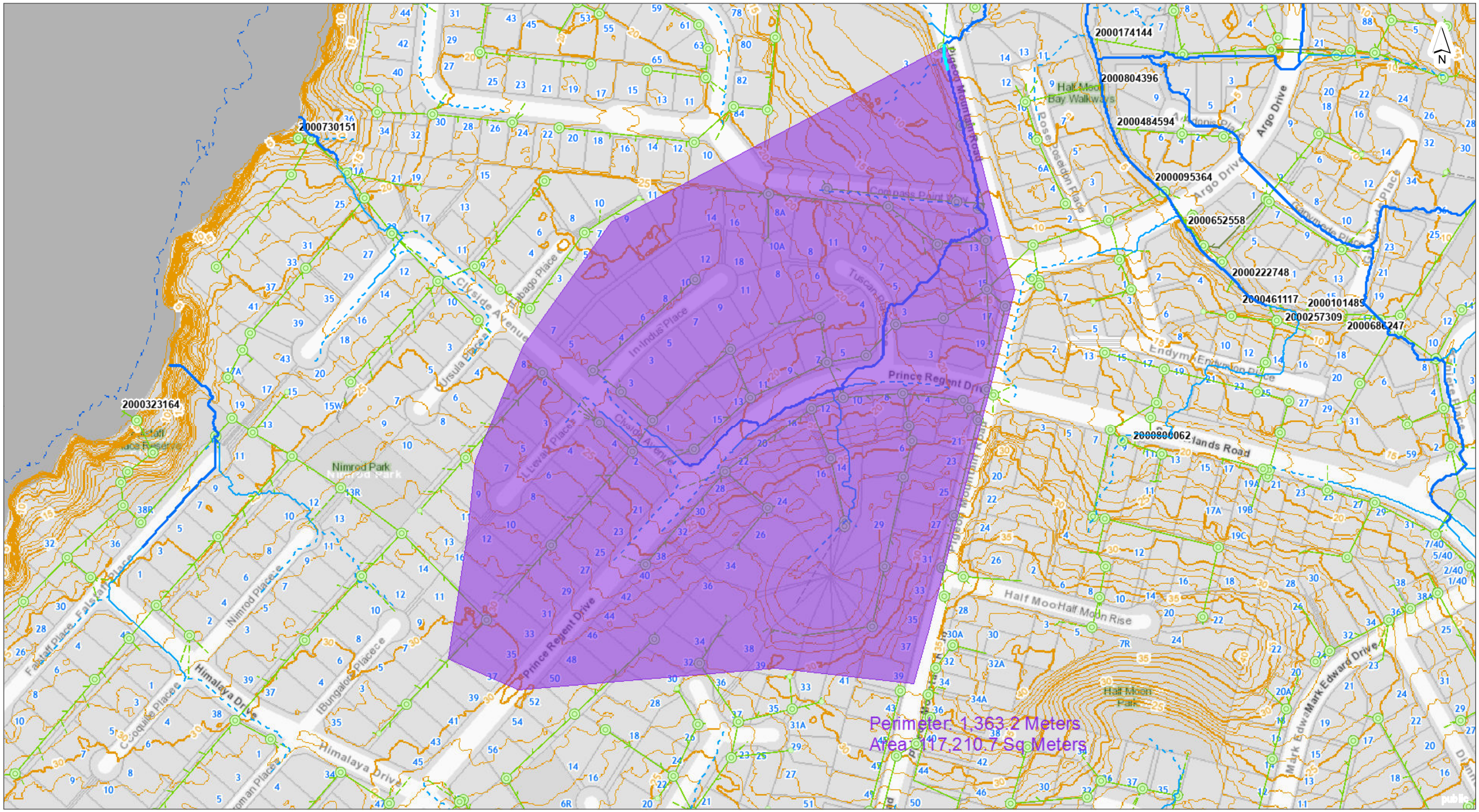
TP108 Rainfall

Rainfall Depth 205 mm
ARI 100 years

Duration hr	**Duration** mins	**Depth** mm	**Intensity** mm/hr (Q_{10})
0.166	10.0	27.58	**166.17**
0.333	20.0	42.42	127.38
0.5	30	52.32	104.64
1	60	73.75	73.75
2	120	99.61	49.80
6	360	152.28	25.38
12	720	195.38	16.28
24	1440	**239.44**	10.06

ARI	Ratio
2	9.0%
5	11.3%
10	13.2%
20	15.1%
50	16.8%
100	16.8%

ARI: 100
Ratio: 16.8%



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Height datum: Auckland 1946.

PMR OLFP CATCHMENT

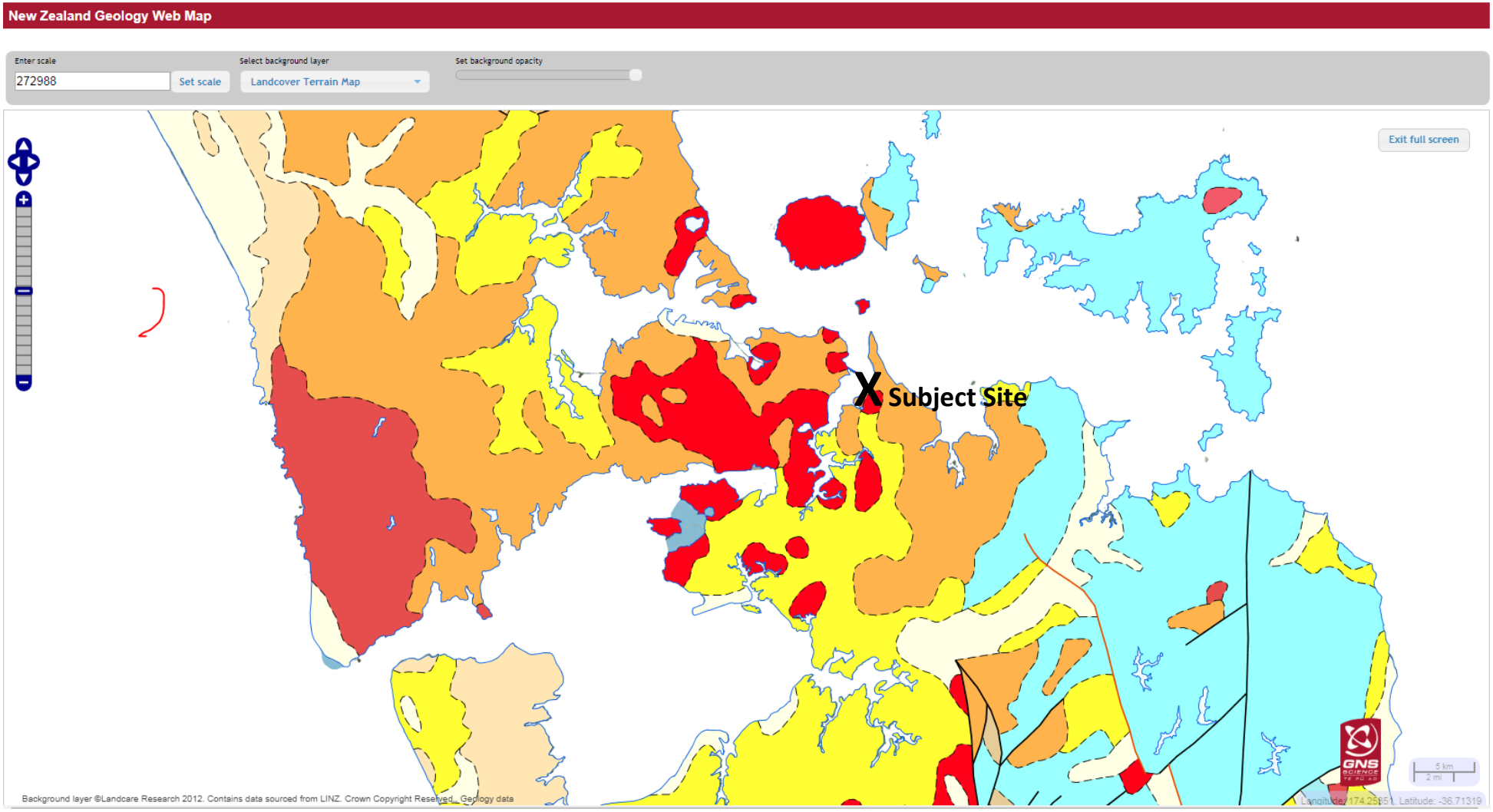
0 25 50 75
Meters

Scale @ A3
= 1:2,500

Date Printed:
17/02/2023

Auckland Council
Te Kaunihera o Tāmaki Makaurau

GNS - Auckland Geology Map: 3 Pigeon Mountain Road, Half Moon Bay, Auckland



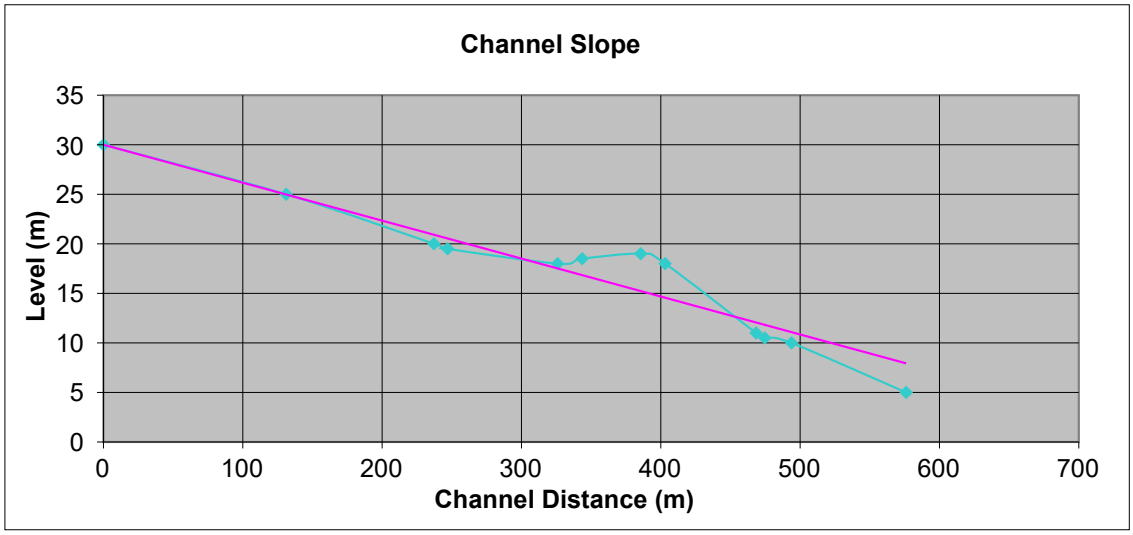
BROWN AREAS: TP108 Clay - Runoff Curve Number CN=74

Plot symbol	eM
Name	Waitemata Group
Description	Interbedded, graded sandstone and siltstone or mudstone, massive mudstone and sandstone; local intercalated volcanic grit, breccia and conglomerate, and minor bioclastic limestone.
Geologic history	Early Miocene
Simple name	Zealandia Megasequence Mainly Marine Sedimentary Rocks (Neogene)

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	8/09/2023

CATCHMENT SLOPE ANALYSIS
SLOPE CALCULATIONS - EQUAL AREA METHOD - TP10 FOR PMR OLFP

Description	Level (m)	Incremental distance (m)	Running distance (m)	"Area" from TP108	Average Slope Level
Inlet point	30	0	0		30
	25	131.1	131.1	3605.25	25
	20	106.1	237.2	2387.25	21
	19.5	9.8	247	193.55	21
	18	78.9	325.9	1479.375	18
	18.5	17.7	343.6	323.025	17
	19	42	385.6	787.5	15
	18	17.5	403.1	323.75	15
	11	65.3	468.4	946.85	12
	10.5	6.2	474.6	66.65	12
	10	19.2	493.8	196.8	11
	5	82.3	576.1	617.25	8
				0	30
				0	30
				0	30
				0	30
				0	30
				0	30
				0	30
				0	30
				0	30
				0	30
Channel length (m)			**576.1**	10927.25	
Average Channel Slope	**-0.03830**				



Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	15/05/2023

Hydrographs- SCS Method:

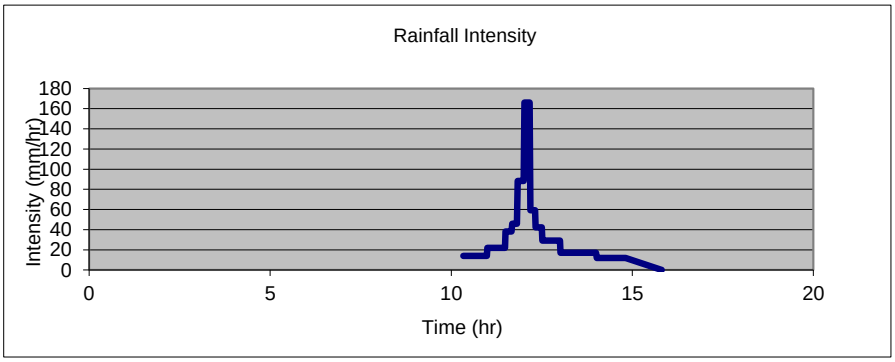
Rainfall Depth (mm) 239.44 100 YEAR ARI

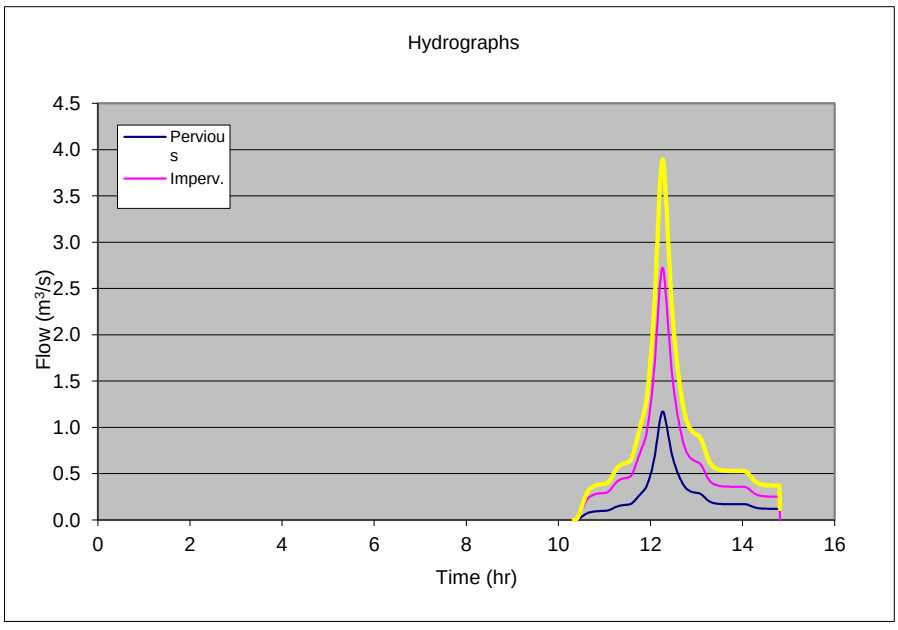
Notes:

1. Inputs
2. Typical inputs for CN, Ia, CF are in 'Typical Inputs' Sheet.
3. Method based on ARC TP108.
4. Maximum Impervious area = 65% for Urban areas to AUP H2.

Catchment Data	**Pervious Ar**	**Impervious A**
Area (ha)	4.10	7.62
Runoff No (CN)	74	98
Initial Loss (Ia-mm)	5	0
Channel Length (L-m)	576.1	576.1
Channel Slope (Sc-m/m)	0.0383	0.0383
Channel Factor (CF-0.6 to 1.0)	0.8	0.6
Time of Concentration (tc-min)	16.7	16.7
Soil storage (S-mm)	89.2	5.2

Outputs			**Total**
Runoff (mm)	169.8	234.4	211.8
Peak Flow (m^3/s)	1.172	2.726	**3.897**
Time (hr) at Peak Flow	12.26	12.26	12.26
Rainfall (mm/h) over tc	131.55	131.55	131.55
Runoff Coefficient - Peak	0.78	0.98	0.91
Runoff Coefficient - Volume	0.71	0.98	0.88

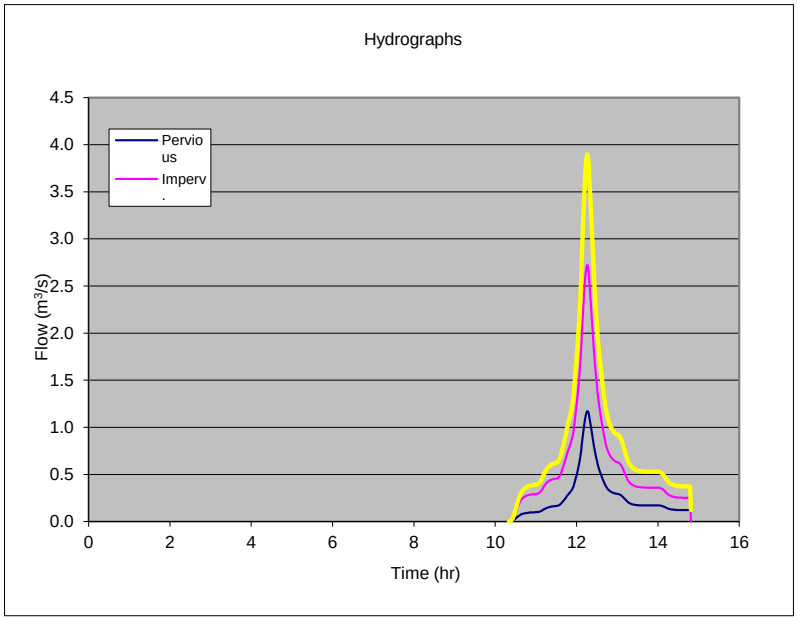




Hydrographs- SCS Method:

Total Hydrograph in tabular form: (based on simualtion from above)

Volumetric error in scaling 1.84%



Time (hr)	Flow (m^3/s)
10.336	0.000
10.891	0.384
11.121	0.432
11.298	0.574
11.447	0.615
11.578	0.653
11.696	0.849
11.805	1.061
11.907	1.275
12.002	1.735
12.092	2.388
12.178	3.337
12.260	3.897
12.310	3.704
12.360	3.255
12.412	2.753
12.465	2.309
12.519	1.977
12.574	1.709
12.631	1.480
12.689	1.286
12.749	1.135
12.810	1.035
12.874	0.977
12.940	0.943
13.008	0.922
13.079	0.891
13.153	0.802
13.230	0.686
13.311	0.604
13.397	0.563
13.488	0.543
13.587	0.534
13.694	0.531
13.812	0.529
13.946	0.529
14.105	0.511
14.313	0.403
14.813	0.121
-1.000	0.000

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:** HND HMB Ltd		**Sheet No:** 1
	Job: 3 Pigeon Mountain Road		**Job No:** 220571/01
	Calc's By: SW	**Phone:**	**Date:**
	Reviewed RCHT	09 534 6523	11/10/2023

Adapted TP108 Worksheet 1: Weighted C Coefficient for Rational Method

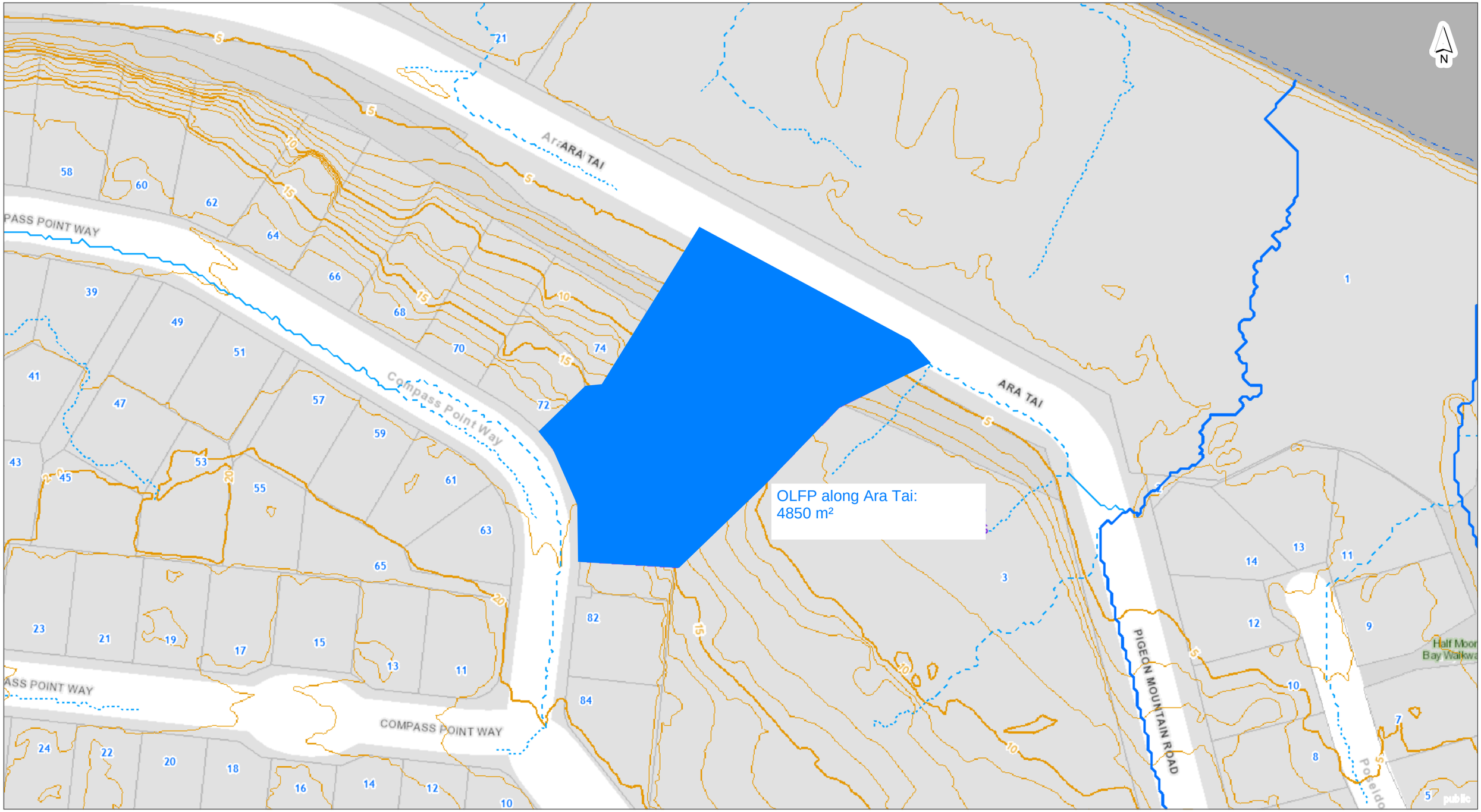
Project	Whole Site	**By**	SW	**Date**	11/10/2023
Location	3 PMR	**Checked**	RCHT	**Date**	

Circle One **Present** **Developed**

1. Runoff C Coefficient

	Cover Description (cover, type, treatment, and hydrologic condition)	Coefficient C	Area (ha)	Product of CN x area
				0.00
	Impervious areas - Roof	0.9	0.298	0.27
	Impervious areas - Pavement	0.85	0.265	0.23
	Pervious areas	0.3	0.844	0.25
				0.00
				0.00
			1.4073	0.75

$$C_{(weighted)} = \frac{\textit{total product}}{\textit{total area}} = \frac{0.75}{1.41} = 0.53$$



OLFP along Ara-Tai

0 10 20 30
Meters

Scale @ A3
= 1:1,000

Date Printed:
16/10/2023

Auckland Council
Te Kaunihera o Tāmaki Makaurau

CLIENT: HND HMB Ltd
PROJECT: 3 Pigeon Mountain Road,
Half Moon Bay
JOB No.: 220571/01

SHEET No.: 1
CALCS. BY: SW
DATE: 09/02/2023

PIPE FLOW CALCULATIONS	REFERENCE

Overland Flow Rate **Q = 2.78 C i A** *Rational Formula*

Storm Scenario		**1%**	AEP
Coefficent of Runoff	C	**0.53**	
Rainfall Intensity	i	**162.1**	mm/hr
Area of Runoff	A	**1.41**	ha
Overland Runoff Rate	**Q**	**336**	**l/s**

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PO Box 259 339, Botany, 2163 | Level 1, Fountain Lane North, Botany Town Centre
T: +64 9 534 6523 E: botany@aireys.co.nz

Airey

CLIENT: HND HMB Ltd
PROJECT: 3 Pigeon Mountain Road, Half Moon Bay
JOB No.: 220571/01

SHEET No.: 2
CALCS. BY: SW
DATE: 16/10/2023

PIPE FLOW CALCULATIONS				REFERENCE
Overland Flow Rate		**Q = 2.78 C i A**		*Rational Formula*
Storm Scenario		**1%**	AEP	
Coefficent of Runoff	C	**0.65**		
Rainfall Intensity	i	**162.1**	mm/hr	
Area of Runoff	A	**0.49**	ha	
Overland Runoff Rate	**Q**	**142**	**l/s**	

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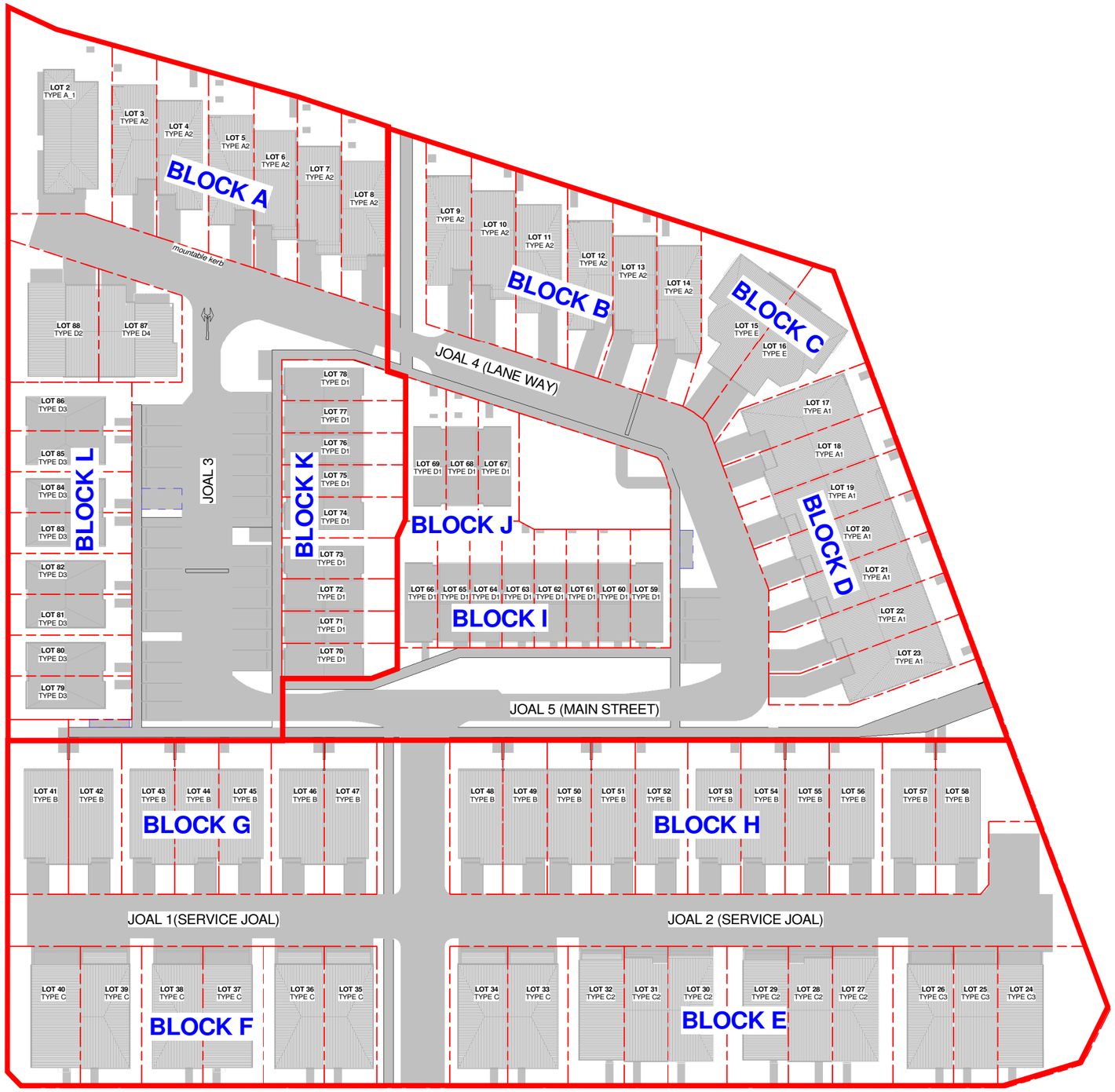

IMPERVIOUS SPACE	
NAME	AREA
BIKE STORAGE AREA	
BIKE STORAGE AREA	12 m²
BINS	
BINS	26 m²
BLOCK A	
TYPE A_1	112 m²
TYPE A-2	440 m²
FOOTPATH	11 m²
DRIVEWAYS / CAR PARK	86 m²
BLOCK B	
TYPE A-2	441 m²
FOOTPATH	14 m²
DRIVEWAYS / CAR PARK	96 m²
BLOCK C	
TYPE E-1	180 m²
BLOCK D	
TYPE A-1	505 m²
FOOTPATH	13 m²
DRIVEWAYS / CAR PARK	121 m²
BLOCK E	
TYPE C-3	348 m²
TYPE C-2	81 m²
TYPE C-1	457 m²
BLOCK F	
TYPE C-1	557 m²

IMPERVIOUS SPACE	
NAME	AREA
BLOCK G	
TYPE B-1	529 m²
BLOCK H	
TYPE B-1	828 m²
BLOCK I	
TYPE D-1	311 m²
FOOTPATH	9 m²
DRIVEWAYS / CAR PARK	120 m²
BLOCK J	
TYPE D-1	117 m²
FOOTPATH	5 m²
BLOCK K	
TYPE D-1	351 m²
DRIVEWAYS / CAR PARK	143 m²
BLOCK L	
TYPE D-1	520 m²
DRIVEWAYS / CAR PARK	118 m²
COMMON FOOTPATH	
FOOTPATH	568 m²
FOOTPATH	
IMPERVIOUS AREA	121 m²
ROAD	
DRIVEWAYS	2354 m²
AREA TOTAL	9595 m²

3 PIGEON MOUNTAIN TOTAL AREA: 14070㎡

IMPERVIOUS AREA:		COMPLIANCE
MIX HOUSING SUB-URBAN ZONE REQUIREMENT:	60% MAX NET SITE AREA (8442㎡)	
PROPOSED AREA:	68.2% (9595㎡)	NO
PREVIOUS AREA:	67.2% (9457㎡)	

S92 RESPONSE

asc architects

3 PIGEON MOUNTAIN ROAD

SITE PLANNING AREA (IMPERVIOUS AREA)

N

Project No. :	JOB NO. 22924
Scale:	1 : 300@ A1
Date:	15/05/2024
Revison:	H

RA0201

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:** HND HMB Ltd		**Sheet No:** 1
	Job: 3 Pigeon Mountain Road		**Job No:** 220571/01
	Calc's By: SW	**Phone:**	**Date:**
	Reviewed RCHT	09 534 6523	21/05/2024

Adapted TP108 Worksheet 1: Weighted C Coefficient for Rational Method

Project	Whole Site	**By**	SW	**Date**	21/05/2024
Location	3 PMR	**Checked**	RCHT	**Date**	

Circle One **Present** **Developed**

1. Runoff C Coefficient

	Cover Description (cover, type, treatment, and hydrologic condition)	Coefficient C	Area (ha)	Product of CN x area
				0.00
	Impervious areas - Roof	0.9	0.538	0.48
	Impervious areas - Pavement	0.85	0.422	0.36
	Pervious areas	0.3	0.448	0.13
				0.00
				0.00
			1.4073	0.98

$$C_{(weighted)} = \frac{\textit{total product}}{\textit{total area}} = \frac{0.98}{1.41} = 0.69$$

Airey

CLIENT: HND HMB Ltd
PROJECT: 3 Pigeon Mountain Road, Half Moon Bay
JOB No.: 220571/01

SHEET No.: 12
CALCS. BY: SW
DATE: 21/05/2024

PIPE FLOW CALCULATIONS				REFERENCE
Overland Flow Rate		**Q = 2.78 C i A**		*Rational Formula*
Storm Scenario		**1%**	AEP	
Coefficent of Runoff	C	**0.69**		
Rainfall Intensity	i	**162.1**	mm/hr	
Area of Runoff	A	**1.41**	ha	
Overland Runoff Rate	**Q**	**437**	**l/s**	

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TAKAPUNA **BOTANY** QUEENSTOWN

CLIENT:

HND HMB LTD

JOB TITLE:

3 PIGEON MOUNTAIN ROAD
HALF MOON BAY

NOTES:

REV	AMENDMENT	DATE	BY

DRAWING STATUS:

FINAL

ISSUE PURPOSE:

OLFP CALCS

DESIGN:	SW
DRAWN:	LP
CHECKED:	RT
DATE:	21/05/2024
SCALE:	1:250 @ A3

DO NOT SCALE FROM DRAWINGS

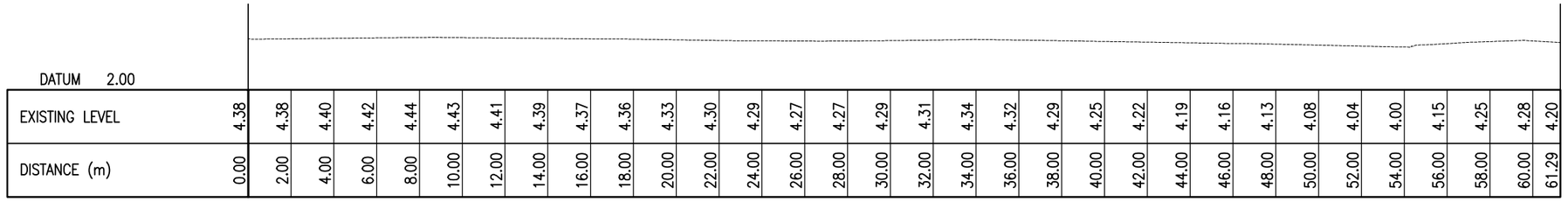
ORIGINAL SIZE:

5 0 5 10 15 20 25

DRAWING TITLE:

SITE PLAN
OVERLAND FLOWPATH
POST DEVELOPMENT

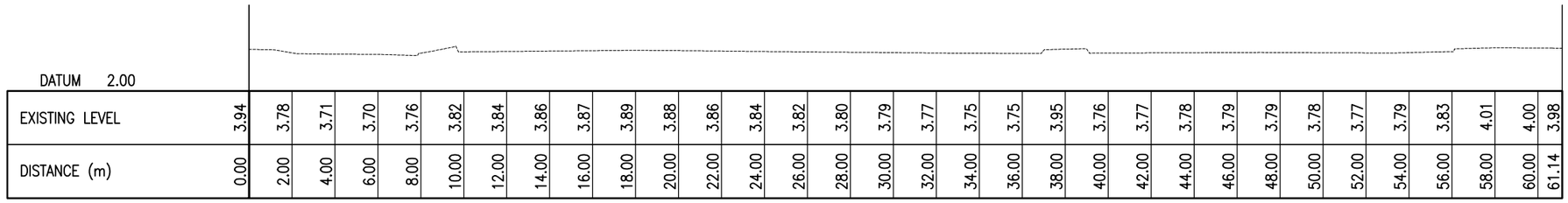
JOB No:	SHEET No:	REV:
220571-1	OLFP03	-



DATUM 2.00

EXISTING LEVEL	4.38	4.38	4.40	4.42	4.44	4.43	4.41	4.39	4.37	4.36	4.33	4.30	4.29	4.27	4.27	4.29	4.31	4.34	4.32	4.29	4.25	4.22	4.19	4.16	4.13	4.08	4.04	4.00	4.15	4.25	4.28	4.20
DISTANCE (m)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00	28.00	30.00	32.00	34.00	36.00	38.00	40.00	42.00	44.00	46.00	48.00	50.00	52.00	54.00	56.00	58.00	60.00	61.29

SECTION OLFP – EX 3–3



DATUM 2.00

EXISTING LEVEL	3.94	3.78	3.71	3.70	3.76	3.82	3.84	3.86	3.87	3.89	3.88	3.86	3.84	3.82	3.80	3.79	3.77	3.75	3.75	3.95	3.76	3.77	3.78	3.79	3.79	3.78	3.77	3.79	3.83	4.01	4.00	3.98
DISTANCE (m)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00	28.00	30.00	32.00	34.00	36.00	38.00	40.00	42.00	44.00	46.00	48.00	50.00	52.00	54.00	56.00	58.00	60.00	61.14

SECTION OLFP – EX 4–4

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TAKAPUNA **BOTANY** QUEENSTOWN

CLIENT:

HND HMB LTD

JOB TITLE:

3 PIGEON MOUNTAIN ROAD
HALF MOON BAY

NOTES:

REV	AMENDMENT	DATE	BY

DRAWING STATUS:

FINAL

ISSUE PURPOSE:

OLFP CALCS

DESIGN:	SW
DRAWN:	LP
CHECKED:	RT
DATE:	21/05/2024
SCALE:	1:100 @ A3

DO NOT SCALE FROM DRAWINGS

ORIGINAL SIZE:

5 0 5 10 15 20 25

DRAWING TITLE:

OLFP CROSS-SECTIONS

JOB No:	SHEET No:	REV:
220571-1	OLFP06	-

Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	23/05/2024

CHANNEL CAPACITY CALCULATIONS — EXISTING Ara-Tai/PMR Carriageway

INPUTS

Case (A or B): B

Case A

Flow (m^3/s): 4.375 <- 3.897+0.142+0.336

Case B

Slope (S_o): 0.008

Water level (m): 4.23 — 0.227

MFFL: 4.73

Channel Geometry x (m)	y (m)	Mannings "n" value	Sinuosity	
0	4.38	0.013		Carriageway
0	4.38	0.013		Carriageway
8	4.44	0.013		Carriageway
26	4.27	0.013		Carriageway
28	4.27	0.013		Carriageway
54	4	0.013		Carriageway
56	4.15	0.013		Carriageway
58	4.25	0.013		Carriageway
60	4.28	0.013		Carriageway
-1				

The table can input 10 (x,y) co-ordinates.
The (x,y) pairs should be in order
Terminate list by making x = -1.0

Flow distribution is based on velocity and energy gradient common to all parts of the channel. i.e.
$n=(\sum(P_1 n_1^{1.5}+....)/P)^{0.67}$

Sinuosity is the relative length of that flow channel element compared to other elements and input S_o.
Default value is 1.0.

OUTPUTS

Normal Flow Conditions

Flow (m^3/s)	4.376	OK
Velocity (m/s)	1.543	
S_o or S_f	0.0076	
Energy (m)	4.348	
Froude No	1.473	
Bed Stress (Pa)	8.313	
Equivalent "n"	0.013	
Equivalent k_s(mm)	1.64	

Geometry for wetted conditions

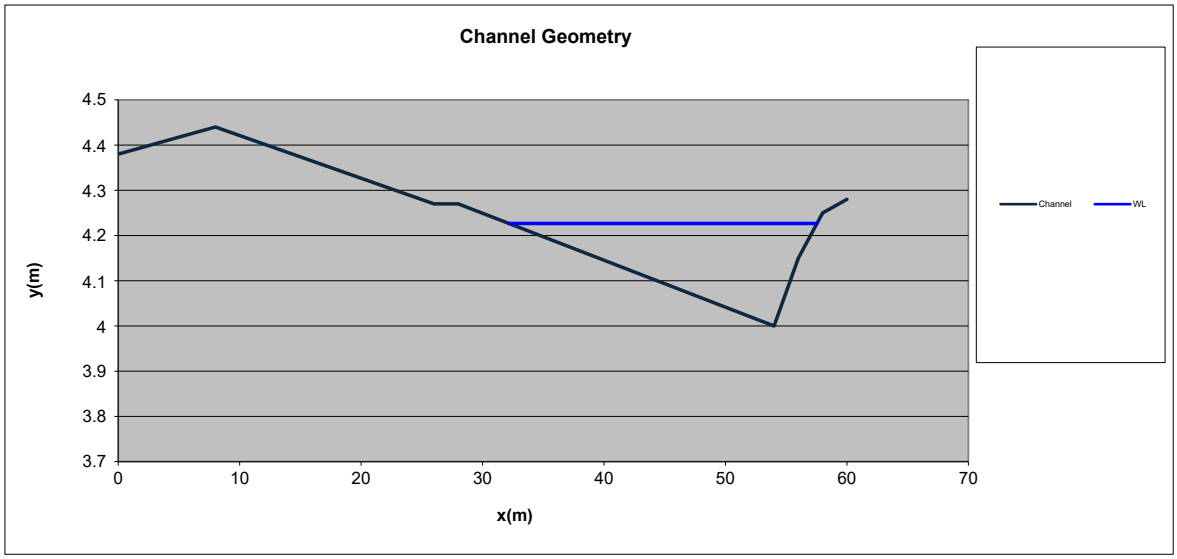
Depth (d-m)	4.227
Area (A-m^2)	2.836
Width (B-m)	25.362
Perimeter (P-m)	25.370

Critical Flow Conditions

Flow (m^3/s)	2.971	INCREASE CHANI
Velocity (m/s)	1.047	
Energy (m)	4.283	

Typical "n" values

Concrete	0.013
Gunite	0.017
Smooth earth	0.02
Clean channel	0.03
Natural Channel	0.035-0.065
Floodplain	0.05-0.15
Overland flow (grass)	0.2-0.5



Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	23/05/2024

CHANNEL CAPACITY CALCULATIONS — POST DEV Ara-Tai/PMR Carriageway

INPUTS

Case (A or B): B

Case A

Flow (m^3/s): 4.476 <-3.897+0.142+0.437

Case B

Slope (S_o): 0.008

Water level (m): 4.23 — 0.229

MFFL: 4.73

Channel Geometry x (m)	y (m)	Mannings "n" value	Sinuosity	
0	4.38	0.013		Carriageway
0	4.38	0.013		Carriageway
8	4.44	0.013		Carriageway
26	4.27	0.013		Carriageway
28	4.27	0.013		Carriageway
54	4	0.013		Carriageway
56	4.15	0.013		Carriageway
58	4.25	0.013		Carriageway
60	4.28	0.013		Carriageway
-1				

The table can input 10 (x,y) co-ordinates.
The (x,y) pairs should be in order
Terminate list by making x = -1.0

Flow distribution is based on velocity and energy gradient common to all parts of the channel. i.e.
$n=(\sum(P_1 n_1^{1.5}+....)/P)^{0.67}$

Sinuosity is the relative length of that flow channel element compared to other elements and input S_o.
Default value is 1.0.

OUTPUTS

Normal Flow Conditions

Flow (m^3/s)	4.476	INCREASE CHANI
Velocity (m/s)	1.551	
S_o or S_f	0.0076	
Energy (m)	4.351	
Froude No	1.475	
Bed Stress (Pa)	8.382	
Equivalent "n"	0.013	
Equivalent k_s(mm)	1.64	

Geometry for wetted conditions

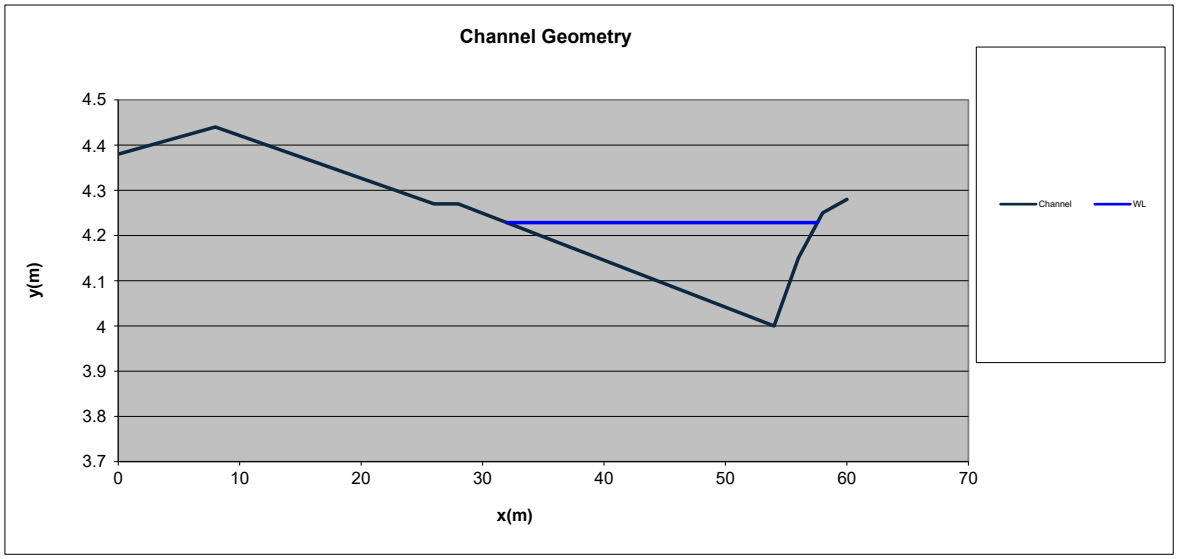
Depth (d-m)	4.229
Area (A-m^2)	2.885
Width (B-m)	25.584
Perimeter (P-m)	25.593

Critical Flow Conditions

Flow (m^3/s)	3.034	INCREASE CHANI
Velocity (m/s)	1.052	
Energy (m)	4.285	

Typical "n" values

Concrete	0.013
Gunite	0.017
Smooth earth	0.02
Clean channel	0.03
Natural Channel	0.035-0.065
Floodplain	0.05-0.15
Overland flow (grass)	0.2-0.5



Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	23/05/2024

CHANNEL CAPACITY CALCULATIONS EXISTING Marina Carpark

INPUTS

Case (A or B) B

Case A

Flow (m^3/s) 4.375 <- 3.897+0.142+0.336

Case B

Slope (S_o) 0.013

Water level (m) 3.87 0.116

MFFL 4.37

Channel Geometry x (m)	y (m)	Mannings "n" value	Sinuosity	
0	3.94	0.013		building
8	3.76	0.013		carpark
10	3.82	0.013		carpark
18	3.89	0.013		carpark
34	3.75	0.013		carpark
36	3.75	0.013		carpark
40	3.76	0.013		carpark
56	3.83	0.013		carpark
58	4.01	0.013		carpark
-1				

The table can input 10 (x,y) co-ordinates.
The (x,y) pairs should be in order
Terminate list by making x = -1.0

Flow distribution is based on velocity and energy gradient common to all parts of the channel. i.e.
$n=(\sum(P_1 n_1^{1.5}+....)/P)^{0.67}$

Sinuosity is the relative length of that flow channel element compared to other elements and input S_o.
Default value is 1.0.

OUTPUTS

Normal Flow Conditions

Flow (m^3/s)	4.375	OK
Velocity (m/s)	1.409	
S_o or S_f	0.0130	
Energy (m)	3.967	
Froude No	1.761	
Bed Stress (Pa)	8.321	
Equivalent "n"	0.013	
Equivalent k_s(mm)	1.75	

Geometry for wetted conditions

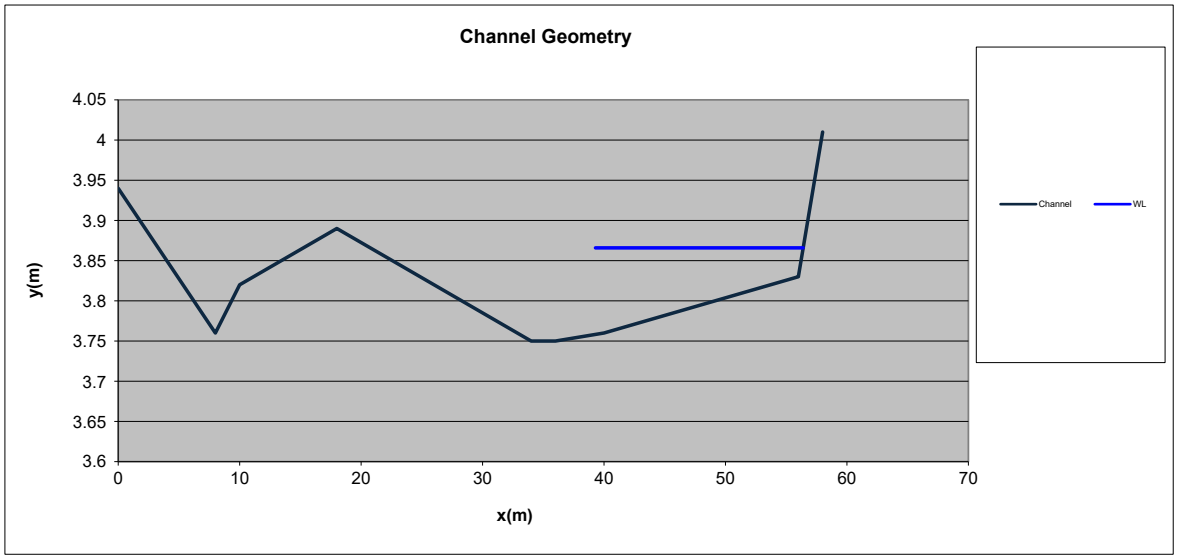
Depth (d-m)	3.866
Area (A-m^2)	3.106
Width (B-m)	47.597
Perimeter (P-m)	47.602

Critical Flow Conditions

Flow (m^3/s)	2.485	INCREASE CHANI
Velocity (m/s)	0.800	
Energy (m)	3.899	

Typical "n" values

Concrete	0.013
Gunite	0.017
Smooth earth	0.02
Clean channel	0.03
Natural Channel	0.035-0.065
Floodplain	0.05-0.15
Overland flow (grass)	0.2-0.5



Airey Civil, Structural and Fire Engineers Takapuna **Botany** Queenstown	**Client:**	HND HMB Ltd		**Sheet No:** 1
	Job:	3 Pigeon Mountain Road Half Moon Bay		**Job No:** 220571/01
	Calc's By:	SW	**Phone:**	**Date:**
	Reviewed By:	RCHT	09 534 6523	23/05/2024

CHANNEL CAPACITY CALCULATIONS — POST DEV Marina Carpark

INPUTS

Case (A or B): B

Case A

Flow (m^3/s): 4.476 <-3.897+0.142+0.437

Case B

Slope (S_o): 0.013

Water level (m): 3.87 0.117

MFFL: 4.37

Channel Geometry x (m)	y (m)	Mannings "n" value	Sinuosity	
0	3.94	0.013		building
8	3.76	0.013		carpark
10	3.82	0.013		carpark
18	3.89	0.013		carpark
34	3.75	0.013		carpark
36	3.75	0.013		carpark
40	3.76	0.013		carpark
56	3.83	0.013		carpark
58	4.01	0.013		carpark
-1				

The table can input 10 (x,y) co-ordinates.
The (x,y) pairs should be in order
Terminate list by making x = -1.0

Flow distribution is based on velocity and energy gradient common to all parts of the channel. i.e.
$n=(\sum(P_1 n_1^{1.5}+....)/P)^{0.67}$

Sinuosity is the relative length of that flow channel element compared to other elements and input S_o.
Default value is 1.0.

OUTPUTS

Normal Flow Conditions

Flow (m^3/s)	4.476	OK
Velocity (m/s)	1.418	
S_o or S_f	0.0130	
Energy (m)	3.969	
Froude No	1.764	
Bed Stress (Pa)	8.404	
Equivalent "n"	0.013	
Equivalent k_s(mm)	1.75	

Geometry for wetted conditions

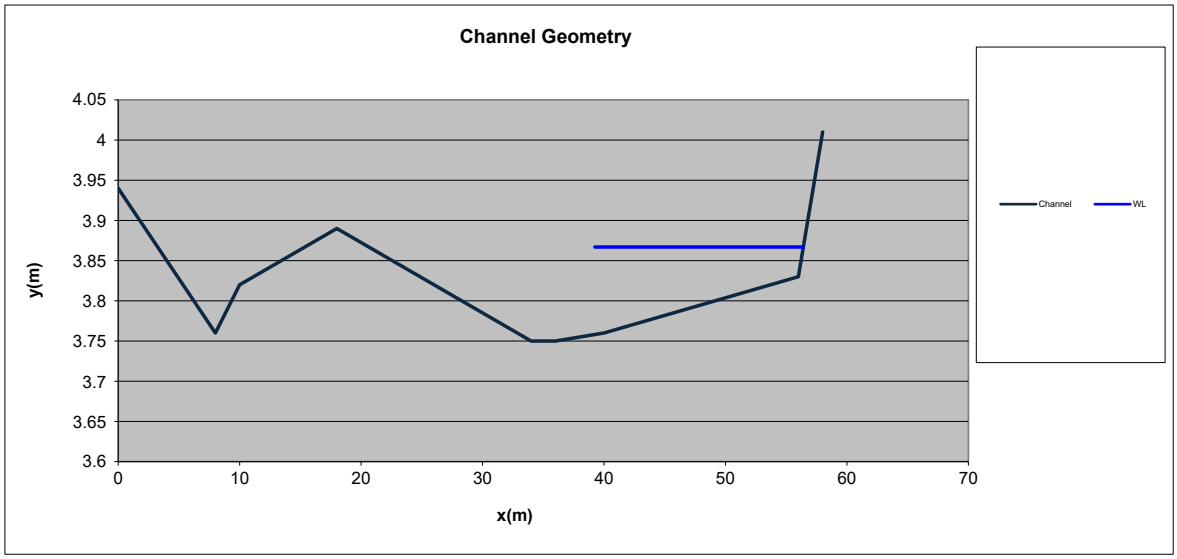
Depth (d-m)	3.867
Area (A-m^2)	3.157
Width (B-m)	47.899
Perimeter (P-m)	47.903

Critical Flow Conditions

Flow (m^3/s)	2.538	INCREASE CHANI
Velocity (m/s)	0.804	
Energy (m)	3.900	

Typical "n" values

Concrete	0.013
Gunite	0.017
Smooth earth	0.02
Clean channel	0.03
Natural Channel	0.035-0.065
Floodplain	0.05-0.15
Overland flow (grass)	0.2-0.5



Aaron Grey

From: Yujie Gao <yujie@campbellbrown.co.nz>
Sent: Tuesday, 28 May 2024 11:02 am
To: Aaron Grey
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road - UD matters
Attachments: 3 Pigeon Mountain Road Fence Recommendations 20240524 rB_1.pdf

Hi Aaron

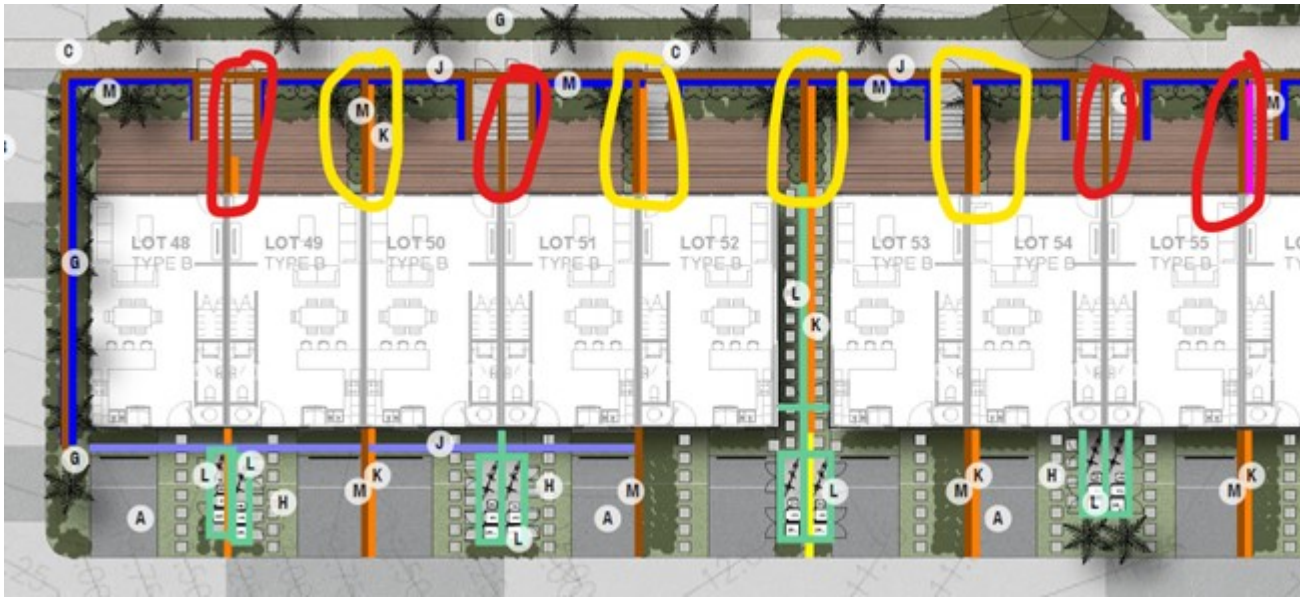
We largely accept the recommendations and will have the plans updated.

- I am having ASC double check any retaining heights in the middle block before we respond to this (and also address the secondary comment about RT wall heights consistency).

  Regarding the middle block, speaking to Sola – Mike had proposed 1.6m high fencing which he considered to achieve a good balance. 1.6m is still about at the eye height of an average so we still do consider that a 1.6m fence is adequate to provide privacy.

- Where there is a landscape strip between decks (example locations below), we propose a 1.6m screen. Where there is no landscape strip, we adopt the requested 1.8m fence.

  In the below example – yellow circled areas have a landscape strip so 1.6m fence is proposed and we consider this is sufficient.
  Red circled areas have no landscape strip so adopt the 1.8m recommendation.



- For Block A and B, recommendation that these screens are integrated with the architectural response is accepted. Can this please be incorporated as part of the standard condition for final details to be submitted.

For clarity I've made some notes on the plan that Nick had provided.

Cheers
Yujie

Fencing Recommendations
TMDO
24.05.2024

Accept recommendation for privacy screening to be integrated with architectural response, can this please be conditioned as part of final design details

Block A and B are prominent and require a higher quality design response.

Privacy screening between units strongly recommended to be integrated into building architectural response, shown in purple

Accept 1.8m solid fence where decks adjoin each other.

Maintain proposal for 1.6m fence where there is an additional landscape strip that provides additoinal screening and separation.

Increase planting where located between adjacent outdoor living areas

TBC subject to ASC clarification on RT heights

Block J, K: No passive surveillance required for these units. 1.8m closed fence to full outdoor area recommended.

Block L: Joined decks require privacy screen. Recommend 1.8m solid fence

Accepted - plans will be updated

Block G, H: Joined or very closely located decks require privacy screen. Recommend 1.8m solid fence to extent of deck (shown in red)

Extend 1.6m semi-permeable boundary fence to extent of deck shown in green

Accept 1.8m solid fence where decks adjoin each other.

Maintain proposal for 1.6m fence where there is an additional landscape strip that provides additoinal screening and separation.

Block D: Privacy screen between units needs to balance passive surveillance as a front yard and privacy from neighbouring units, and presenting a good quality outcome to Pigeon Mountain Rd.

Recommend 1.6m semi-permeable fence typology is used at position of deck shown in green.

Accepted - plans will be updated

Block I: Where units face onto common landscaped area, 1.8m fence is limited to deck only.

Accepted - plans will be updated

No passive surveillance required for these units. 1.8m closed fence to full outdoor area recommended.

TBC subject to ASC clarification on RT heights

Aaron Grey

From: Yujie Gao <yujie@campbellbrown.co.nz>
Sent: Tuesday, 28 May 2024 9:41 am
To: Aaron Grey
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road - Reasons for consent clarifications

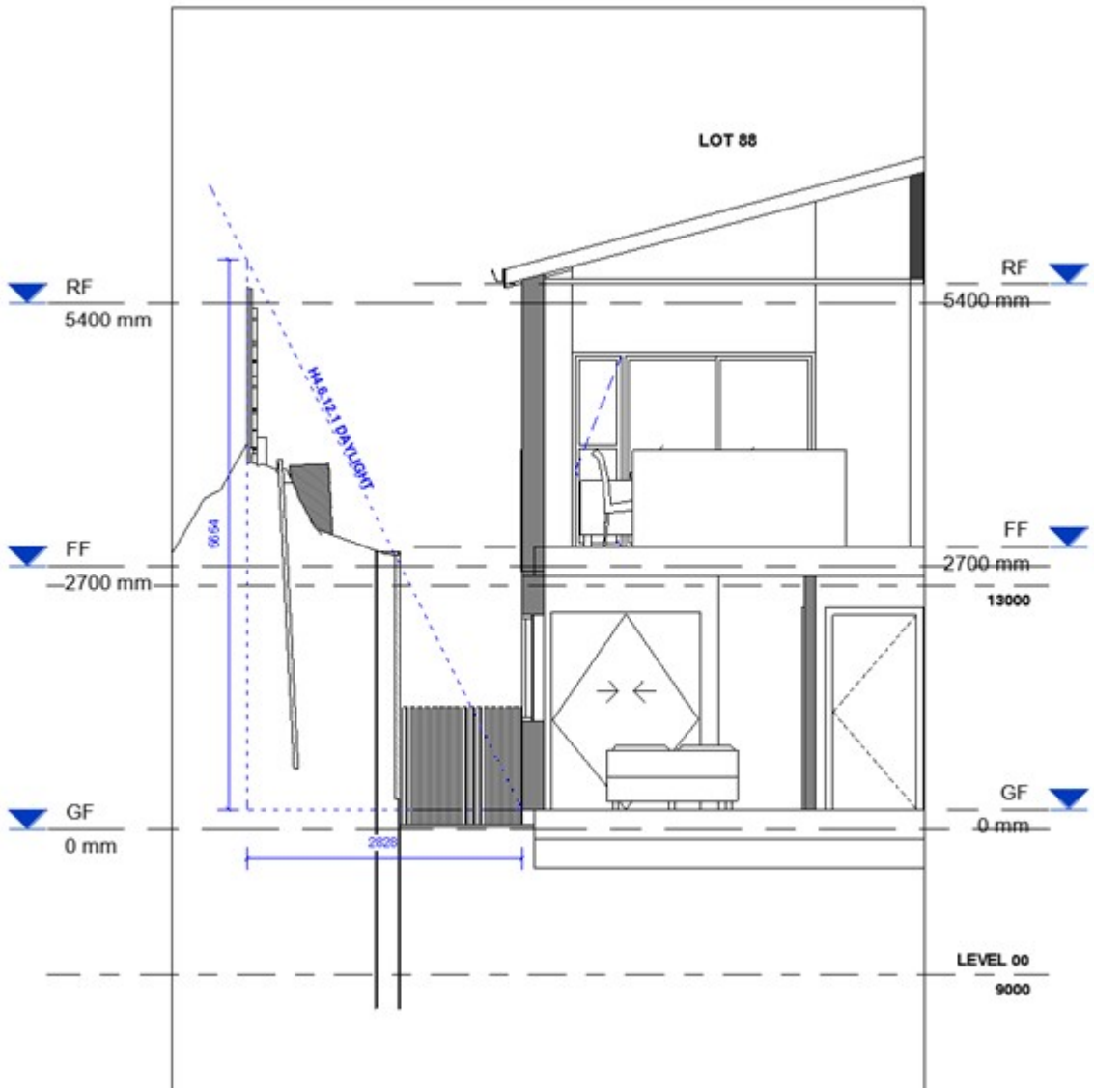
Hi Aaron

I have had the architect review your list below- see their comments in orange.
I'm happy for dimensions to be rounded to 1 or 2 dp – which would make them mostly the same as what you have.

For Unit 88, the bedroom window has been flipped to the other side.

Link to updated plans:
https://www.dropbox.com/scl/fi/cha89lnzqk0w313p7x2rn/2024-05-24-Architecture-Plans.pdf?rlkey=gq51xqick1siss6eczr33s1z2&st=dpm9brlo&dl=0

Cheers
Yujie



From: Aaron Grey <Aaron@civilplan.co.nz>
Sent: Thursday, 23 May 2024 10:27 am
To: Yujie Gao <yujie@campbellbrown.co.nz>
Subject: BUN60419132 - 3 Pigeon Mountain Road - Reasons for consent clarifications

Hi Yujie,

Further to my previous email regarding reasons for consent under section E27, I have been working through the reasons fo

I note there are a number of infringement to the front yard standard, which you have provided assessment of. However, I a latest architectural plans are not sufficient to confirm the extent of these infringements. Can you please review the below l green – in some instances I have included plan-measured dimensions to clarify the exact dimension being sought.

For the steps for Unit 16, the elevations suggest these are a height of 2.4 m above ground, but your latest RFI response sai above ground. Can you please clarify the maximum height of the deck and steps, noting that steps are likely to be higher th towards the road. Can you then please identify (in plan view) that part that is more than 1.5 m in height, dimension the mi boundary of that area and the length parallel to the boundary of that area.

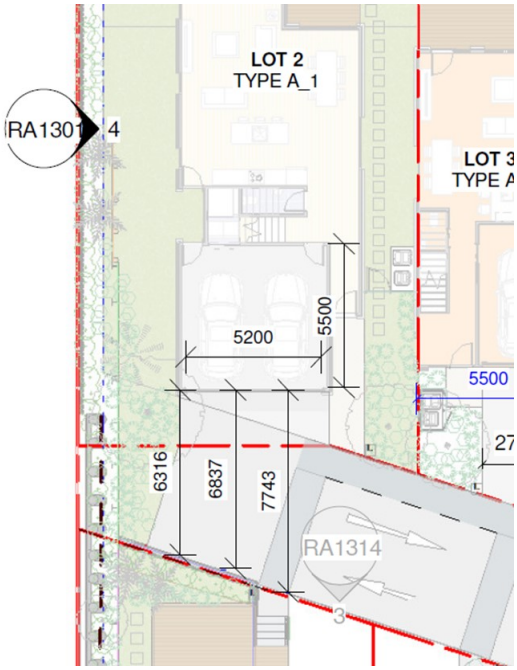
Aaron Grey

From: Yujie Gao <yujie@campbellbrown.co.nz>
Sent: Tuesday, 21 May 2024 5:12 pm
To: Aaron Grey
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road - Section 92 May update

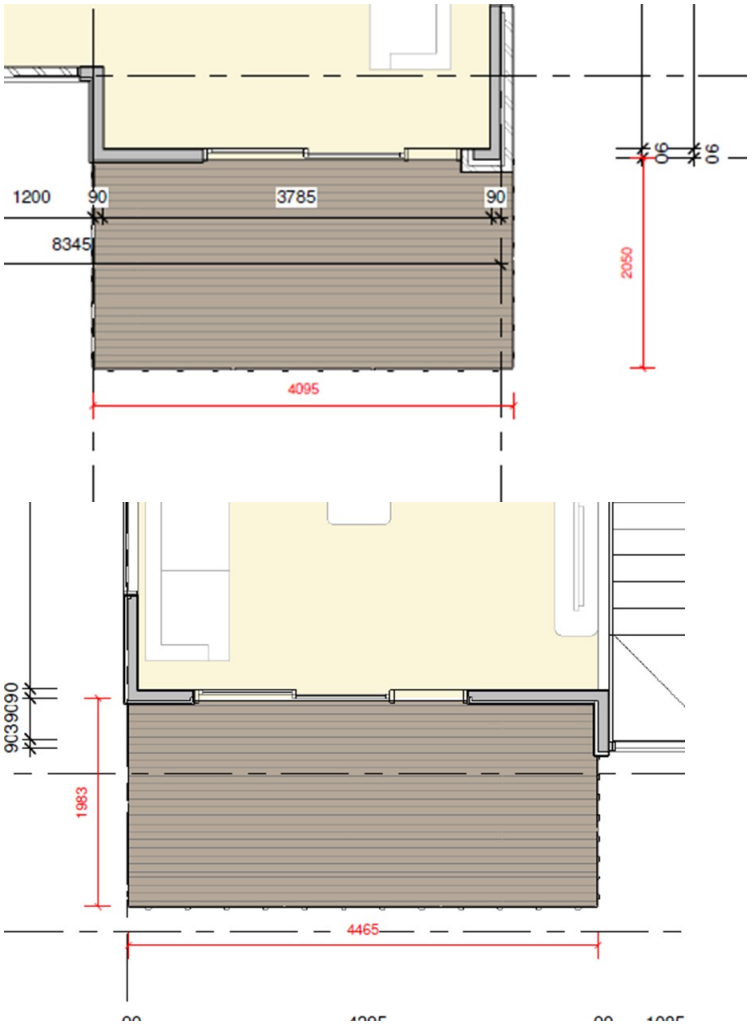
Hi Aaron

Further to our phone call yesterday- updated architectural plan set here, let me know if you have any issues accessing.
https://www.dropbox.com/scl/fi/pz0whoe89x2gh7q6yre1d/2024-05-21-Architecture-Plans.pdf?rlkey=peebvdl8zyx8n478xk6xier3k&st=3ocw5fcj&dl=0

1. Garage door for Lot 2 has been widened to 5.2m (also showing on the typology plan) with aisle depth of 6.3m

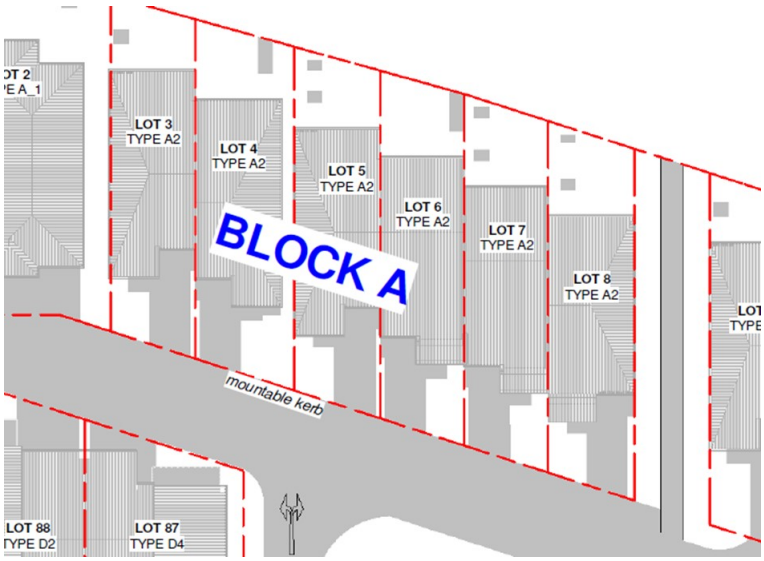


2. First floor balconies for both units 87 and 88 confirmed to be at least 1.8m – dimensions added to the typology plan.



3. Landscape area and impervious area sheets have been updated.
   Some of the display areas were not showing properly previously, but were corrected accounted for in calculations.
   Specific comments:

   - Landscape plan showing one category of green
   - Entrance paths in front of the doors are concrete, less than 1.5m width. They are partly overhung by the roof, there is a small strip that exceeds the roof line – this is now showing properly on the updated impervious plan.



   - Path to Lot 14 now added to impervious and landscape area (concrete, less than 1.5m).

Cheers
Yujie

From: Yujie Gao
Sent: Friday, 17 May 2024 10:54 am
To: 'Aaron Grey' <Aaron@civilplan.co.nz>
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road - Section 92 May update

Hi Aaron

Following our meeting and phone call last week, please find attached updated response and plans to the outstanding queries at this link: s92 response - May

For ease of reference the blue rows in the table are where we have updated the response.

We have also reviewed the DE queries with the project engineer and will be able to get a response to you by mid-next week.
We do not anticipate those responses affecting any of the other matters, so you can continue with your review of these responses.

The link above has a set of engineering drawings but at this stage please only refer to those in relation to the queries around the access gradients, not in relation to responding to the DE comments on drainage (SW lines). We will provide an updated drainage plan responding to the DE s92s.

Thanks and have a good weekend
Yujie

Yujie Gao | Senior Planner | B.UrbPlan (hons) | Int.NZPI

Campbell Brown Planning Limited
Level 2, 46 Brown Street, Ponsonby | PO Box 147001, Ponsonby, Auckland 1144
Cell 021 0265 9036 | Ph 09 378 4936 | DDI 09 394 1697
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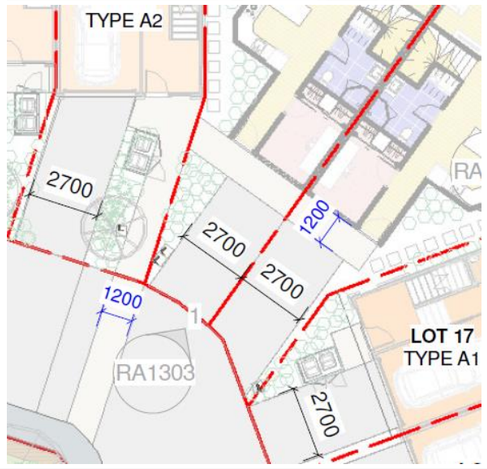
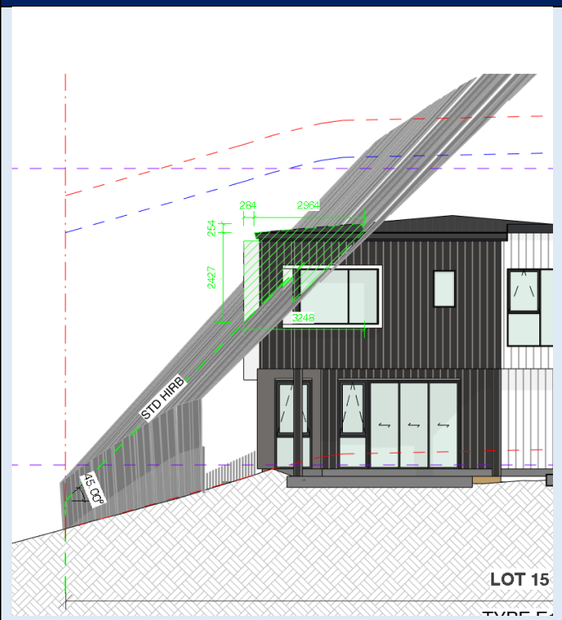
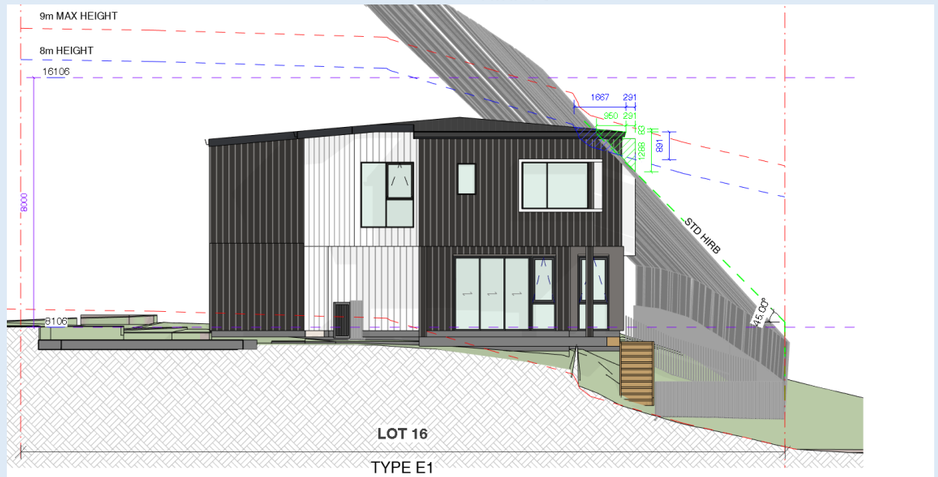
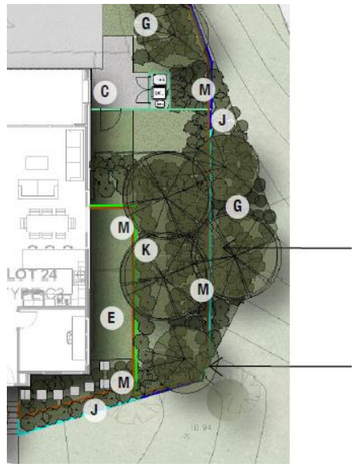
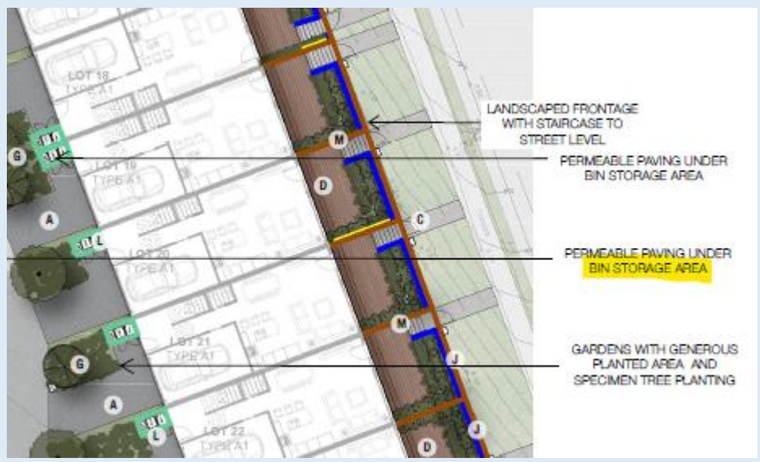
Campbell Brown

TOITŪ CARBON ZERO ISO 14064-1 ORGANISATION

Item	Request	Response
1.	On drawing RA1317, please change the fencing in front of Lot 25 to be a 1.2 m permeable fence rather than a 0.8 m block wall given that the relevant retaining wall is over 1 m in height.	Landscape drawing shows 1.2m semi-transparent fence on top of retaining wall setback 600mm. Have added notation on L112 (landscape plan). RA1317 of architecture plans has been updated.
	On Drawings RA3000, RA3001 and RA3001.1, please re-add the deck depth dimensions previously provided that confirmed the depth of that part of the deck that does not include stairs.	Sheets RA3000, RA3001 and RA3001.1 updated.
	Please provide consistency between the plans regarding all decks, noting that some plans show that one or both of the ends of the decks show a strip of landscaping while others show decking extending across the full width of the dwelling/lot. For example, units in Block D has a landscape strip shown on some architectural plans but not on the landscape plans, while some units in Blocks A, B, G and H has a landscape strip shown on the landscape plans but not on some of the architectural plans.	Updated landscape and architecture plans. Confirming it is intended for a landscape strip between decks on Block D. Confirming Block D balconies have a minimum size of at least 8m^2 (9m^2) excluding the area of stairs and landscaping strip.  Privacy screen has been added between decks on Block A and B 

Item	Request	Response
	Please correct the architectural and landscape drawings to show the driveway for Unit 16 extending out to JOAL 5 as shown on the engineering drawings.	Updated in Landscape and Architecture plans with removed garden area and adjusted letterbox.  
	Please name the dwelling typology shown on Drawing RA3008.	RA3008 updated - TYPE C2-int
27.	However, in relation to part (a), there remains insufficient information in order to quantify the recession plane infringements for Units 3 to 15. While the elevations hatches areas of recession plane intrusions for Units 3 to 8 (RA1031 A002-1), 9 to 14 (RA1032 A002-1), these are not dimensioned, and recession planes are not provided on most of the relevant side elevations (RA1031 A002-2, RA1032 A002-3, RA1032 A002-4).	RA1303 updated – infringement to Lot 15 and 16 dimensioned. Infringements to Units 3-8 are dimensioned in the updated architecture plans. Recession planes have been added – note that the site boundary is not parallel to the elevation so the elevation of the HIRB line is offset. This is modelled correctly for determining the area of infringements however – see images below of HIRB model (model not shown on plans)

Item	Request	Response
	There is also no information provided to demonstrate whether Unit 15 infringes the recession plane. This information is required in order to confirm the applicable reasons for consent for the application.	  2 SIDE ELEVATION FACING EAST (BLK-C)
30.	Drawing RA1317 identifies that the maximum combined height of the wall and fence adjacent to Unit 33 is 2.504 m, which is still (marginally) over 2.5 m and therefore an infringement of Standard H4.6.7. Please confirm the length of this infringement and provide the requested assessment of environmental effects. Please provide the requested assessment of environmental effects for the infringement of Standard H4.6.7 identified in the response for Unit 24 (maximum height of 2.7 m, exceeding 2.5 m for a length of 5.4 m).	I acknowledge the maximum combined height of the wall and fence adjacent to Unit 33 is 2.504 which is 0.004 greater than 2.5m. I consider that any potential effects arising from this infringement as less than minor, as the exceedance would not be discernible to the human eye. In relation to Unit 24 the following assessment is provided: While the maximum height of 2.7m exceeds 2.5m by 0.2m, it is considered that any potential dominance effects are less than minor, and a high-quality street frontage is achieved by the following elements. The keystone retaining wall is topped by an open aluminium fence of 1.2m height. The open fence reduces any potential

Item	Request	Response
		visual dominance effects by being visually permeable, and a different materiality to the retaining wall which provides visual relief. Additionally, the open fence is set back 0.6m from the top of the wall, with the gap in between planted out with a magnolia hedge. Magnolia provides a dense hedge which will fully screen the fence, in time, and the visual appearance from the streetscape will be of a keystone retaining wall with hedge on top. Overall, it is considered that a high quality of amenity is delivered. 
31.	In order to accept the accuracy of the impervious area specified on drawing RA0201: please address the matters previously raised: • Please update the landscape plans to show that individual bin storage areas are to be permeable pavers. Alternatively, please add these areas to the total impervious area. • Please update the landscape plans to specify that “paved path” (Type H) will consist of permeable pavers. As drawing RA0201 identifies a total impervious area of 9,596 m² (which is greater than 9,512 m²), please provide the required updated assessment.	• The landscape plans have been updated to note Bin storage areas as permeable paving. • The landscape plans have been updated to note Type H on landscape plans as “PAVED PATH PERMEABLE PAVERS”. 

<table>
<tr><th>Item</th><th>Request</th><th>Response</th></tr>
<tr><td></td><td></td><td> 

(L) additional notes under legend in for L (bin and bike storage areas)

The proposal results in an infringement to impervious areas. It is considered that any potential effects are less than minor and the purpose of the maximum impervious area standard is achieved. It is confirmed that the proposed development can be appropriately serviced for stormwater, including in relation to the capacity of the stormwater network. A number of the paved areas on the site are counted as both landscaped area and impervious area. In combination with the comprehensive and high quality landscape plan, it is considered that a quality outcome is being delivered.</td></tr>
<tr><td>33.</td><td>In order to accept the accuracy of the landscaped area specified on drawing RA0202: please address the following matters:

• For Blocks I and J, the decks (part of “Landscape area category 1a,b,c”) should extend for the full width of the dwellings, as shown on the landscaped plans.

• Drawing RA0155 indicates that the deck for Unit 9 may be more than 1 m above finished ground levels and therefore should be excluded from the total landscaped area.

• Despite the response stating that “Bin storage and covered bike stand areas has been removed”, this does not appear to have occurred. This is particularly noticeable for Units 2 to 23 and 41 to 58.

• It is unclear why the paved entrance areas next to driveways at Units 2 to 23 are shown as “Landscape area category 1a,b,c” when the landscape plans specifies these as being concrete (same treatment as the driveways). It is considered that these should be removed from the landscaped area.
• Please include all pavers as part of “Landscape area category 1a,b,c”.</td><td>- Landscape area of decks for Block I and J has been updated

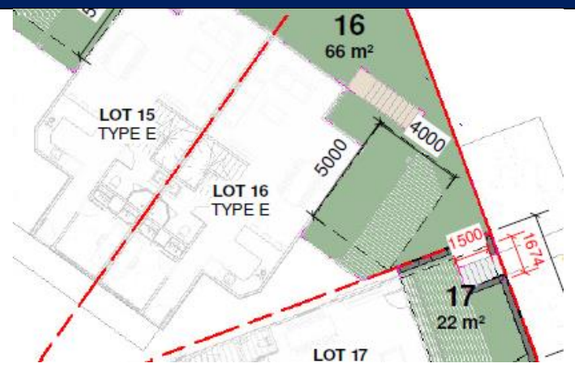
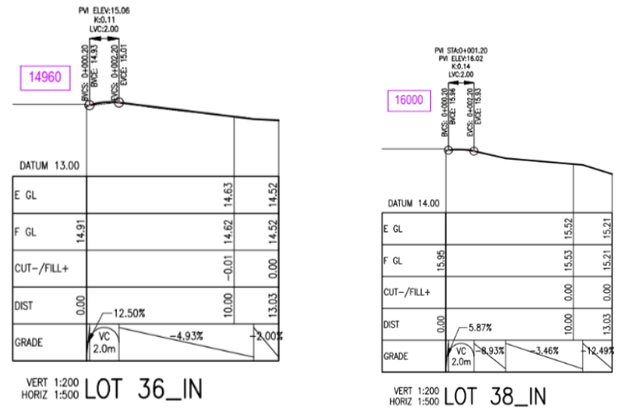
- RA0155 – the finished ground level is sloping, but the height under the deck is less than 1m.

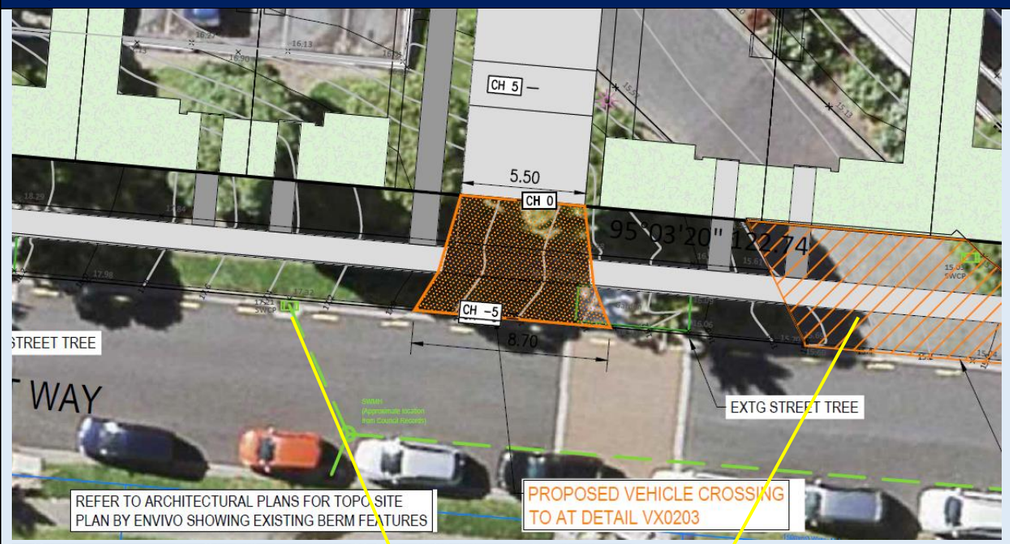
- Bin and covered bike areas has been removed, refer to sheet RA0202.

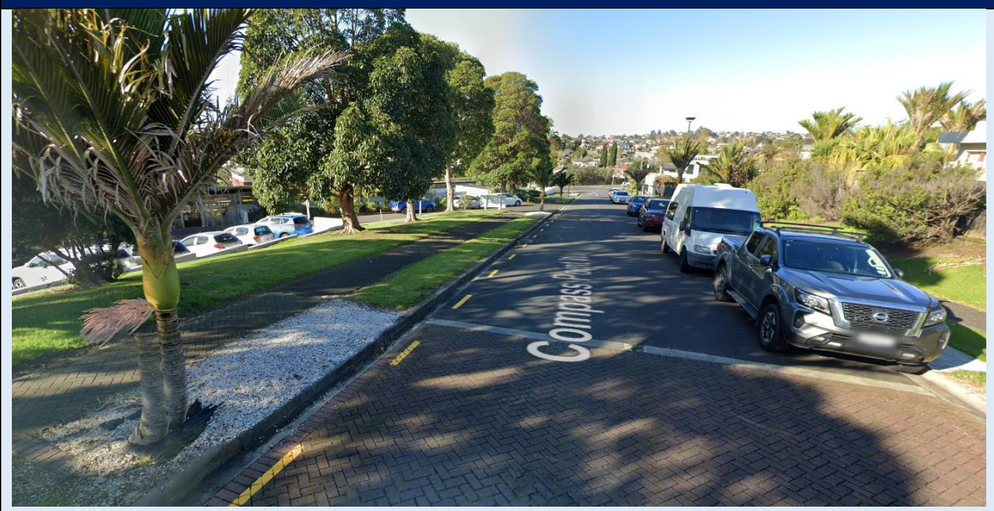
- Entrance areas have been removed.

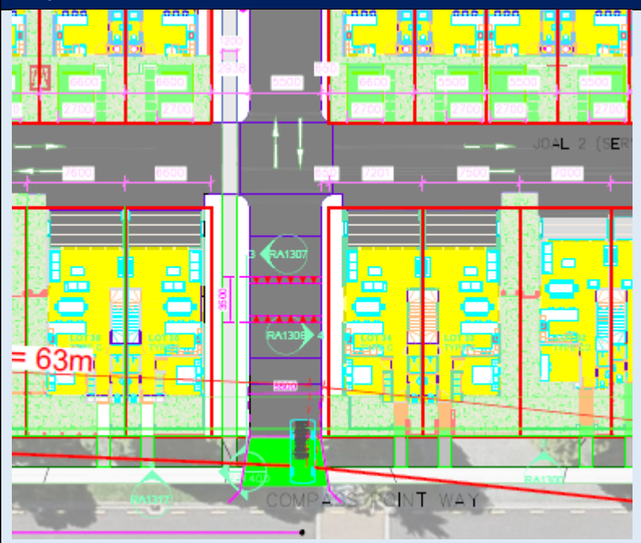
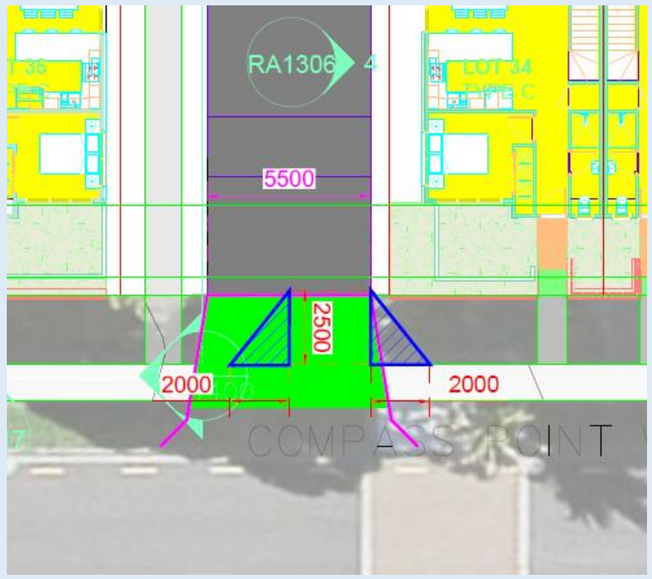
- An updated calculation has been provided for those areas categories under “Landscaped area 1a, b, and c”

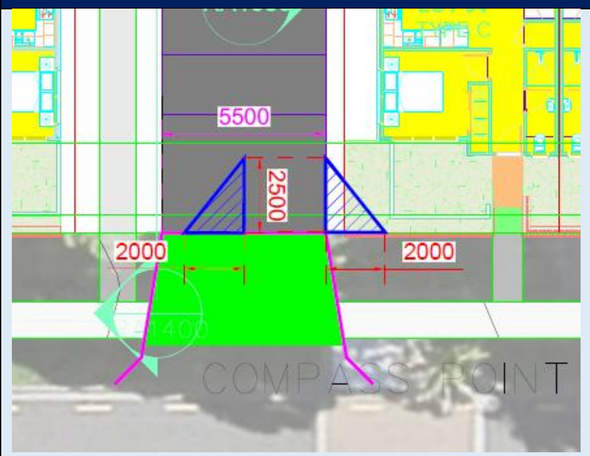
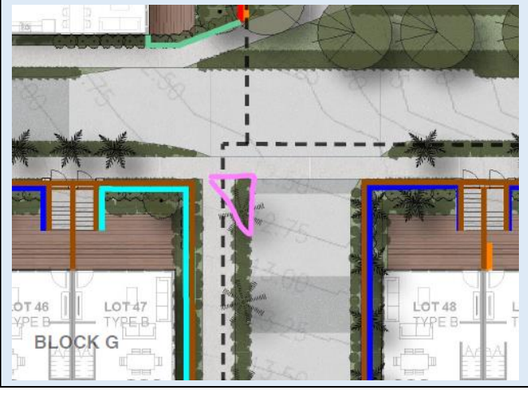
<table>
<tr><th colspan="3">CATEGORY 1a, b, c calculation</th></tr>
<tr><th>AREA</th><th>CALCULATION</th><th>TOTAL</th></tr>
<tr><td>DECKING & BINS</td><td>as shown</td><td>672m²</td></tr>
<tr><td>PAVED PATH</td><td>814 pavers @ 0.2025m²</td><td>164.84m²</td></tr>
<tr><td></td><td></td><td>836.84m²</td></tr>
</table>
This is 16% (less than 25%) of the total proposed landscaped area.</td></tr>
<tr><td>42.</td><td>The rationale for the further changes to Units 15 and 16 are noted.
However, the proposed response does not directly address the original request.</td><td>- Lot 16 – stairs has been moved and deck enlarged to provide a 4m x 5m area.</td></tr>
</table>

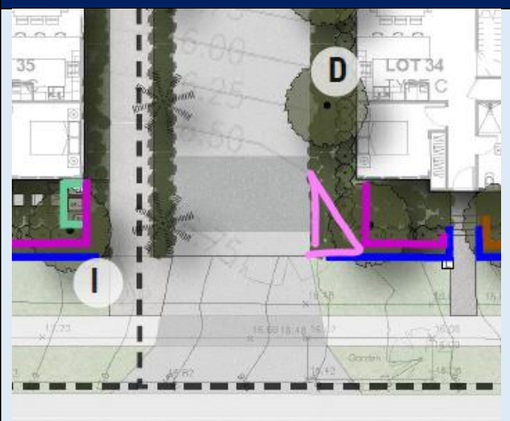
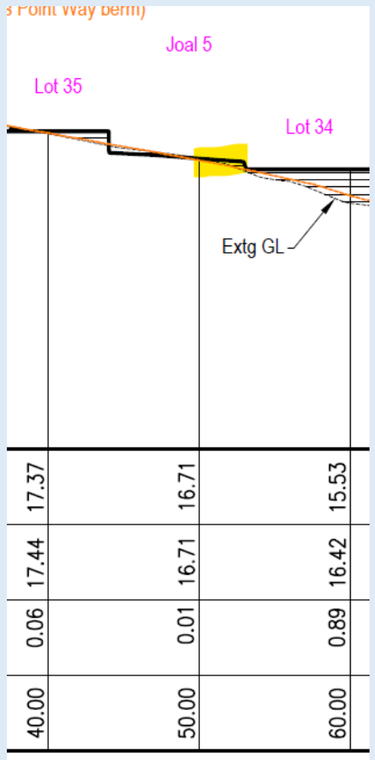
Item	Request	Response
	• The amended Unit 15 outdoor living space now provides a level 4 m x 5 m area and so further comment is not necessary. • However, for Unit 16 stairs are proposed through the middle of the shown 4 m x 5 m area. Please provide further comment in order to demonstrate that the provided outdoor living space, including those parts outside of the shown 4 m x 5 m area, are of a functional size and dimension.	
57.	Provision of a lighting plan remains outstanding.	Please see attached updated Lighting Plan.
58.	Sufficient information has been provided in response to this request. Council continues to consider that there is an infringement to E27.6.4.3.2(T151) as this requires clear sight lines along the entire access as well as passing bays.	Noted
60.	As previously requested, please provide a plan similar to Sheets 302 and 303 that correlates with the long sections for Lots 24 to 31 and 35 to 40 provided on Sheets 318 and 319. Despite the response provided, the long sections for LOT 36_IN and LOT 38_IN have not been updated and still include a summit with a change in gradient exceeding 12.5% (17.54% and 15.18%, respectively) without a 2 m transition. Please amend the levels and gradients to achieve compliance or provide assessment of the effects of the infringement of Standard E27.6.4.4(2).	Sheets 304 and 305 have been added to Airey Plan Set correlating with the long sections for Lots 24-31 and 35-40. Transition curves added for Lot 36_in and Lot 38_in, please refer to Airey Plan Set Sheet 318. 
62.	Please provide a context site plan that shows all details at the road frontage (both Compass Point Way and Pigeon Mountain Road) and its relationship to the location of the two-way vehicle crossings. This should include the number of traffic lanes, flush median including width, edge line markings, on street parking, street lighting pole, catch pit and any other road furniture for the full frontage of the site. Council's traffic engineer is unable to locate the provided context site plan that shows the information requested. Please clarify which drawing this is.	Aerial of surroundings has been added to **Airey Plan Set Sheet 301 (page 28).** Please also refer to Architectural plans for topo site plan by Envivo showing existing berm features. See excerpt and photo below which indicates features in vicinity of the proposed vehicle crossing. **Also see page 21 of the TPC documents for additional context plan**

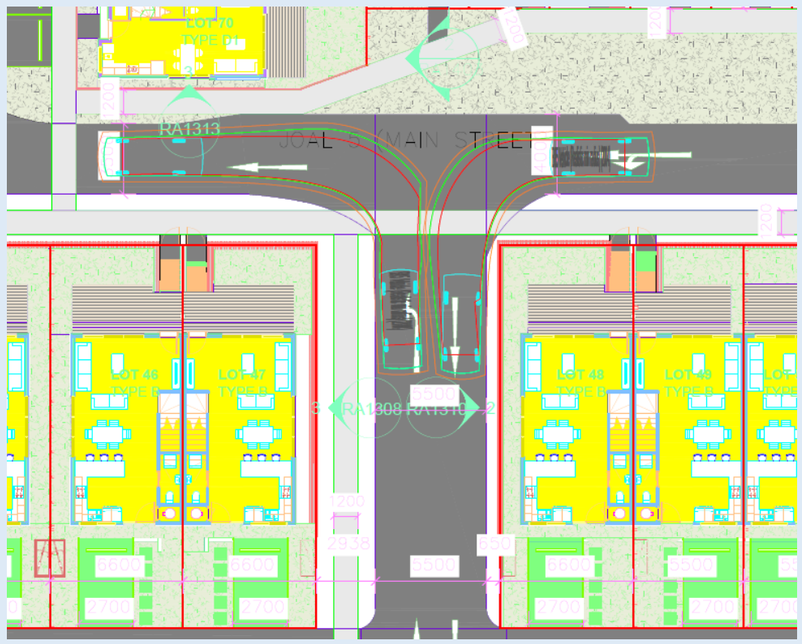
Item	Request	Response
		  The following photo indicates the site frontage on Compass Point Way. No vehicle crossing points are proposed on Pigeon Mt Road and Ara Tai. No changes are proposed to the intersection of Compass Pt Way and Pigeon Mt Road and the proposed crossing is located approximately 90m from this intersection.

Item	Request	Response
		
63.	Council's traffic engineer specifies that the signage and marking plan does not include key details such as internal intersection control analysis, one way / two way traffic and bollards where pedestrian connections adjoins Pigeon Mountain Road.	A detailed signage and marking plan will be provided at EPA stage. Bollards are shown on the landscape plan.
64.	Council's traffic engineer requires a corner sightline assessment to be provided to ensure car/car and car/pedestrian safety is not compromised (given absence of all corner splays).	As indicated in our previous response, in those locations where corner splays are limited convex mirrors are recommended. The attached drawing indicates corner sightline assessments throughout the site at the intersections. It should be noted that JOAL3 and 4 are one-way such that there is a low likelihood of vehicular interaction. Further to that, footpaths are generally separate to the vehicle access throughout the site and raised table pedestrian crossing points are provided. **See additional assessment plans by TPC.**
65.	Sufficient information has been provided in response to this request. However, Council's traffic engineer recommends adding a speed hump around JOAL 5 to slow down vehicles, especially around JOAL's cross-roads. If this is not provided, conditions of consent may be imposed to require this.	A speed table has been added.

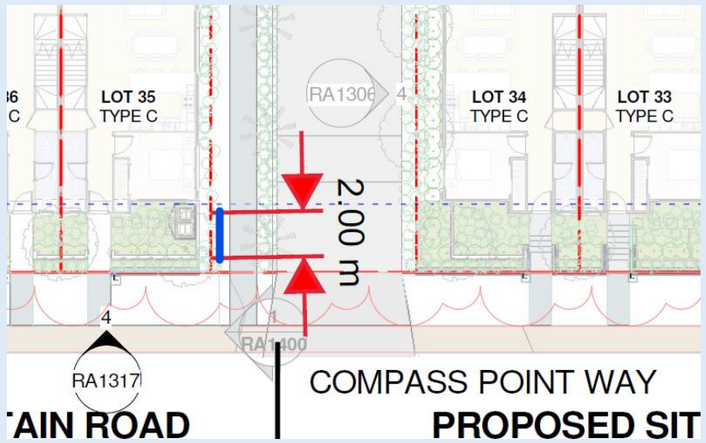
Item	Request	Response
		
66.	Council's traffic engineer does not agree with the position that the requested splays cannot be provided. As was requested, please provide detailed analysis as to whether the splays can be achieved and annotate the same on the plans.	Please refer to our previous response. In line with ASNZS2890.1-2004 pedestrian visibility splays 2 x 2.5m are only required on the drivers side of the road when the road is two-way. A splay is naturally provided within the opposing traffic lane. This is demonstrated in the below. Further to that the footpath is offset from the site boundary and as such there is additional time for users to identify any pedestrians past the site along Compass Point Road. 

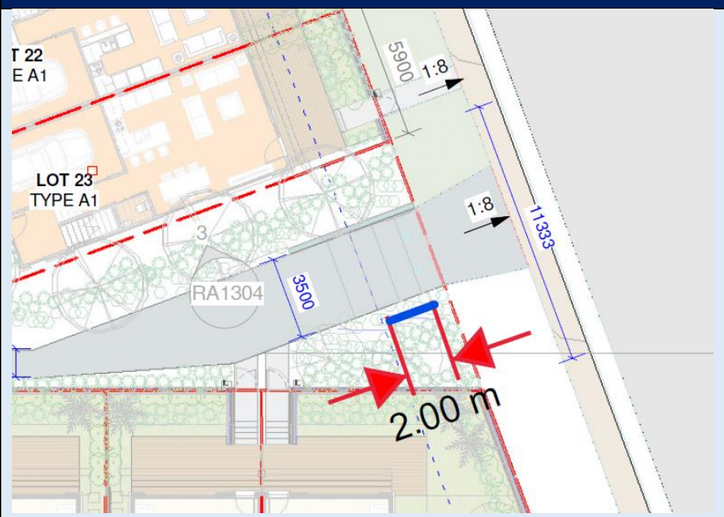
Item	Request	Response
		 **<u>See additional assessment plans by TPC.</u>** Fencing and landscaping has been revised in these areas.  

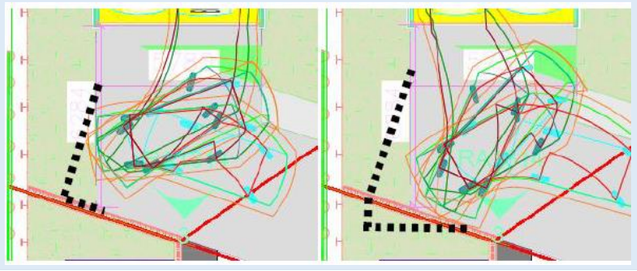
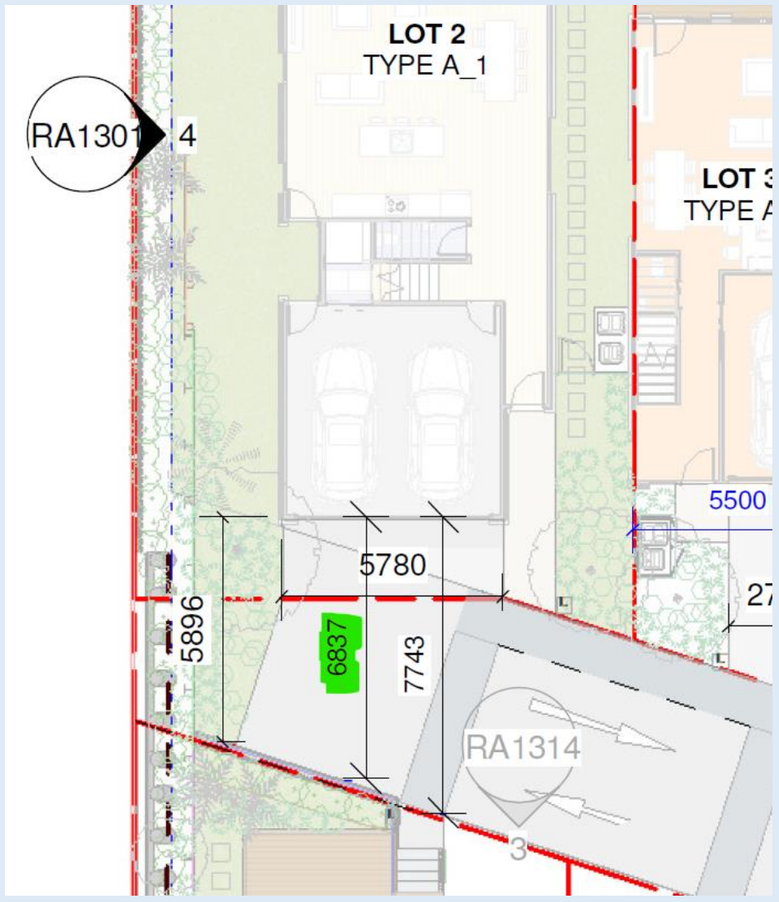
Item	Request	Response
		 'Retaining wall' is only very minimal tapering to 0 at this location 
67.	Council's traffic engineer does not agree with the position taken in the response. Please provide the requested inter-visibility assessment around crossroads and around 90-degree bends to ensure cars can pass each other (tracking) without any blockage from infrastructure (such as fence).	The below image shows two vehicles passing at the JOAL 5/JOAL 4 intersection point. **<u>See additional visibility assessments in the attached document by TPC.</u>** JOAL 3 and 4 are one-way only and so there will be no vehicular movements in opposing directions.

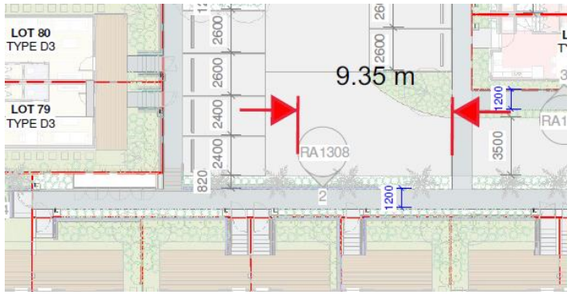
Item	Request	Response
		JOAL 1 and 2 will likely only be right in and left out and users would likely wait for an exiting vehicle before entering the JOAL. In any event, the likelihood of vehicular interaction at JOAL and JOAL 2 is considered low. 
68.	• The widths of the internal garages for typologies “Type C1.1-Corner”, “Type C2-int”, “Type C2-Corner”, “Type C2.1-Corner”, “TYPE C3-int” and “TYPE C3-CORNER” are not provided. • The depth of the internal garages for typology “TYPE C3-int” should be corrected to exclude the bin storage area (this is assumed to be 5.51 m like “Type C2-int”). • Please identify the widths of the internal garages for typologies “TYPE A_1-CORNER”, “TYPE D2” and “TYPE D4” to exclude the laundry areas. Please also refer to the additional requests under item 99 below.	Dimensions added. Sheet RA3007, RA3008, RA3009, RA3010, RA3011, RA3012 has been updated Depth of type c3 has been dimensioned – refer to sheet RA3011 TYPE A_1, TYPE D2 and TYPE D4 garage widths dimensioned. Refer to Sheet RA3001.1, RA3014, RA3016
71.	The requested truck tracking curves for a truck turning into JOAL 2 from JOAL 5 (and from JOAL 2 into JOAL 5) still have not been provided.	See page 12 and 13.

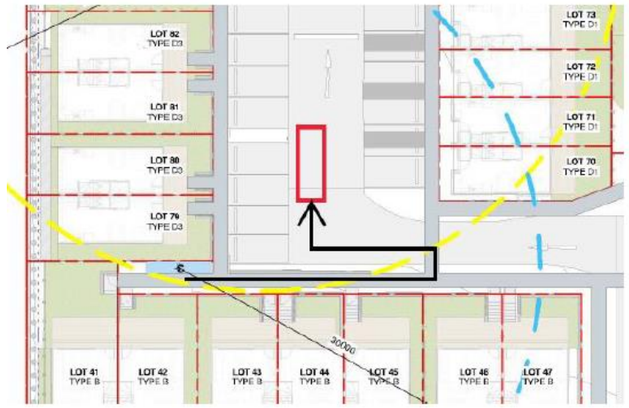
Item	Request	Response
		
74.	A response to the following remains outstanding: • Please provide further details regarding the proposed easement. If this easement is to be in gross in favour of Auckland Council, please identify whether the footpath(s) within this easement will meet Auckland Transport's standards for a public footpath.	The footpaths are no longer proposed to allow public access therefore an easement to Auckland Council is no longer required. Consultation with NZ Post will be undertaken at a later stage (along with the street naming) to confirm letter box locations.

Item	Request	Response
	• Please clarify whether consultation with NZ Post has been undertaken.	If NZ Post is not able to access the JOAL network then a communal letter box bank will be proposed. In discussion with the project Landscape Architect, this would comprise 2x communal letter box banks, one at Compass Pt Way frontage and one at Pigeon Mt Road frontage. Excluding Block D, E, and F units (which have road frontage access so would have individual letterboxes at the road frontage) there are a total of 64 units / 64 letter boxes split over 2 banks. For a mailbox bank, each box is 250mm wide x 190mm high. Stacked 4 high on a 500mm plinth, this is a total dimension of 1.2m height x 2m length. 1.2m height is akin to that of a solid 1.2m fence. The following shows two locations where this can be implemented – located outside of any visibility splays. The exact number in each bank would be confirmed once the road naming has taken place however it was proposed to accommodate more than 32, the letter box banks can be slightly lengthened, and not increased in height. 

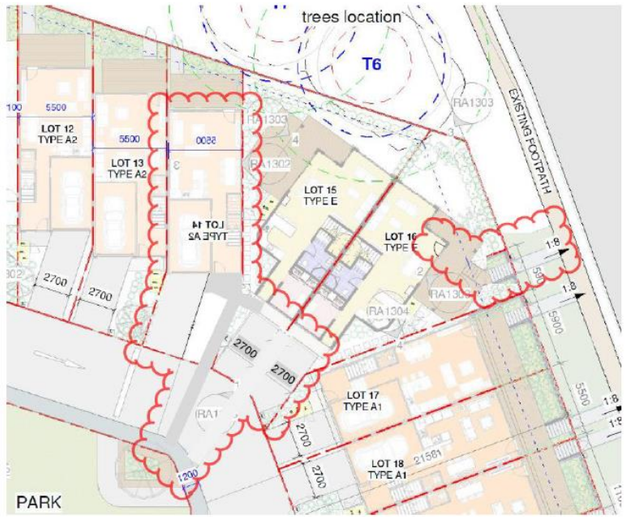
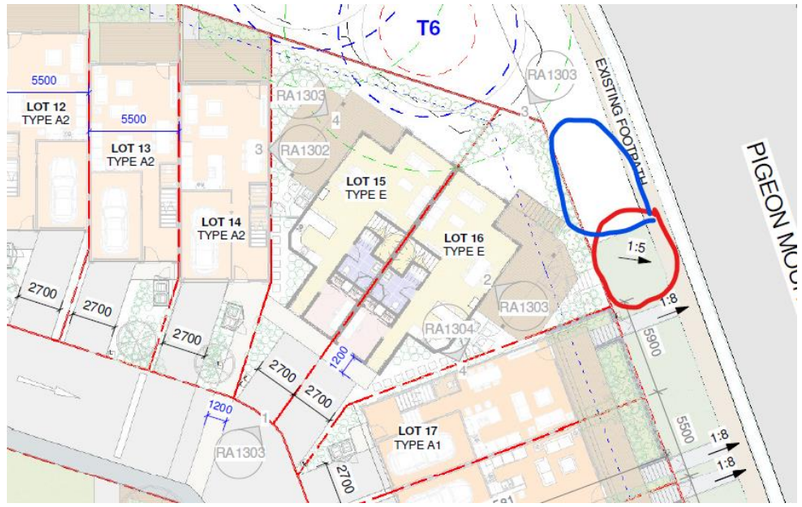
Item	Request	Response
		
94.	A response to the following remains outstanding: • Please provide the additional information requested regarding the specific amalgamation conditions proposed. This may be provided as part of the updated subdivision scheme plan, which has not yet been sent through.	Amalgamation conditions will be shown on the updated scheme plan.
98.	An updated scheme plan has not been provided to clarify the response to this item.	To be provided pending review of other responses.
99.		
a.	The requested assessment against the purpose of Standard H4.6.13 has not been provided.	It is considered that all units have been provided with outdoor living space with a functional size and dimension, which has suitable access to sunlight, and is accessible from the dwelling. While some units have minor shortfalls to the total area, it is noted that for those without secondary outdoor living spaces, the shortfall is a maximum of $2m^2$. Other units have larger shortfalls, however are provided secondary outdoor living spaces. Shading studies have confirmed that all outdoor living spaces achieve suitable sunlight, in particular meeting the rule of thumb noted in the ADM for sunlight access to private outdoor living areas. All proposed decks are of a functional and practical size and dimension. High quality landscaping is proposed within the outdoor living areas of each lot, providing low maintenance planting that contributes to visual amenity.
c.	The double garage parking spaces for the revised Unit 2 does not comply with Standard E27.6.3.1 as: • The depth of the parking spaces, excluding the laundry area, is approximately 4.85 m (this should be dimensioned on the plans), below the minimum requirement under the AUP of 5.0	Lot 2's internal garage layout has been updated – to achieve a depth of 5.5m Lot 2's driveway has been updated to reduce required tracking as suggested. Refer to sheet RA0100

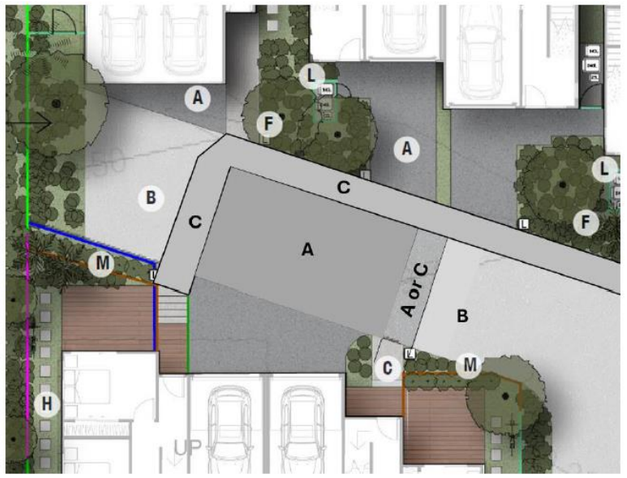
Item	Request	Response
	m. This should ideally be at least 5.4 m to provide consistency with AS/NZS 2890.1:2004. • The provided tracking diagrams for Unit 2's garage confirms a minimum aisle depth of 6.3 m, below the minimum requirement under the AUP (where the width of the parking space is 2.5 m – as the garage door is 5.0 m) of 6.7 m. Please either amend the design of the garage to comply with Standard E27.6.3.1 (this is recommended, especially for the parking space depth) or confirm the additional reason for consent and provide an appropriate assessment of effects. The required tracking for the two parking spaces for Unit 2 is noted to be very tight and requiring multiple manoeuvres. The multiple manoeuvrers are also across that part of the accessway where pedestrian access to Unit 88 would be obtained. It is recommended that the extend of accessway provided in this location be increased in order to reduce the complexity of these manoeuvres. Refer to suggestions below. Any change to the extent of pavement would need to be reflected with updated assessment against the impervious area and landscaped area standards. 	The driveway for Lot 2 achieves a compliant aisle depth exceeding 6.7m. 
d.	The parking pads for Units 15 and 16, shown as being 2.5 m in width (previously these were 2.7 m in width), do not comply with Standard E27.6.3.1 as the combined parking space depth and aisle depth is a minimum of 11.3 m, below the minimum requirement under the AUP of 11.7 m. Please either amend the design of the parking pads to comply with Standard E27.6.3.1 (the spaces would only need to be increased in width to 2.6 m, which could occur alongside amendments to the pedestrian access – refer below) or confirm the additional reason for consent and provide an appropriate assessment of effects. It is noted that tracking diagrams for these parking spaces has not previously been provided.	- Tracking provided within attached drawing. - Lot 15 and 16's driveway and footpath has been updated and enlarged to 2.7m. Refer to sheet RA0100

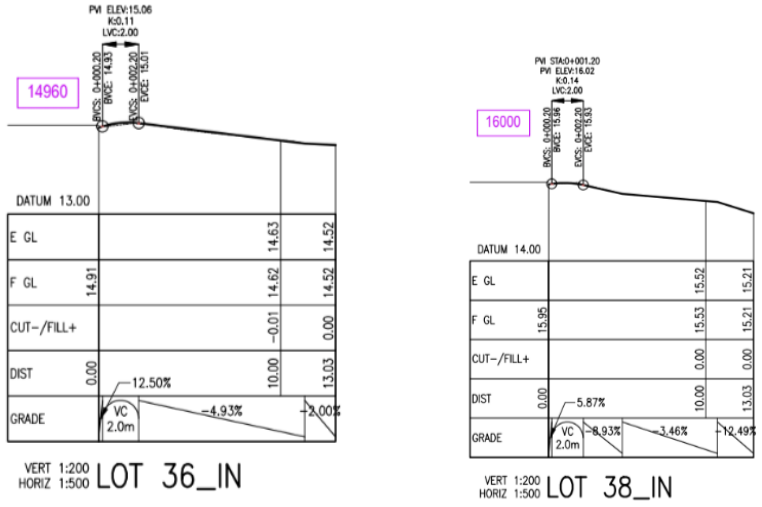
Item	Request	Response
e.	The stacked double garages for Units 87 and 88, which will have a total length of less than 10 m when excluding the laundry areas, do not comply with Standard E27.6.3.1 as the depth of at least one of the parking spaces would be below the minimum requirement under the AUP of 5.0 m. Please either amend the design of the garage to comply with Standard E27.6.3.1 or confirm the additional reason for consent and provide an appropriate assessment of effects. Note that Council is unlikely to accept a stacked double garage with an internal depth of less than 10 m.	Lot 87-88's internal layout has been updated to achieve a depth of 10.6m. Refer to sheet RA3014 and RA3016.
f.	In relation to the revised waste management strategy and updated WMP: • Section 4.1 of updated WMP specifies that Lots 35 to 40 will move bins to the edge of the adjacent JOAL. However, in this case the relevant JOAL is JOAL 1, which the responses above confirmed will not be serviced by a rubbish truck (due to no turning area being available). Please revise section 4.1 of the WMP to confirm that Lots 35 to 40 will instead place their bins kerbside on Compass Point Way, consistent with section 4.3 of the WMP. • Section 4.3 of the updated WMP states that, for Lots 35-40, "The truck will park on Compass Point Road in the nearest safe and unrestricted parking space". However, NSAAT lines apply along the full length of the site's frontage. Please clarify. • Noting the above, it may be more practical for Lots 35 to 40 to be serviced by Council's public waste collection service. • Please clarify the anticipated route that bins from the new refuse areas adjacent to Lot 79 will be wheeled to the parked collection truck within needing to use stairs. It appears that the only route available is that shown on the sketch below. Please comment on whether a more efficient route is achievable, such as through amending ground levels or landscaping.	• Section 4.1 of the WMP will be updated. • Section 4.3 of the WMP will be updated. Lots 35-40 will be served by Council's public waste collection service from the NSAAT lines, as is common with other areas with NSAAT lines. • Yes that is the route that the bin collection will travel. Rubbish Direct has reviewed this and confirmed this to be suitable. It is not proposed to amend ground levels as on the path would be required to achieve this. This is not considered necessary in any event as the distance saved is approximately 20m in total. • Based on previous feedback from Rubbish Direct, this is likely to only save a few seconds to each collection. 

Item	Request	Response
		
	• In the provided WMP, the table in section 3.4 outlines the estimates volumes of refuse etc. and calculates the provided capacity. However, the provided capacity for refuse, co-mingled and cardboard is 72% lower than the estimated volumes and for organic is 86% lower. Can you please increase the number of bins to allow for larger capacity for the site.	Response from Rubbish Direct: Re bin capacity: the shared bin solution recommended in the WMP is sufficient based on Auckland Council's own guidance for residential properties. Specifically, Waste Plan Consents team member Jan Burbery recommended to us in late 2021 that a bin capacity of around 65-75% of maximum occupancy is appropriate because residential properties are rarely 100% occupied for 100% of the time. Another reason for lower bin capacity is that it is more environmentally sustainable to manufacture, store, and clean fewer bins. Since then over 350 of our WMPs have successfully achieved resource consent with shared bin capacities of around 65-75% of maximum occupancy volumes. This approach is borne out in practice because we now service hundreds of residential properties using bin solutions based on the WMP provided, and none of those properties produce maximum occupancy volumes. In the case of 3 Pigeon Mountain Road the units using shared bins (37 units / 84 bedrooms) will produce a total of 10,080 litres per week using Auckland Council's MUD calculator, and the shared bin capacity in the WMP is 8,640 litres per week, which is 86% of maximum occupancy volumes, therefore we are already providing more bin capacity than that recommended by Auckland Council. As well, we were advised to aim for a shared bin capacity of around 240L total waste per household unit per week to match Council's standard public collection service offering. With 3 Pigeon Mountain Road, the per-unit capacity provided is 234L total waste per household unit per week, so we are also on target by that metric. Hopefully that helps to clarify why the WMP bin solution capacity is lower than the maximum occupancy volumes.
8.	Please provide the final design report that is updated in accordance with the comments made on 12 March 2024 (“We will update the alert & alarm level for DM 1-9 in accordance with the model predictions”).	Please see attached updated report, updates are on page 20, and references the final architecture and civil plan sets.
1.	Sheet L115 of the landscape drawing set shows two options for “1.2m Aluminium Semi-Transparent Frontage Fence”. Only	SOLA – updated drawing with the option 2 only

Item	Request	Response
	option 2 is supported. Please confirm whether you will remove Option 1 from the drawings. If not, expect conditions of consent to be imposed that would only allow for Option 2.	
2.	For the frontages to Compass Point Way where a 'fill' retaining wall is proposed (Units 24 to 37), the setback of fencing from the retaining wall is unclear. It is recommended that this be at least 600 mm, to allow for planting between these structures. If this recommendation is agreed to, please identify this set back on the plans. Otherwise, except conditions of consent to be imposed requiring this.	SOLA – updated drawing with notation.
3.	The fence between decks and adjacent terraces of adjacent units is only a 1.2m high semi-permeable fence where fronting a road or JOAL. While this may be an appropriate design response for a front yard, it does not provide sufficient privacy for this space as a primary outdoor living area. The conflict of these being both has not been resolved adequately. In addition, Blocks I, J and K provide a 1.6m high semi-permeable fence to separate adjacent private outdoor areas (at the rear of units). It is not clear why a lower fence standard and permeability is required. In general, where outdoor living spaces are fronting streets / JOALS, a 1.6m semi-permeable fence and/or significant screening from landscape is required between adjacent units as a minimum. Where outdoor living spaces are not fronting these spaces (Block K, I), a min. 1.8m closed fence is recommended. OLS in Blocks F and E are separated by architectural walls. Noting the item in condition 1 regarding potential landscape strips between decks, this could provide the necessary screening instead of changes to fences. If this is being provided, it is assumed this is to be Michelia figo which could support the screening required if this reaches 1.8m high relative to the height of each deck but this is also not clear. In general, a larger PB size is recommended if relied upon for screening. Please consider updating the landscape plans to address the comments above.	SOLA – updated drawing with notation. • Fencing is often set above a retaining wall, so it's a balance between the privacy and surveillance. • Block I it is preferred to have lower fence as it overlooks the common area. • Block J is 1.2m over a retaining wall so prefer to keep as it • Block K is against block I / J side yard so prefer to have a 1.8 m fence as shown. • End block of K Lot 78 has a lower 1.2m fence as it should overlook the JOAL. And pedestrians will not be looking straight onto the outdoor space but on and angle. So prefer to keep as shown. • 1.6m semi-transparent front fencing is not supportable as there is often combined with retaining. Therefore, we prefer to keep it at a lower 1.2m level and rely on hedging and gardens Infront and behind the front fencing to provide screening and separation to suit the future owners. • Privacy screens between adjoining decks have been added. • Additionally the fill retaining / higher level of the outdoor living spaces provides privacy to the outdoor living areas. - We have included some additional larger grade hedging where possible.
4.	The revised pedestrian access outcomes for Lots 15 and 16 are considered to be poor, with a path width of only 900 mm provided that is sleeved between two narrow carparks. It is expected this would be frequently parked over, limiting	Noted. Lot 14 updated as per the suggestion.

Item	Request	Response
	pedestrian access to these units. It is noted a secondary pedestrian access is provided for Unit 16 to Pigeon Mountain Road. Were this to be formed as a primary pedestrian entry, Unit 14 and 15 might be redesigned (mirroring Unit 14) to provide a shared pedestrian path to Unit 14 and 15 (at least 1.2 m in width). Refer to the sketch below. Please consider making these changes to address these concerns. 	Lot 16 is not proposed to have a primary pedestrian entry (that screen shot is an outdated version) for the reasons previously mentioned- due to the relative height difference (circa 4m). The berm outside of Lot 16 is 1:5 and is not suitable for a pedestrian connection. This cannot be lowered further as this area is required to provide a transition (red area is transition area) to the existing berm height (blue area).  *"After further review of Lot 15 and 16, we have elected to remove the pedestrian paths from these 2 units to the public footpath. The height difference is about 3.8m compared to the floor level of the building. We felt that due to the level difference, the street and reserve side did not practically read as the site frontage/entrance and there was little point trying to make it read as the front of the building."* The following previous comments were also provided as to why Lot 15 and 16 cannot be lowered like 17-23: *The split level/lowered level configuration doesn't work at this location due to the larger difference in levels to the footpath that cannot be accommodated easily. The difference in levels is 3.9m, whereas the difference from Lot 17-23 was around 2m.* *For Lot 17-23, we were able to just lower the living room, however for Lot 15-16, essentially the whole dwelling would need to be lowered (with many stairs down from the JOAL side) and gravity WW discharge is not achievable, with the dwelling being lower.* *Unit 15 and 16 also do not have an internal garage so it is internally inefficient to accommodate the required number of stairs within the building. For 17-23, this was accommodated efficiently in the corridor alongside the garage.* *Even if we incorporated stairs, the berm would have to be lowered significantly to achieve adequate grades for pedestrians, which would have adverse effects on the trees and likely not supportable by the project arborist. The length of Lot 16 is also required to marry the berm levels of the lowered area in*

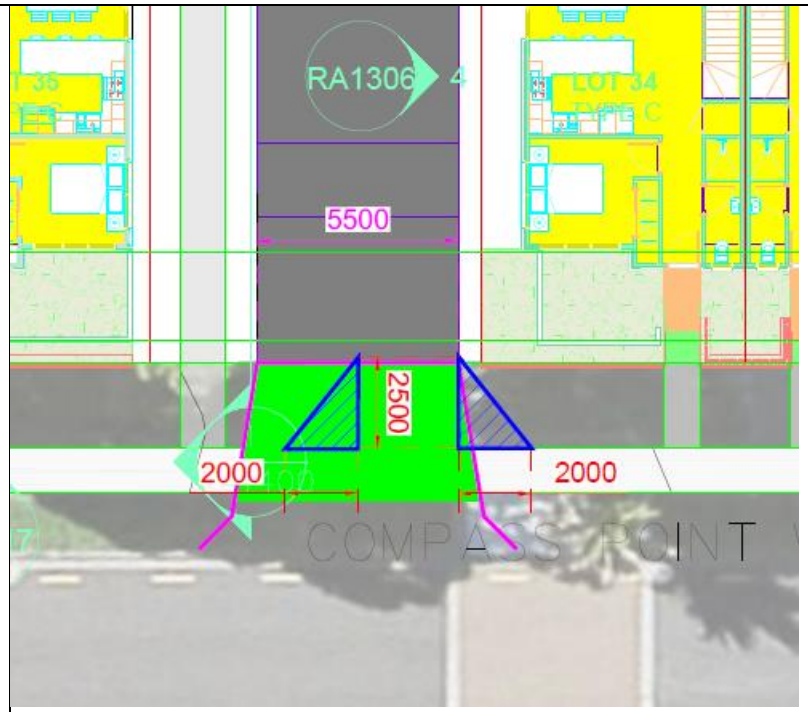
Item	Request	Response
		front of Lot 17 to the existing berm around the pohutukawa trees, without cutting or requiring retaining walls. *Given the location at this corner and being limited to 2 units, we felt it made more logical design sense for the front entrance to be from the JOAL side, rather than a contrived entry from the northern side. The pohutukawa tree also obscures the frontage, so overall, between the above factors, we felt that the more logical entrance was from the JOAL side.*
5.	It is recommended that a visual crossing point for Unit 87 and 88 be provided to connect to the pedestrian path opposite. This could include adjusting the extent of the already proposed 'banding' of the proposed accessway to align with the entrances to Units 87 and 88. Refer to the sketch below.  	This has been updated as suggested on the landscape plan. 

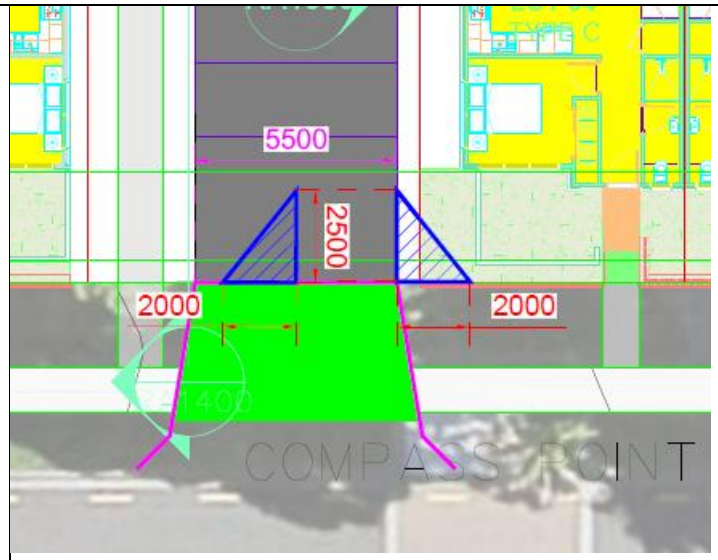
58.	Sufficient information has been provided in response to this request. Council continues to consider that there is an infringement to E27.6.4.3.2(T151) as this requires clear sight lines along the entire access as well as passing bays.	Can we please confirm our understanding that you consider this is a technical infringement?
60.	As previously requested, please provide a plan similar to Sheets 302 and 303 that correlates with the long sections for Lots 24 to 31 and 35 to 40 provided on Sheets 318 and 319. Despite the response provided, the long sections for LOT 36_IN and LOT 38_IN have not been updated and still include a summit with a change in gradient exceeding 12.5% (17.54% and 15.18%, respectively) without a 2 m transition. Please amend the levels and gradients to achieve compliance or provide assessment of the effects of the infringement of Standard E27.6.4.4(2).	Sheets 304 and 305 have been added to Airey Plan Set correlating with the long sections for Lots 24-31 and 35-40. Transition curves added for Lot 36_in and Lot 38_in, please refer to Airey Plan Set Sheet 318. 
62.	Please provide a context site plan that shows all details at the road frontage (both Compass Point Way and Pigeon Mountain Road) and its relationship to the location of the two-way vehicle crossings. This should include the number of traffic lanes, flush	Aerial of surroundings has been added to Airey Plan Set Sheet 301. Please refer to Architectural plans for topo site plan by Envivo showing existing berm features.

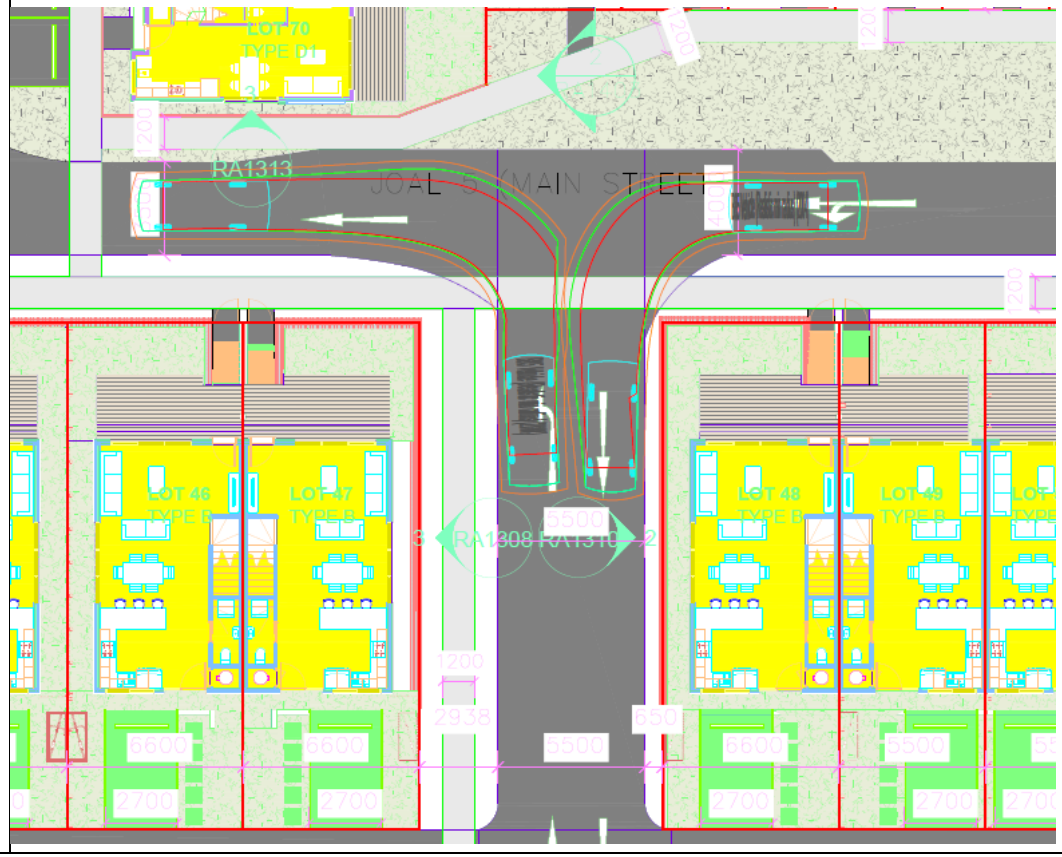
	median including width, edge line markings, on street parking, street lighting pole, catch pit and any other road furniture for the full frontage of the site. Council's traffic engineer is unable to locate the provided context site plan that shows the information requested. Please clarify which drawing this is.	
63.	Council's traffic engineer specifies that the signage and marking plan does not include key details such as internal intersection control analysis, one way / two way traffic and bollards where pedestrian connections adjoins Pigeon Mountain Road.	A detailed signage and marking plan will be provided at EPA stage. Bollards are shown on the landscape plan.
64.	Council's traffic engineer requires a corner sightline assessment to be provided to ensure car/car and car/pedestrian safety is not compromised (given absence of all corner splays).	As indicated in our previous response, in those locations where corner splays are limited convex mirrors are recommended. The attached drawing indicates corner sightline assessments throughout the site at the intersections. It should be noted that JOAL3 and 4 are one-way such that there is a low likelihood of vehicular interaction. Further to that, footpaths are generally separate to the vehicle access throughout the site and raised table pedestrian crossing points are provided.
65.	Sufficient information has been provided in response to this request. However, Council's traffic engineer recommends adding a speed hump around JOAL 5 to slow down vehicles, especially around JOAL's cross-roads. If this is not provided, conditions of consent may be imposed to require this.	Speed hump has been added proximate to the 'cross road' of JOAL 5.

66.	Council's traffic engineer does not agree with the position that the requested splays cannot be provided. As was requested, please provide detailed analysis as to whether the splays can be achieved and annotate the same on the plans.	Please refer to our previous response. In line with ASNZS2890.1-2004 pedestrian visibility splays 2 x 2.5m are only required on the drivers side of the road when the road is two-way. A splay is naturally provided within the opposing traffic lane. This is demonstrated in the below. Further to that the footpath is offset from the site boundary and as such there is additional time for users to identify any pedestrians past the site along Compass Point Road.

		 RA1306 4 LOT 34 5500 2500 2000 2000 COMPASS POINT

		 5500 2500 2000 2000 COMPASS POINT	

67.	Council's traffic engineer does not agree with the position taken in the response. Please provide the requested inter-visibility assessment around crossroads and around 90-degree bends to ensure cars can pass each other (tracking) without any blockage from infrastructure (such as fence).	The below image shows two vehicles passing at the JOAL 5/JOAL 4 intersection point. JOAL 3 and 4 are one-way only and so there will be no vehicular movements in opposing directions. JOAL 1 and 2 will likely only be right in and left out and users would likely wait for an exiting vehicle before entering the JOAL. In any event, the likelihood of vehicular interaction at JOAL and JOAL 2 is considered low. 

71.	The requested truck tracking curves for a truck turning into JOAL 2 from JOAL 5 (and from JOAL 2 into JOAL 5) still have not been provided.	Truck tracking provided in the attached drawing.

Item references are as per letter dated 24 October 2023:

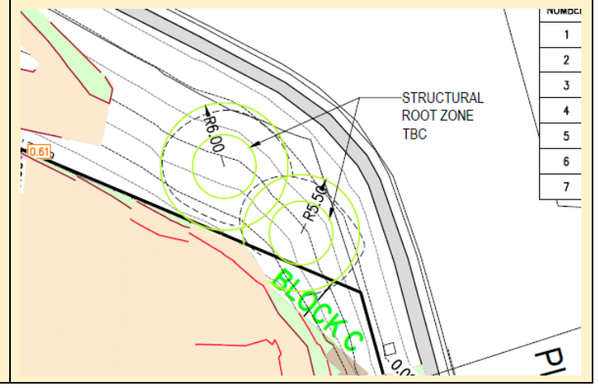
Item	Draft s92 request	Response 5/02/2024	Council response 21/02/2024	Further response	Response April 2024
Consistency of Plan Sets					
1	Please provide consistent architectural, landscape, engineering and subdivision plan sets for assessment. *Specifically, please update the landscape and engineering plan sets to match the various changes made since lodgement to the architectural plans. Should any further changes be made, please ensure that all plan sets are updated to match each other.* *All references to Units in the subsequent requests for further information are in relation to the unit numbering on the architectural plans provided in on and after 28 August 2023.*		A number of inconsistencies between the updated architectural, landscape and engineering plans have been identified. Please correct these and all other inconsistencies that continue to appear between the plan sets. • The engineering (earthworks) drawings show that no earthworks area proposed in the north-eastern corner of the site (within Lots 15 and 16). However, the architectural and landscape plans show the establishment of retaining walls and decks in this location, despite the written responses advising that the retaining wall has been pushed back into the site and the extent of decking reduced. • Sheet 204 (engineering plans) indicates that a retaining wall extends across the pedestrian accessway between Blocks D and H (with a height of around 1 m), while all other plans show two separate retaining walls. • The heights of the retaining walls on Drawing RA014 (architectural plans) are not fully reflective of the heights of the retaining walls on Sheets 204 and 204a (engineering plans), with the latter understood to be the accurate heights. Inconsistencies have been identified for the retaining walls in Lots 17, 18, 24, 25 and 37. The elevations for Block E (architectural plans) appear to show: • Units 27 and 28 with the same floor levels for the garage, while all other plans show a difference of 350 mm (10.70 m for Lot 27 and 11.05 m for Lot 28). The elevations for Block E (architectural plans). • Units 30 and 31 with the same floor levels for the garage, while all other plans show a difference of 300 mm (12.0 m for Lot 30 and 12.3 m for Lot 31).	To be updated and co ordinated.	Landscape, civil, and architecture plans have been updated and co-ordinated.

			• Units 33 and 34 with the same floor levels for the garage, while all other plans show a difference of 350 mm (13.6 m for Lot 33 and 13.95 m for Lot 34). • The elevations and 3D views within the architectural drawings show, along the Compass Point Way frontage, slatted fences above retaining walls. However, the landscape plans show a "800mm high low wall/fence". Furthermore, Sheet 204a (engineering plans) shows that this retaining wall has a height (where above existing ground levels) of up to 1.7 m, exceeding 800 mm in front of Units 24, 25, 26, 27, 30, 33 and 34.		
Earthworks (*Draft requests for further information related to earthworks were provided on 20 July 2023. A response to these matters dated 24 August 2023 and an Earthworks Management Plan, both prepared by Airey Consultants, were subsequently received. These have been reviewed by Council's earthworks specialist, who has provided an updated set of requests for further information (outlined below) for the reasons set out in the attached document)*					
2	The total area of earthworks requires consent under Chapter E11.4.1 of the AUP(OP). Please apply for this consent and provide an addendum to the AEE to provide an assessment of effects for the relevant activity, including the relevant objectives and policies.	I confirm consent pursuant to activity A4 of table E11.4.1 is sought. The following additional assessment comments are provided: The proposed earthworks require resource consent as a restricted discretionary activity under both the district and regional rules set out in chapters E11 and E12 'Land Disturbance' of the AUP(OIP). The relevant matters of discretion are E11.8.1(1), E12.8.1(1). The proposed earthworks will comply with all of the relevant accidental discovery protocols (E11.6.1 and E12.6.1) and general standards (E11.6.2 and E12.6.2) of both Land Disturbance chapters. It is also noted that the area of proposed earthworks is not within any additional Overlay areas. **Overall Effects of Earthworks** The proposed earthworks will be undertaken accordance with the applicable standards including accidental discovery protocols and best practice erosion and sediment controls which will minimise and manage the quantity and quality of runoff from the site to any downstream watercourses. Sediment	Please clarify under which rule in Table E11.4.1 that the proposed earthworks will be a restricted discretionary activity under. Fewer than 5 ha of earthworks are proposed and there does not appear to be any part of the site within the Sediment Control Protection Area – therefore, is there more than 2,500 m² that has a slope of equal to or greater than 10 degrees? The response also specifies that compliance with the standards in both sections E11 and E12 is achieved. However, the response to item 84 below and the overland flow assessment report confirms that the works will result in the diversion of an overland flow path's exit point at a site boundary, which would infringe Standard E12.6.2(12). Please clarify.	Activity sought is (A8). I confirm the works would infringe standard E12.6.2(12). Consent has been sought pursuant to E36, and the assessment of effects in relation to the diversion of the overland flow path has been assessed. As such the following assessment is still considered to be applicable. **Overall Effects of Earthworks** The proposed earthworks will be undertaken accordance with the applicable standards including accidental discovery protocols and best practice erosion and sediment controls which will minimise and manage the quantity and quality of runoff from the site to any downstream watercourses. Sediment and erosion controls are shown on the earthworks plans at by Aireys. The proposed erosion and sediment controls to be implemented prior to construction works commencing will work to	

		and erosion controls are shown on the earthworks plans at by Aireys. The proposed erosion and sediment controls to be implemented prior to construction works commencing will work to contain all earth works and excavated material, including dust and sediment runoff within the subject site. The proposed silt fencing, and clean and dirty water diversions will work to avoid or minimise any potential adverse effects on downstream watercourses and their ecological health. Overall, it is considered that the proposed earthworks are necessary to establish the proposed development. The scale of the earthworks reflects the area required for the stormwater pond. The construction methodology and erosion and sediment controls proposed to be implemented onsite will ensure that any potential or actual adverse effects arising from the earthworks themselves are temporary, contained with the subject site and with less than minor adverse effects on the surrounding environment. **Erosion and Sedimentation Effects** The applicant has prepared an Erosion and Sediment Control Plan which would be implemented prior to works commencing on site. The proposed works and associated activities will employ the best practicable options to minimise any impact on the environment from the works site. As a result of the proposed mitigation measures including the sediment and erosion control measures, it is considered unlikely that the proposed earthworks would result in any significant adverse effects on the surrounding overland stormwater network and downstream waterways, particularly in the long-term as the sediment generating potential of the site should be restricted to the period of the works only. Overall, any adverse effects of the proposed activity on the environment when considering potential silt and sedimentation impacts will be less than minor.		contain all earth works and excavated material, including dust and sediment runoff within the subject site. The proposed silt fencing, and clean and dirty water diversions will work to avoid or minimise any potential adverse effects on downstream watercourses and their ecological health. Overall, it is considered that the proposed earthworks are necessary to establish the proposed development. The scale of the earthworks reflects the area required for the stormwater pond. **Erosion and Sedimentation Effects** The applicant has prepared an Erosion and Sediment Control Plan which would be implemented prior to works commencing on site. The proposed works and associated activities will employ the best practicable options to minimise any impact on the environment from the works site. As a result of the proposed mitigation measures including the sediment and erosion control measures, it is considered unlikely that the proposed earthworks would result in any significant adverse effects on the surrounding overland stormwater network and downstream waterways, particularly in the long-term as the sediment generating potential of the site should be restricted to the period of the works only. Overall, any adverse effects of the proposed activity on the environment when considering potential silt and	

				sedimentation impacts will be less than minor.	
3	The proposed total area of earthworks is 1.37ha. However, the drawings suggest that the earthworks will occur around the entire site (being 1.4073ha) and extend outside the site boundaries (e.g. for the construction of pathways and individual pedestrian accessways; installation of infrastructure). Please update the total volume and area of earthworks to include all proposed works. Please ensure any reference in the EMP to cut / fill volumes or area are consistent with the cut/fill plan.	Please refer to amended Site Plan Earthworks, Sheet 200 of Engineering Plan Sheet.	As noted in the original request, the site area is 1.4073ha. Drawing 200 and the ESCP staging plans suggest that works will extend across the entire site, plus small areas that extend outside the boundary. However, drawing 200 only indicates a total of 1.39ha will be disturbed. Should the works / land disturbance area be 1.4073ha plus the small areas outside of the site boundary (550 m^2)?	To be updated	Please refer to updated EMP – Rev 2. The revised disturbed areas are: Within Site: 1.4 Ha (4,076 m^3 cut and 6,690 m^3 fill) Ara Tai Reserve: 225m^2 (19 m^3 cut and 8 m^3 fill) Pigeon Mountain Road berm: 245 m^2 (35 m^3 fill)
4	From the draft response, it is understood that all earthworks to complete the development to finished floor levels is proposed to be included in the earthworks volumes and area. Please update the relevant cut / fill drawings and final contour plan to confirm this.	The amended earthworks now models to the Finished Floor Levels and the Finished Ground Levels.			
5	Please provide an estimate of the volumes of topsoil to be stripped, and volumes to be respread and removed from the site.	Please refer to amended Site Plan Earthworks, Sheet 200 of Engineering Plan Set for the amended estimate of volumes of topsoil to be stripped and volumes to be respread and removed. It is estimated 1/3 of topsoil is respread.			
6	Please provide a proposed final contour plan to better understand the proposed development levels, landform and slope direction following construction.	Please refer to final contour plan.			
7	The ESCP has been updated to propose one SRP. The proposed staging is acknowledged to allow the SRP to be designed and sized for a smaller catchment area. However, this does not appear to be practical (including subsoil drains used for CWD), and is unclear how the completed stage 1 area will be effectively diverted away from the SRP during Stages 2 and 3. Please consider using a maximum of two stages (e.g. a N-S staging line, approx. in-line with 'stabilised access' extension) through, and resize the SRP accordingly. *It is recommended that the Applicant's Engineer / ESC Specialist discuss the feedback with Council's Earthworks Specialist prior to response*	The ESCP has been revised to address comments 7-12.	The updated ESCP staging drawings dated 20/11/2023 are acknowledged. Please update the ESCP staging drawings to annotate the estimated catchment sizes for each stage, to better demonstrate that open catchments will be limited to the sizing of the SRP. To note, the revision number has not changed from previous revisions (we acknowledge that the date has changed). Please ensure the updated ESCP drawings include a new revision number (along with the corresponding date).	To be updated	Please refer to updated and revised ESCP with disturbed areas for each stage noted and revision number updated.

8	The ESCP and EMP refers to the use / installation of temporary field drains within the site to form CWDs. These are likely to be impractical. It is also noted that use of these (subsoil) field drains may cause diversion of groundwater. As such, and in light of item 7 above, please revise the ESCP.		Councils does not support the use of the field cesspits and non-perforated subsoil drains (as indicated on the ESCP staging drawings) to provide cleanwater diversion function. Please amend to demonstrate CWDs are design in accordance with GD05 (e.g. aboveground bund or channel).	To be updated	For your information, subsoil drain was recommended by AC inspection/specialist for one of our previous project at 44 Eighth View, Beachlands. Nevertheless, we propose to postpone the "detailed ESCP design" to before physical works start. Please insert a condition along the lines of "General Earthworks Conditions – Condition 11: Sediment/erosion control in accordance with plan to be provided". https://content.aucklanddesignmanual.co.nz/regulations/consent-conditions-manual/Documents/General%20Earthwork%20Conditions.pdf
9	Please provide a response to each of the following comments on or requested amendments to the Earthworks Management Plan: a. On Page 6 of the EMP, for completeness (and ease of reference), please state the total area the SRP is sized for. (Noting this may change following response to item 7 above) b. Please update EMP in light of feedback to item 8 above regarding Field Drains. c. In the Inspection and Maintenance table of section 6 of the EMP, please include a summary for the SRP maintenance. d. The use of Silt Socks as a CWD is not recommended (and not generally consistent with GD05). Please revise the EMP and ESCP where necessary. (The exception can be when the retaining wall along the western boundary is installed as part of proposed stage 5). e. The USLE assumes a slope length of 37m. However, the catchment length for each stage would be greater than 37m. In the EMP, please include a section on erosion controls (e.g. controls to be installed prior to rainfall). f. Please include a section for management of the SRP spillway, and whether there will need to be any specific pre-rainfall requirements, particularly as flows are directed to the footpath. g. Please include a section for the management of footpath				

	construction that are located outside of the site /SRP boundaries. h. Please include a section for the management of dewatering during installation of underground infrastructure (from the methodology section, it appears that the SRP will remain during this phase, and any dewatering will be directed to the SRP – please discuss in the recommended section to clarify if this is correct).				
10	To address items 7 to 9 above, please update the ESCP to clarify the contributing catchments directed to the proposed sediment control devices.		Not yet addressed. Please update staging plans.	To be updated	As above – see updated ESCP.
11	To address items 7 to 10 above, please update the ESCPs and SRP Details Plan (drawing 213) as applicable to address the following: a. Impoundment device details (including single point entry, sizing, decant and spillway locations); b. Updated plan and long-section of SRP design (including RL of design features).				
12	A new stormwater manhole and line is proposed to be installed to accommodate the outlet from the proposed SRP. Please clarify in the EMP how the new Stormwater line, manhole and SRP outfall will be installed to connect to the existing SW line (e.g. trenched or directionally drilled).				
13	Please clarify whether any earthworks will be located within the protected root zone of trees that are to be retained. a. Please show the protected root zones on the ESCP and earthworks drawings, and include a key / annotation to identify this feature. b. In the EMP, please clarify what works are proposed within the protected root zone of those trees and provide a methodology of works to demonstrate works will not adversely affect those trees.	The protected root zones are shown on the updated earthworks plan. The works would comply with the permitted standards of E16, with a maximum disturbance area of less than 4%.	Please confirm the source of the protected root zone measurements. This is queried as the dripline/canopy indicated on the earthworks plans appears to be greater in diameter than the specified root zone. The definition of "protected root zone" in Chapter J of the AUP refers to the greatest distance between the trunk and the outer edge of the canopy. Please also refer to comments against item 86, requesting comment from an arborist to verify that compliance with the standards in section E16 can be achieved.	The radii are advised by PBM. Piles locations are designed at detailed design stage and the applicant would accept a condition of consent that the locations are confirmed with an arborist prior to works occurring.	The revised site layout of Lot 15 and 16 now does not propose any earthworks within the Protected Root Zones (radii advised by Peers Brown Miller). 

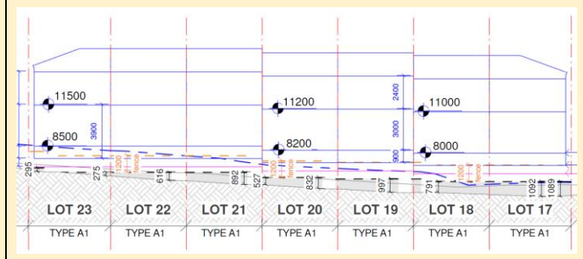
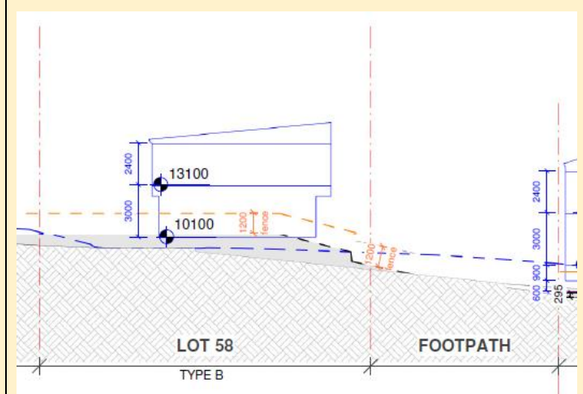
				Hi Roxanne, Thanks for the phone call today. Please find the Trees 6 & 7 below; In regard to the piles, the limitation incursion c Since I last updated the report for this project, 4.4% Tree 6 for Lot 15. So, we can propose pile to go over the plans again myself just to double ok. What might make it easier is if you can send piles, as in size of hole needed and location of t Let me know if you need anything else. **Ngā mihi | Kind regards** **Santos Tumai** Mobile: 021 08225632 Peers Brown Miller Ltd	
14	Please ensure an ESCP drawing shows the northwest corner of the site to clarify how this area will be managed (including CWD diversion along the western boundary and Silt Fence for the NW corner).	The northwest corner only has a catchment of approximately 650 m². Silt fence is proposed all the way along the northern boundary to manage the sediment laden water runoff. For the remaining areas, dirty water diversion channel/bund lined with geocloth is proposed to convey the water towards the proposed sediment retention pond.			
15	In the Earthworks Memo and on the ESCP: a. Please clarify the timing of construction of the site boundary retaining walls and associated batters in relation to the bulk earthworks, particularly along the north and eastern boundaries. b. Please clarify whether these areas can be effectively managed via the proposed impounded devices, or whether staging and separate devices will be required to undertake the retaining wall construction works. Please update the ESCP where applicable.	Please refer to Earthworks Management Plan enclosed.			
16	Please include details within the Earthworks Memo and on the ESCP for the management of runoff from construction of the footpath, individual pedestrian accessways and underground infrastructure that are located outside of	All works outside the site boundary (primary sediment treatment device catchment) will be undertaken in short sections. Any excavation will be backfilled by the end of the day for safety and stablised to minimise sediment runoff.			

	Species	Protected Root Zone (m)	T Pro Zor
Tree 6	Pohutukawa *(Metrosideros excelsa)*	5.5	8
Tree 7	Pohutukawa *(Metrosideros excelsa)*	6	8

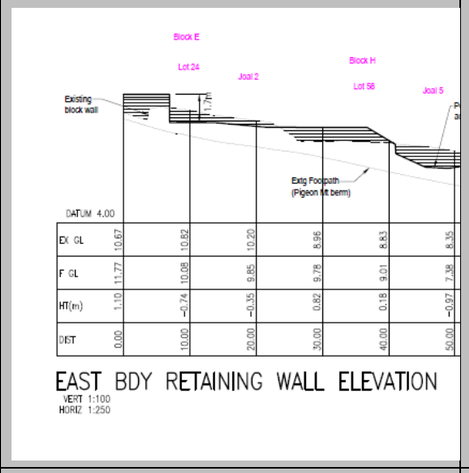
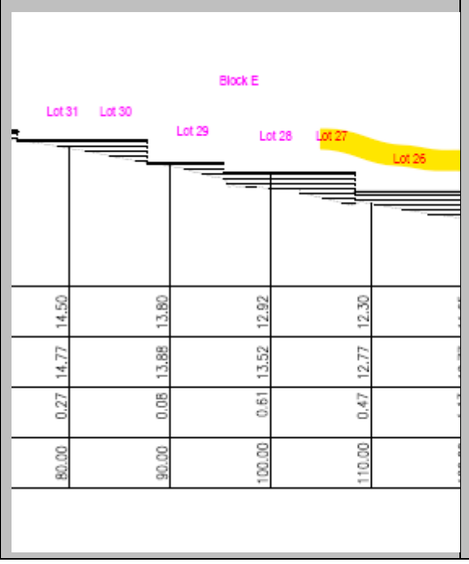
	the catchments directed to the primary sediment treatment devices.				
17	Please update the earthworks plans to show the fill earthworks proposed between the existing and proposed retaining walls along the western boundary of the site.	Please refer updated earthworks plans.			
Retaining Walls					
18	Please provide a retaining wall construction methodology.	***Plant and Equipment:*** 10-14 t excavators, piling rig, backfill compactors, surveying instruments. ***Establishment:*** The drilling rig and other equipment would be unloaded into the work site following the site traffic management plan. Set up temporary fencing and barriers to ensure site security and public safety. ***Piling Operation:*** • Perform a detail survey of the existing timber retaining wall, recording the pole size, spacing, and locations which confirms the exact setout of the new wall. • Conduct a condition survey of neighbouring properties to assess potential impacts during and after construction, including ground settlement. • Excavate the 5-meter-wide drilling platform with a hard stand as per engineering specifications. • Install the new retaining wall piles, following a sequential approach from the south end to the northern end. Ensure proper quality control during piling operations, monitoring pile depths, alignment, and integrity. • During the piling operation, immediately address the backfilling of drainage material between the existing and new retaining wall to ensure the structural integrity and drainage efficiency of the entire system. • Simultaneously with the piling operation, coordinate the backfilling and compaction of hardfill between the existing and new retaining walls. Employ compaction equipment and	Comments on this response is pending feedback from Council's development engineer.		

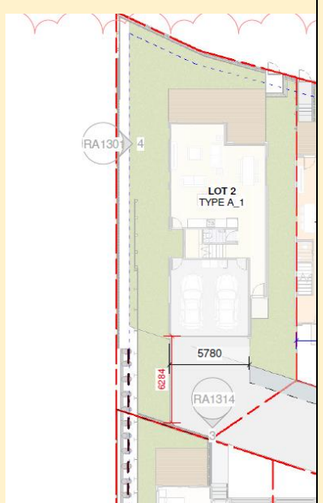
		methods that are compliant with the detail design specs to achieve the desired impact testing values. Regular testing by qualified engineers is necessary to verify compaction levels. • After completing installation of the wall, excavate the area in front of the new retaining wall to the required finished level, which should be 0.55 meters below the Finished Ground Level (FGL) as specified. Continuously monitor the excavation process to ensure that the desired depth is achieved and take appropriate measures to prevent over-excavation. ***Monitoring During and After Construction:*** Follow the monitoring regime and contingency plan per the geotechnical design report. The monitoring results will be regularly reported to the designer and checked for deformation status during the whole construction process.			
19	Please provide comments on the stability of the new retaining wall height (along the western boundary, based on the updated plans and reporting received on 5 October 2023), including if the geotechnical report needs to be updated to reflect these changes.	The report has been updated to reflect the updated plans and also respond to the WAT comments.	Comments on this response is pending feedback from Council's development engineer.		
20	Please confirm the height of any fencing above the retaining wall proposed along the western boundary of the site.	1.8m height fencing.			
21	Please clarify how remaining ground between the existing and proposed retaining wall to the western boundary will be finished. For example, some planting is indicatively shown in the background of RA1317.	The ground between the existing and proposed retaining wall will be backfilled, with 500mm topsoil to support planting. This has been reviewed by the project landscape architect, and suitable plant specimens proposed accordingly.			
22	For each retaining wall proposed along the northern, eastern and southern boundaries, please identify the height of the top of wall in relation to the ground level of the adjacent footpath in Compass Point Way, Pigeon Mountain Road and Ara Tai. This could be provided by adding the footpath height to the retaining wall elevations on Sheet 204. Please then provide assessment of dominance effects	Please refer updated page 204 of the engineering plans which includes a line showing the existing footpath relative to the existing ground level at the boundary, and retaining walls.	• Please add the footpath in Compass Point Way to Sheet 204a. • Please provide the requested assessment of dominance effects of the proposed retaining walls on users of the footpaths along all three streets. • It is suggested that lower, stepped retaining walls are provided, including sufficient landscaping at the lower level step to provide an appropriate front yard landscape response to the street.	Additional planting to be added to Lot 24 in the suggested location. The other information is being co ordinated. -	The following comments are provided in relation to retaining wall effects to each frontage. The area adjacent to Lot 24 has been revised with increased planting to screen the retaining walls from the public realm- of both the upper and lower levels.

	of the proposed retaining walls on users of these footpaths. *During the site visit, it was observed that the footpaths along Pigeon Mountain Road and Ara Tai were much lower than the ground level at the site's boundary, which would result in the retaining walls having greater dominance effects on the streetscape than if the ground level at the boundary was the same as the ground level at the footpaths.*		• For the area adjacent to Unit 24, the grass area broken up by the retaining wall is considered to have limited functionality as an outdoor living space and may be better served with significant planting to screen the retaining walls from the public realm • As part of the assessment of effects, representative detailed landscape sections are requested to better understand the interface with Compass Point Way and Pigeon Mountain Road.		 1. Compass Point Way. Fill retaining walls to Compass Point Way are keystone and generally do not exceed 1.2m in height, on average being between 0.3m to 0.8m. Where retaining walls are less than 1m, a 0.8m block wall a top is proposed in order to create a high-quality solid structure to the street frontage design. This is complemented by mass landscaping within the front yard. Where retaining is over 1m in height, a permeable fence of 1.1m is proposed (height required for fall barriers) with landscaping behind. Where minor cut retaining walls are required (1m or less, Lot 36-40) these are proposed to be timber as they will not be visible from the streetscape. For clarity Sheet RA1317 indicates a blue line for 1.8m height at the boundary. The following locations has combined fencing/retaining that would exceed 1.8m. • Lot 33 – a maximum vertical extent of 0.714m over a length of 5.2m. • Lot 34 – a maximum vertical extent of 0.32m over a length of 1.2m. • Lot 27 – a maximum vertical extent of 0.57m over a length of 5.2m. • Lot 25 – a maximum vertical extent of 0.3m over a length of 4.2m. • Lot 24 – a maximum vertical extent of 0.9m over a length of 5.2m.

					While there are some isolated exceedances, these comprise open permeable fencing. In the context of the overall elevation, it is considered that the road frontage elevation is largely complying, and retains a sense of openness and amenity. 2. Pigeon Mountain Road Following additional feedback from AT, the berm of PMR has been lowered. Proposed retaining height has been kept the save as previous. As such, the effect retained height as viewed from the footpath on PMR is now proposed to be lower than the existing situation. On the RTW elevation on sheet RA1316, the blue dashed line represents the height of the existing retaining wall. The grey shaded area represents the height of the proposed retaining wall. The orange dashed line represents a 1.2m high proposed fence. As shown, for the majority of the frontage along PMR, the height of the combined proposed retaining and fencing is a similar to height of the existing retaining wall.  The section of retaining wall adjoining Lot 58 is slightly higher than existing, however it is noted that the proposal also removes a section of existing retaining wall where the pedestrian entry is proposed to be. 

					Sheet 1319 demonstrates the combined retaining and fencing height. A blue line representing 1.8m is included for ease of reference. The following location has combined fencing/retaining that would exceed 1.8m. • Lot 24 – a maximum vertical extent of 0.39m over a length of 4.2m. • Lot 58 – a maximum vertical extent of 0.567m reducing to 0m over a length of 18m. • Lot 21 – a maximum vertical extent of 0.29m reducing to 0m over a length of 4.2m. • Lot 20 – a maximum vertical extent of 0.22m reducing to 0m over a length of 2.7m. • Lot 19 – a maximum vertical extent of 0.39m reducing to 0m over a length of 4.2m. • Lot 18 – a maximum vertical extent of 0.32m reducing to 0.19m over a length of 4.2m • Lot 17 – a maximum vertical extent of 4.8m reducing to 0.32m over a length of 0.32m. Retaining is largely less than 1m in height, and is proposed to be keystone retaining wall. Proposed fencing is 1.2m high permeable fencing. The combined fencing and retaining height are largely compliant. Some minor exceedances are proposed, to a maximum of 0.406m, however these relate to the open portion of fencing only. Overall, it is considered that any potential dominance effects from the proposed retaining walls to the footpath along Pigeon Mountain Road, are improved from the existing situation due to the reduction in the berm height. 3. Ara Tai Reserve Retaining along Ara Tai is limited in height, with a maximum height of 0.7m but generally less than 0.3m. Retaining walls are proposed to be keystone. Fencing is 1.2m permeable fencing. It is considered that the retaining is limited in extent and would not result in adverse dominance effects. For clarity Sheet RA1318 indicates a blue line for 1.8m height at the boundary. The following location has combined fencing/retaining that would exceed 1.8m. • Lot 6 – by a maximum vertical extent of 0.315m over a length of 5m. The exceedance relates to a portion of open permeable fence.

					All other locations do not exceed 1.8m in height. Overall, it is considered that any potential dominance effects from the proposed retaining and fencing would be less than minor.
23	Please clarify the height of the retaining walls adjacent to Units 15 to 23 and 24. While the AEE and Drawing RA0104 specifies these are a maximum of 1.5 m, Sheet 200 (where the units are numbered 14 to 22 and 23) shows that over 2 m of fill earthworks are proposed behind these walls and Sheet 204 specifies a maximum height of 2.43 m in front of Unit 16 (15 on engineering drawings) and 2.42 m in front of Unit 24 (23 on engineering drawings).	Please refer updated page 204 of the engineering plans: 	Sufficient information has been provided in response to this request. However, please note the request under item 1 for Drawing RA0104 to be consistent with the retaining wall heights specified on Sheets 204 and 204a.		
24	Please clarify the height of the retaining walls adjacent to Units 25 to 27. While the AEE and Drawing RA0104 specifies these are a maximum of 1.0 m, Sheet 200 (where the units are numbered 24 to 26) shows that over 1 m of fill earthworks are proposed behind these walls.	Please refer updated page 204a for the updated retaining wall heights. 	Sufficient information has been provided in response to this request. However, please note the request under item 1 for Drawing RA0104 to be consistent with the retaining wall heights specified on Sheets 204 and 204a.		
Dwellings and Landscaping					
25	Please demonstrate whether compliance with Standard H4.6.4 Building Height would be achieved for Units 1 to 8, 15, 16 and 77 to 80 if using the average ground level method described in the definition	The average height measurement is shown on sheet RA1301 for Lots 1-8. The average height measurement is shown on RA1303 for Lots 15 and 16.			

	of 'height' in Chapter J of the AUP and shown in Figure J1.4.3.	The average height measurement is shown on RA1313 for lots 77 to 80.			
26	Please clarify whether Units 3, 4, 5, 6, 7, 15, 16, 27, 28, 29, 35, 39, 40, 50, 51, 55, 77, 78, 79, 80 would be able to comply with an average height of 8 m when undertaken the average ground level method only in relation to the footprint of that unit (rather than the building containing a row of units). As this is an inaccurate method to demonstrate compliance with Standard H4.6.4, please do not show this on the elevations in the architectural set.	The definition of average ground level specifies building rather than dwelling unit. • Conveyors. Outside the coastal marine area there are tw (a) the rolling height method where heigl between ground level at any point ar immediately above that point. The ro J1.4.2 Height – rolling height method (b) the average ground level method wh distance between the highest part of ground level, being the average leve the external foundations of the buildi provided that no part of the building height for the site by 2m if measured average ground level method is illust ground level method below.	This request was issued with an error – the last sentence should have said "inaccurate method". It is accepted that the requested information would not identify where compliance with Standard H4.6.4 can be achieved for these buildings, but the information could demonstrate that the effects of the infringements are equivalent to detached buildings of similar height that could be established as permitted activities. Given this and the response provided, further information in response to this request is optional.		
27	Under Standard H4.6.5, the 2.5 m and 45 degree recession plane remains applicable to the site's boundary with the reserve land between the site and Ara Tai, noting that the exemption under Standard H4.6.5(2)(b) only applies to Open Space zoned areas with a width greater than 20 m. Therefore, please: a. Identify the extent to which Units 1 to 15 intrude the 2.5 m and 45 degree recession plane from the northern boundary of the site; and b. Provide an appropriate assessment of environmental effects associated with any infringements. *A previous response to this item (which was provided in draft form) only showed the extent of infringement on elevation 1 on Drawings RA1301 and RA1302 but did not show the recession plane locations on elevations 2 and 4 of those drawings and did not provide any assessment of environmental effects. In addition, no clarification was received in regard to Unit 15 (which was Unit 14).*	Refer to sheet RA1301 Elevation 4 Unit 1 has a technical infringement to standard H4.6.5 due to the land immediately to the north of the site being zoned Open Space zone, rather than road reserve. The area of infringement relates to a high sill window in a study and the upper portion of a window to the hallway. All outlook spaces from habitable rooms are oriented toward the north or south (away from the side boundary). Therefore it is considered that any potential privacy effects are less than minor. Additionally, the building is two storey in height and complies with maximum height. Shading studies confirm that shading largely falls away from the adjoining site back into the site, therefore it is considered that any potential shading and dominance effects are less than minor.	The response provided inaccurately assesses the infringement of Unit 1 in relation to the western boundary, rather than the infringement of Units 1 to 16 in relation to the northern boundary. Please provide the requested assessment. In addition, Sheets RA1301, RA1302 and RA1303 do not show a recession plane from the northern boundary on their eastern and western elevations, despite the areas of recession plane intrusion being marked and dimensions.	Lot 1 proposed to be removed, Lot 2 changed to standalone dwelling that complies fully with standard HIRB. (One of the JOALs will be renamed Lot 1 to avoid the renumbering of all subsequent lots) This is currently being co ordinated with landscape and traffic but including an excerpt for your reference: 	Lot 1 has been removed (one of the JOALs has been renamed Lot 1) and Lot 2 has been revised to a standalone dwelling.  This dwelling complies fully with standard HIRB to the side boundary. Lot 2 has an infringement to the standard HIRB as applied from the northern boundary (reserve side).

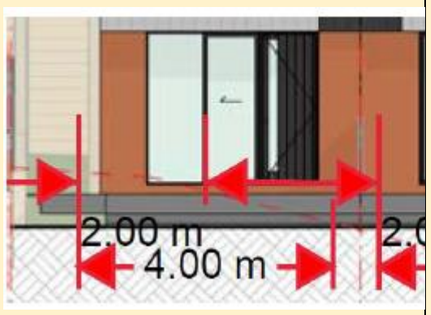
					 Vehicle tracking has been confirmed, refer attached tracking diagram. HIRB is applicable as the width of Ara Tai open space reserve is less than 20m in width. The following comments are noted in relation to effects. Due to the orientation of the site and the infringement, any potential shading will fall back onto the subject site. The building is two storey in height and complies fully with 8m maximum height. Additionally, while the land is zoned reserve, the land functions more as a road reserve berm and is also partially occupied by a public parking area. The land does not contain any public walkways or amenities. Overall, it is considered that any potential bulk and dominance, shading, or privacy effects are less than minor.
28	Under Standard H4.6.6, the alternative height in relation to boundary only applies to development that is within 20m of the site frontage. As Unit 1 is not within 20 m of the site frontage (the site's boundary with the reserve land between the site and Ara Tai is a side boundary, not a front boundary), please: a. Remove the alternative height in relation to boundary recession plane from elevation 1 on Drawing RA1301; and b. Provide an appropriate assessment of environmental effects associated with the infringement of Standard H4.6.5	The Alternative HIRB has been removed from the plans of Unit 1.			

	by a maximum height of 2.1 m over a length of 12.2 m.				
29	Please identify the height above existing ground level of all decks, steps and terraces within a 1 m yard from the northern boundary and 3 m yards from the eastern and southern boundaries. If any are more than 1.5 m above existing ground levels, please identify a further infringement of Standard H4.6.7 and provide an appropriate assessment of environmental effects. *The decks and steps associated with Units 15 and 16 are expected to be greater than 1.5 m in height, given that over 2 m of fill earthworks are proposed in this area. The deck associated with Unit 24 may also be greater than 1.5 m in height.*	Refer to front yard drawings on sheet RA0203. We had decks to Lot 15, and 16, which were elevated from the ground at the boundary, however we have now pulled back the retaining wall to reduce the retaining wall/deck height. All decks are 1.5m or less now.	Sufficient information has been provided in response to this request. However, please note the request under item 1 for the architectural and landscape drawings sets to be consistent with the stated changes to retaining walls and decking.		
30	Please identify those locations where the fencing above the proposed retaining walls within a 1 m yard from the northern boundary and 3 m yards from the eastern and southern boundaries will be greater than 2.5 m in height above existing ground levels. For these locations, please identify a further infringement of Standard H4.6.7 and provide an appropriate assessment of environmental effects. *Where a 1.2 m fence is proposed on top of retaining walls in these yards, this would be in all locations where the retaining wall height is greater than 1.3 m, such as adjacent to Units 6, 15 to 19, 25 and 30.*	Lot **24** is not complying with H4.6.7. The combined rtw and fence heights at this location is more than 2.5m	• Please provide an assessment of the identified infringement of Standard H4.6.7 for Lot 24, including identifying the maximum combined height of the retaining wall and fencing and the length along the road boundary/ies that this will exceed 2.5 m. • Please clarify the combined height of retaining wall and fencing for Lot 17, given that drawing L104 (landscape plans) specifies a fence height of 1.2 m and Sheet 204 (engineering plans) specifies a wall height of more than 1.3 m in this location. If an infringement of Standard H4.6.7 is identified, please provide an appropriate assessment of environmental effects. • Please clarify the combined height of retaining wall and fencing for Lot 33, given that drawing L105 (landscape plans) specifies a fence height of 1.2 m and Sheet 204a (engineering plans) shows a wall height of more than 1.3 m in this location. If an infringement of Standard H4.6.7 is identified, please provide an appropriate assessment of environmental effects. • Please clarify the height of the fence for Lot 16 in relation to the road boundary height following the changes to the retaining walls and decking referred to in item 1. If an infringement of Standard H4.6.7 is identified, please provide an appropriate assessment of environmental effects.	• Additional information to be provided for the listed lots for combined RTW and fencing height.	**<u>Sheet RA1316</u>** Lot 16 • No retaining walls per revised scheme. Lot 17 • 1.1m retaining height + 1.2m fence height = maximum 2.3m combined height **<u>Sheet RA1317</u>** Lot 24 • 1.5m retaining height + 1.2m fence = maximum 2.7m combined height. Length infringing 2.5m is 5.4m along Compass Pt Way. Refer sheets 1319 for PMR frontage. Lot 33 • 1.3m retaining height + 1.2m landscape wall = maximum 2.5m combined height.
31	In relation to each of the following features, please either update Drawing R0201 to show these as part of		• Despite the response stating that “the paths are permeable”, the landscape plans continue to identify a large number of	Being updated and co ordinated.	Please refer to updated landscape calculation page.

	impervious area or update the landscaping plans to demonstrate that they will not constitute impervious area: a. The stairs and paths out to the road/reserve in front of Units 1 to 41 (identified on the lodged landscape plans as exposed aggregate concrete). b. The communal path network, including along the front of Units 43 to 91, out to Pigeon Mountain Road and out to Ara Tai (identified on the lodged landscape plans as medium trowel concrete or exposed aggregate concrete). c. All external individual bin storage areas, which in the absence of detail are assumed to be impervious. d. The individual pavers that form part of private paths along the sides of Units 1, 15, 16 and 60, which in the absence of detail are assumed to be impervious. e. Any paved areas for bench setting, as had been shown Units 23 and 60. If it is determined that the total impervious area is greater than 9,512 m², please identify the increased inconsistency with Standard H4.6.8 and update the assessment of environmental effects in relation to this inconsistency. Please also update the infrastructure report to identify the increased impervious area and specify any changes to the proposed stormwater management approach to address the increased adverse effects, including the consistency with Policy H4.3(7).	Noted and updated refer to sheet RA0201 Paths are permeable. Refer to the updated landscape plans. Central area layout has been updated as per planner's feedback Individual bins will be on permeable pavers. Refer to the updated landscape plans. individual pavers will be permeable pavers refer to updated landscape plan The infrastructure report has been updated to reflect the impervious areas.	these as "MEDIUM TROWEL CONCRETE WITH PETERFELL PASSIONFRUIT OXIDE, ADDITIONAL DECORATIVE CUTS", which is understood to be impervious, or otherwise pavement is shown without further clarification. • The communal bin storage area adjacent to Lot 59 is identified by the landscape plans as "EXPOSED AGGREGATED CONCRETE DRIVEWAY WITH NO OXIDES, SHELL ADDED TO MIX", which is understood to be impervious, but this area is not shown on the updated Drawing R0201. • Please update the landscape plans to show that individual bin storage areas are to be permeable pavers. • Please update the landscape plans to specify that "paved path" (Type H) will consist of permeable pavers. • In addition, the covered bike stand adjacent to Lot 67 is not being shown as impervious area. • Please accurately show the extent of all impervious areas, consistent with the information provided in the landscape plans.		- Where paths have been revised to solid concrete and less than 1.5m, they are counted as landscaped area. Note they are not counted as permeable landscaped area. - Pebbled areas have been revised to paver stones (less than 650mm) with planting around. - Bin storage and covered bike stand areas has been removed. - The overhang of the building at first floor level over the decks has been removed. The updated landscape calculation areas as follows: • Overall landscaped area 37.2% • Landscaped area category 1(a, b, c): 10.9%
32	In relation to Standard H4.6.9 (Building coverage) Drawing RA0200, please identify whether the areas delineated on Drawing RA0200, include any part of the eaves or spouting that projects more than 750mm horizontally from the exterior wall of the building (which should not be included as part of building coverage). As an example, it has been observed that the building coverage of Blocks E and F appear to be shown in diagram sheet RA0200 to extend further to Compass Point Way than the building floor plans.	All eaves are less than 750mm and have been excluded from coverages. The updated building coverage figure is 39.1%.	Sufficient information has been provided in response to this request.		

	If it is determined that the total building coverage is less than 5,695 m², please clarify whether there remains an inconsistency with Standard H4.6.9. *A previous response to this item (which was provided in draft form) confirmed that all building eaves were less than 750 mm. However, it was not clarified whether such eaves were excluded from the shown building coverage.*				
33	In relation to Standard H4.6.10 (Landscaped area) and Drawing RA0202: a. Please identify how the following elements specified in the landscape plans and shown as part of the landscaped area or permeable area delineated on Drawing RA0201 (all of which Council considers should not be included) fall within the definition of landscaped area in Chapter J of the AUP: i. All areas listed in RFI item 31 above related to impervious areas, other that paths not exceeding 1.5 m in width and pavers not exceeding 650 mm in dimension. ii. Any decks that are more than 1 m above finished ground levels – please identify the height of each deck to confirm this. iii. Any covered decks, such as parts of the decks in front of Units 14 and 15. iv. The side yards of Units (numbering as per the lodged plans) 4, 5, 10, 11, 25, 26, 28, 29, 31, 32, 36, 37, 39 to 44, 46, 47, 53, 54, 57, 58, 84, 85, 88 and 89, the rear yards of Units 81 to 92 and all other areas identified on the landscape plans as pebble path. b. Please identify any areas beneath roof eaves less than 750 mm (but not beneath overhanging buildings identified as part of building coverage) that would fall	a. i. noted. ii. Decks on the ground floor are all under 1m above ground levels. Refer to sheet RA0203 for the deck levels. iii. noted. Covered area is included under building coverage. iv. Pebble paths fall under the definition of landscaped area. b. Areas have been included in landscaped area. c. Coverage plans have been updated. d. Noted. Areas less than 5m² has been removed from landscape area e. Refer updated landscape calculates page RA0202, the total proportion of permeable area as a proportion of landscaped area is 24%. The updated landscaped area is 38%.	Please revisit this response after accurately showing the extent of all impervious areas, as requested under item 32. • Permeable paths cannot be included as part of landscaped area unless they consist of pavers no more than 650 mm in dimension. Therefore, most of the internal paths should be excluded from landscaped area, unless the paths are confirmed to be impervious, in which case only those more than 1.5 m should be excluded and these must be included as part of impervious area. • In sufficient information is provided in order to verify that all decks included as part of landscaped area will be no more than 1 m above finished ground levels. Drawing RA0203 only provides deck heights for Lots 17 to 23 and does not compare these to the height of ground levels beneath the decks. • Those parts of the decks that are covered by roof (e.g. at Units 15 and 16) have not been removed from the landscaped area. • Please clarify how pebble paths fall within the definition of “landscaped area” under Chapter J of the AUP, given that they are not grassed, planted, an ornamental pool, paving blocks, terraces, decks, non-permeable paths or artificial lawn. These areas should be excluded from landscaped area. • It is expected that the proposed landscaped area, when correctly calculated, is much less than that stated, and potentially below 30%. Please identify any increased inconsistency with Standard H4.6.10 and update the assessment of environmental effects in relation to this inconsistency.	To be updated. Note the following changes. • That the paths will be revised to impervious, and included as part of impervious area calculations. Those more than 1.5m will be excluded from landscape area calculations. Those less than 1.5m included as part of landscaped area calcs. • Pebbled areas will be changed to ground covers with paving stones (pavers less than 650mm). • Portions of decks covered by eaves will be removed from landscaped area calculations. • We are updating the detailed calculations but following a preliminary update, we can confirm that landscaped areas remain around 37-38%.	As above- response to item 31. - Where paths have been revised to solid concrete and less than 1.5m, they are counted as landscaped area. Note they are not counted as permeable landscaped area. - Pebbled areas have been revised to paver stones (less than 650mm) with planting around. - Those parts of deck covered by roof have been excluded. The updated landscape calculation areas as follows: • Overall landscaped area 37.2% • Landscaped area category 1(a, b, c): 10.9% It is observed that the extent of infringement is similar to that commonly approved. • Sheet RA0155 provides the height of the deck and the ground level below the deck, confirming there no decks more than 1m above finished ground level.

	within the definition of landscaped area in Chapter J of the AUP. c. Please split out the areas identified as “landscaped area” or “permeable area” into the following categories: i. Areas that are grassed and planted in trees, shrubs, or ground cover plants. ii. Those elements which are listed in clause (1) of the definition of landscaped area in Chapter J of the AUP, which includes terraces and uncovered decks less than 1 m in height and pavers with dimensions less than 650 mm. iii. Non-permeable pathways not exceeding 1.5m in width. iv. All other permeable areas that are not landscaped area as per the definition in Chapter J of the AUP should not be shown on Drawing RA0202. d. Please then remove exclude any individual/non-contiguous areas less than 5m². e. Please then identify whether those elements which are listed in clause (1) of the definition of landscaped area in Chapter J of the AUP consist of more or less than 25% of the total landscaped area. It is noted that the currently-identified permeable area (1,740 m²) is 34.3% of the currently-identified landscaped area (5,072 m²). If this is more than 25%, please only count towards landscaped area that portion of the elements listed in clause (1) that is no more than 25% of total landscaped area (i.e. no more than a third of all other areas that form part of landscaped area). If it is determined that the total landscaped area (when determining this in accordance with the definition in				

<table>
<tr><td></td><td>Chapter J of the AUP) is less than 5,072 m², please identify the increased inconsistency with Standard H4.6.10 and update the assessment of environmental effects in relation to this inconsistency.</td><td></td><td></td><td></td><td></td></tr>
<tr><td>34</td><td>Please demonstrate that the extent of landscaped area within the front yard of the site, which has been identified in the AEE as 84.8%, has been determined in accordance with the definition in Chapter J of the AUP, noting the various matters outlined in RFI item 33.</td><td>a. Noted
b. Refer to sheet RA0203 for the updated landscape area within the front yard.
Landscape area within the front yard is more than 50%.</td><td></td><td></td><td></td></tr>
<tr><td>35</td><td>Units 70, 82, 83, 86, 87, 90 and 91 are not shown to be provided with a front door. Please clarify.</td><td>Display error. All units are provided with a front door.</td><td>However, it is noted that Units 41 to 45 (Block G) and Units 48 to 58 (Block H) are no longer provided with a ‘front’ door on their northern façade, where pedestrian access is expected to be prioritised (as JOAL 1 does not provide a footpath). Units 46 and 47 do provide this door. Please clarify.</td><td></td><td></td></tr>
<tr><td>36</td><td>Please update Drawing RA0205 to ensure that the outlook space from principal living rooms of Units 61 to 92 are all position to be measured from the centre point of the largest window on the building face to which it applies, as per Standard H4.6.11(4). The provided elevations demonstrate that these outlook spaces would not be along proposed lot boundaries. Please then confirm the dimensions of the overlaps of the outlook spaces with the outdoor living spaces and outlook spaces of adjacent units.
 
</td><td>Outlook Plan has been updated. Refer to sheets RA0205 and RA0206</td><td>No changes appear to have been made. Please clarify.</td><td></td><td>Please refer updated sheets RA0205 where the outlook spaces have been updated.

Dimension of overlaps as follows.
It is noted that all units have the 4m width available, the overlap infringement is due to the centring of the outlook space on the centre of glazing.

<table>
<tr><td>Lot 3</td><td>0.3m x 4.2m</td></tr>
<tr><td>Lot 4</td><td>0.3m x 4.2m</td></tr>
<tr><td>Lot 5</td><td>0.3m x 4.1m</td></tr>
<tr><td>Lot 6</td><td>0.3m x 6m</td></tr>
<tr><td>Lot 7</td><td>0.3m x 6m</td></tr>
<tr><td>Lot 9</td><td>0.3m x 3.5m</td></tr>
<tr><td>Lot 10</td><td>0.3m x 5.6m</td></tr>
<tr><td>Lot 12</td><td>0.3m x 3.5m</td></tr>
<tr><td>Lot 13</td><td>0.3m x 5.6m</td></tr>
<tr><td>Lot 14</td><td>0.18m x 3.4m</td></tr>
<tr><td>Lot 17</td><td>0.3m x 6m</td></tr>
<tr><td>Lot 18</td><td>0.3m x 6m</td></tr>
<tr><td>Lot 19</td><td>0.3m x 6m</td></tr>
<tr><td>Lot 20</td><td>0.3m x 6m</td></tr>
<tr><td>Lot 21</td><td>0.3m x 6m</td></tr>
<tr><td>Lot 22</td><td>0.3m x 6m</td></tr>
<tr><td>Lot 23</td><td>0.3m x 6m</td></tr>
<tr><td>Lot 60</td><td>0.27m x 5m</td></tr>
<tr><td>Lot 61</td><td>0.27m x 5m</td></tr>
<tr><td>Lot 62</td><td>0.27m x 5m</td></tr>
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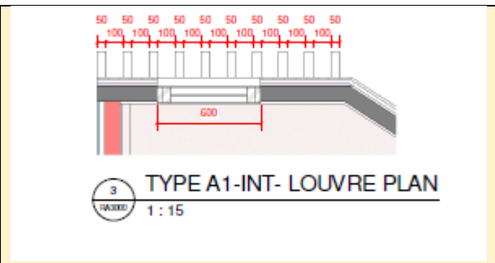
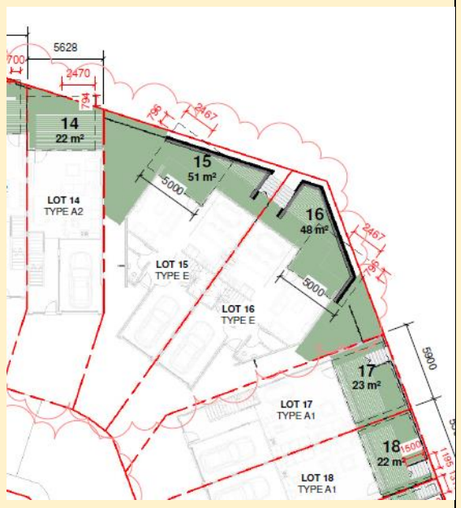
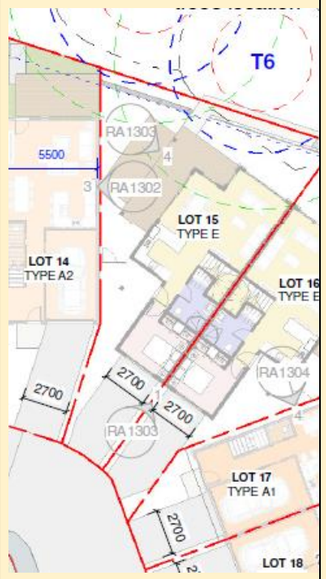
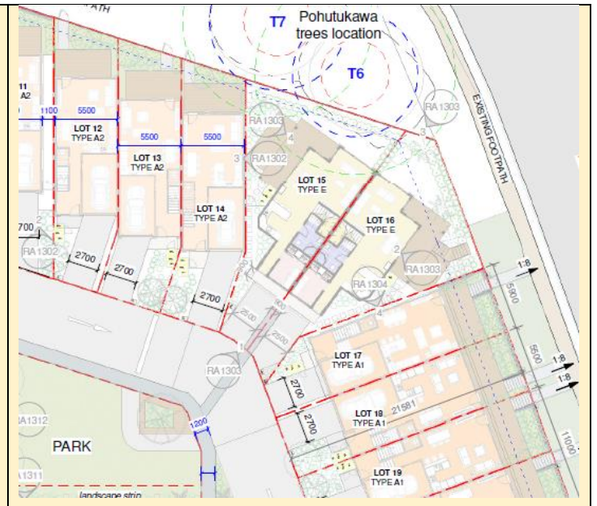
					<table><tr><td>Lot 63</td><td>0.27m x 5m</td></tr><tr><td>Lot 64</td><td>0.27m x 6m</td></tr><tr><td>Lot 65</td><td>0.27m x 6m</td></tr><tr><td>Lot 66</td><td>0.27m x 6m</td></tr><tr><td>Lot 68</td><td>0.45m x 6m</td></tr><tr><td>Lot 69</td><td>0.45m x 6m</td></tr><tr><td>Lot 71</td><td>0.27m x 6m</td></tr><tr><td>Lot 72</td><td>0.27m x 6m</td></tr><tr><td>Lot 73</td><td>0.27m x 6m</td></tr><tr><td>Lot 74</td><td>0.27m x 6m</td></tr><tr><td>Lot 75</td><td>0.27m x 6m</td></tr><tr><td>Lot 76</td><td>0.27m x 6m</td></tr><tr><td>Lot 77</td><td>0.27m x 6m</td></tr><tr><td>Lot 78</td><td>0.27m x 6m</td></tr></table>
37	Please confirm the dimension on Drawing RA0205 of the overlaps of the outlook spaces for Units 17 to 23 with the outdoor living spaces and outlook spaces of adjacent units.	Outlook Plan has been updated. Refer to sheets RA0205 and RA0206			
38	Please clarify the extent to which pergola posts would intrude into the principal living room outlook spaces for Units 2, 4, 6, 10 and 13. 	The post is clear of the outlook refer to sheet RA0205			
39	For the Type A dwellings, please identify the extent to which proposed louvre screens in front of the study's window intrude its outlook space. Please update Drawing RA0206 to correct the placement of outlook spaces associated with Units 69 to 71. Drawing RA3011 demonstrates that the principal bedroom (Bedroom 1) is located over the	Noted and updated outlook space for study rooms. The proposed louvre is aluminium fixed louvres	Please identify to what extent the fixed aluminium louvres will restrict outlook from the study areas.	Aluminium louvres will be removed from the study windows.	Please refer to sheets RA3000, RA3001, RA3002, RA3003 for a detail of the louvres. The width of the louvres are 50mm with 100mm spacing.

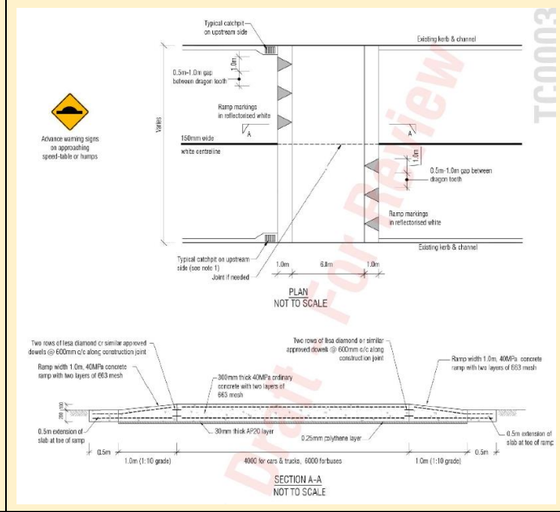
	kitchen at the rear of the dwelling, while Drawing RA0206 indicated the principal bedroom is the bedroom above the lounge and the front of the dwelling (Bedroom 2). Bedroom 1 is larger than Bedroom 2 (by around 1 m²) and so is clearly the principal bedroom.				 In 1m width there are 7x louvre fins which equate to a total width of 350mm / 1000m = 35%. It is noted that the louvres are perpendicular and not slanted therefore do not obstruct views to a greater degree than the physical width of the louvre.
40	Please identify and list all inconsistencies with Standard H4.6.11 and provide an assessment of environmental effects in relation to these inconsistencies.		No response was provided. Please provide the requested information.	I will provide following update of other responses.	Refer response to item 36 and 39.
41	Please update Drawing RA0204 to remove the following areas from the shown outdoor living spaces: a. Those parts with a gradient exceeding 1 in 20, such as staircases to the street and gaps between retaining walls (e.g. at Unit 15). b. Those parts containing overhanging buildings (which is contrary to Standard H4.6.13(1)(d) and different from eaves less than 750 mm), such as the overhang of the study for the Type A dwellings, the overhang of the master bedroom (and study) for the Type B and C dwellings, the overhang of Bedroom 2 for the Type D dwellings and the overhang of Bedroom 1 in the Type E dwellings. Please then identify the minimum dimension provided for each unit, including whether this is less than 4 m for any dwellings further to those identified in the AEE. Please update the assessment of environmental effects in relation to the inconsistencies with Standard H4.6.13.	a. Noted. Please refer to sheet RA0204 for the updated plan. b. The overhang of the buildings is less than 750mm in all instances. The building is only overhanging at the first-floor level and does not impede use of the outdoor living space- which is considered to meet the requirement of being 'clear' of buildings. If a building overhang is considered to contravene H4.6.13(1)(d), then all apartment buildings or terraced dwellings with recessed balconies would also be considered to infringe the outdoor living space standard.	With cross-reference to the finished contour plan provided in the engineering drawing set (Sheet 207), there are a number of parts of the outdoor living spaces that have a gradient of more than 1 in 20 (5%). For example, the areas within Lots 1 to 8 and 17 to 23 have grades of approximately 1 in 5 (20%), and the areas within Lots 42 to 58 have grade of approximately 1 in 4 (25%). The gradients of the spaces in Lots 59 to 78 are also clearly well over 1 in 20. Please accurately respond to the above request.	The EW contours will be updated, and all outdoor living space gradients will be no greater than 1:20. There will be no changes to any retaining wall heights. If required (to compensate for updating the gradient) a larger footing will be included under the deck as part of the building foundations.	All outdoor living spaces are 1:20. There is no change to any required retaining heights. Where required, a larger footing is included under the deck as part of the building foundations.

42	Please comment on whether the decks of Units 15 and 16 are of a functional size and dimension for use as the primary outdoor living space.	In my opinion the decks of Unit 15 and 16 are of a functional size and dimension as they exceed 20m^2. A small corner of the 4m x 5m rectangle is not achieved however it is considered this is compensated by the overall size. 	The provided response does not recognise that the provided outdoor living space is split between multiple tiers and includes land with a grade of more than 1 in 20 (when giving regard to the changes to retaining walls proposed in response to other items). Please address this. In order to demonstrate functionally, occupation of the flat areas with a table and chairs suitable to the number of occupants expected to be resident should be provided.	The internal garage for Lot 15 and 16 is removed, the two units will retain the outdoor uncovered parking space. The internal living areas will be reconfigured, and the outdoor living spaces reconfigured to complying size decks. 	After further review of Lot 15 and 16, we have elected to remove the pedestrian paths from these 2 units to the public footpath. The height difference to the footpath is about 3.8m compared to the floor level of the building. We felt that due to the level difference, the street and reserve side did not practically read as the site frontage/entrance and there was little point trying to make it read as the front of the building. The split level/lowered level configuration doesn't work at this location due to the larger difference in levels to the footpath that cannot be accommodated easily. The difference in levels is 3.9m, whereas the difference from Lot 17-23 was around 2m. For Lot 17-23, we were able to just lower the living room, however for Lot 15-16, essentially the whole dwelling would need to be lowered (with many stairs down from the JOAL side) and gravity WW discharge is not achievable, with the dwelling being lower. Unit 15 and 16 also do not have an internal garage so it is internally inefficient to accommodate the required number of stairs within the building. For 17-23, this was accommodated efficiently in the corridor alongside the garage. Even if we incorporated stairs, the berm would have to be lowered significantly to achieve adequate grades for pedestrians, which would have adverse effects on the trees and likely not supportable by the project arborist. The width of Lot 16 is also required to marry the berm levels of the lowered area in front of Lot 17 to the existing berm around the pohutukawa trees, without cutting or requiring retaining walls within the road reserve. If Lot 16 and 17 were lowered, at some point there would be a sharp change in levels. Given the location at this corner and being limited to 2 units, we felt it made more logical design sense for the front entrance to be from the JOAL side, rather than a contrived entry from the northern side. The pohutukawa tree also obscures the frontage, so overall, between the above factors, we felt that the more logical entrance was from the JOAL side. An additional pedestrian crossing on the JOAL and speed bump has been added. It is noted this crossing is already located in a slow speed environment due to the bend in the JOAL, which is also a one way JOAL. As such it is considered this is a safe crossing point for pedestrians.

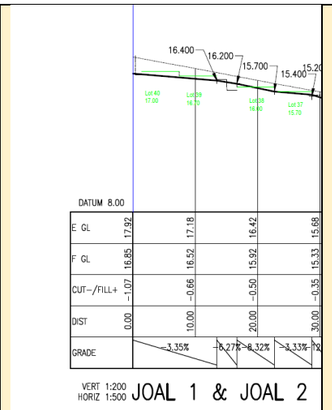
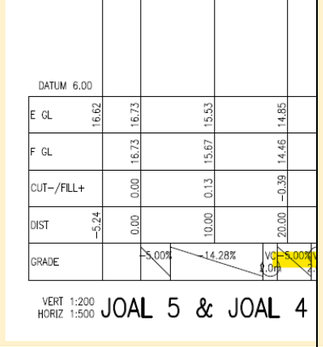
					
43	Please provide an accurate assessment of the proposal against Standard H4.6.14. The AEE specified compliance with this standard without any explanatory comments. However, a number of inconsistencies have been identified. In relation to this: a. Please identify those locations where the combined height of retaining walls and fencing within a 3 m yards from the eastern and southern boundaries will be greater than 1.8 m in height above the ground level at the adjacent boundary. *Where a 1.2 m fence is proposed on top of retaining walls in these yards, this would be in all locations where the retaining wall height is greater than 0.6 m, such as adjacent to Units 16 to 21, 24, 25 and 60.* b. Please identify those locations where the combined height of retaining walls and fencing within a 3 m yards from the eastern and southern boundaries will be greater than 1.4 m in height above the ground level at the adjacent boundary. Please identify if this is less than 50% of the site frontage. c. Please identify those locations where the combined height of retaining walls and fencing within	Refer to sheet RA0104 for the retaining wall plan a. b. Lot **15-22,24** are not complying. c. We have a total length of approx. 239m along southern and eastern bdy of which is approx. 95m are above 1,4m and combined height of fencing and retaining above ground level which is 39% of the site frontage. d. e. Lot 15 at the corner has a retaining wall height of 1.38m + 1.2m semi transparent fence. All other retaining wall on the northern boundary is less than 0.8m and the proposed fence is 1.2m. Refer to updated RA0104, civils updated retaining wall elevations and landscape plans.	As per the request under item 1, RA0104 is not accurately illustrating the height of the proposed retaining walls. RA0104 also does not indicate those lengths where Standard H4.6.14 would not be complied with as it only shows retaining walls, not combined retaining walls and fences. It would be more beneficial for the proposed fencing (as per the landscape plan) to be indicated on the long sections of the retaining walls and those lengths where the combined height exceeds 2.0 m, 1.8 m and 1.4 m be identified and dimensioned. No assessment of effects for the identified infringements were provided. Please provide this.	To be provided.	See response to item 22.

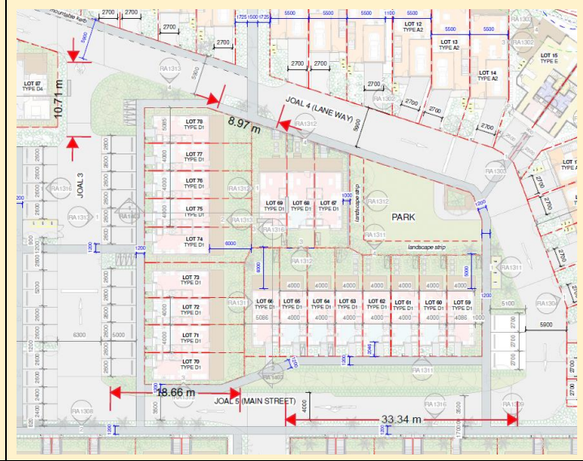
	a 1 m yard from the northern boundary will be greater than 2.0 m in height above the ground level at the adjacent boundary. *Where a 1.2 m fence is proposed on top of retaining walls in these yards, this would be in all locations where the retaining wall height is greater than 0.8 m, such as adjacent to Units 3 to 8 and 15.* d. Subsequently, please list all inconsistencies with Standard H4.6.14 and provide an appropriate assessment of environmental effects.				
44	Please identify those locations where the combined height of retaining walls and fencing within a 1 m yard from the northern boundary and 3 m yards from the eastern and southern boundaries will be greater than 2.0 m in height above the ground level at the adjacent boundary. For these locations, please identify an inconsistency with Standard H4.6.14 and provide an appropriate assessment of environmental effects. *Where a 1.2 m fence is proposed on top of retaining walls in these yards, this would be in all locations where the retaining wall height is greater than 0.8 m, such as adjacent to Units 7, 15 to 19, 24, 25 and 60.*	Lot **15-21** are not complying. They have a max retaining wall height of 1.5m + semi-transparent aluminium fencing above ground level.			
Parking and Access					
45	Please clarify where secure bicycle parking spaces are provided for Units 60 to 71 and 81, as this is not identified on any of the provided plans. Please clarify how the bicycle parking spaces indicated for Units 42 to 59 and 72 to 80 are secure as these are not positioned behind lockable gates. If an infringement to Standard Standard E27.6.2(6) is identified, please provide an assessment of environmental effects proposed in relation to this infringement.	Lot **41-69** will have their bicycle parking within their yards in a bike locker or a low fence area with a lockable gate. The bicycle parking's located in front of Block K will be for units **70-78**, which will also be either a locker or a low fence area with a lockable gate.	The landscape plans do not show the bicycle parking spaces for Units 41 to 58 "in a bike locker or a low fence area with a lockable gate" as specified. Please clarify.	To be updated.	Please refer updated landscape plans which show the bicycle lockers for Units 41-58. 
46	Please confirm the width of all driveways in front of Units 1 to 22.	Driveway infront of Lot 1-22 is **2.7m**	Driveway infront of Lot 1-22 is **2.7m**		

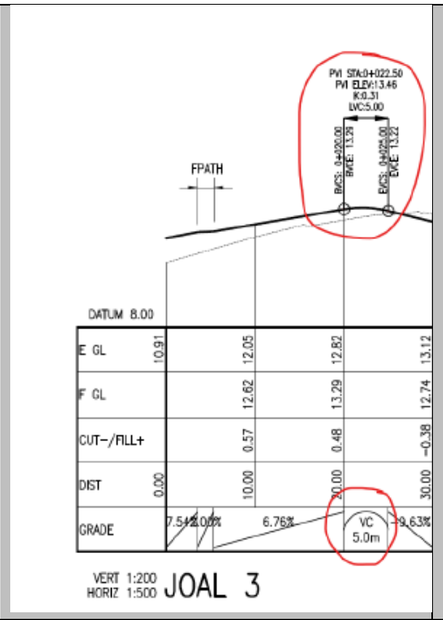
47	Units 24 to 41 are provided with garages with doors that have a width of approximately 5.0 m, into a room with an internal width of 5.3 m. While the plans now show these garages as only serving a single vehicle, they remain of a design that would physically allow for two vehicles to be parked. If these garages are used for two parking spaces, the second space would conflict with the bin storage areas for Units 25, 28, 31, 34 to 36, 39 and 42. Therefore, please either: a. Identify alternative suitable bin storage areas should the future residents choose to park a second vehicle in these garages and provide assessment of the suitability of providing a width that enables a second vehicle while being below the minimum width expectation of 5.5 m for a double garage; or b. Amend the design of the garages so that it is not physically possible to accommodate two vehicles, such as by decreasing the width of the garage doors.	The garages of Lot 25, 28, and 31 are now proposed as a single car garage. Refer to RA0151 – Proposed Ground Level Floor Plan. Lot 24, 26, 27, 29, 30, 32, 33-40 will have the bins located outside We do not consider it necessary to amend the design of the garages. The garage door is a standard size and has other practical benefits to future occupants.	If the garage door is not amended to only provide access for a single vehicle or the internal design of the garage is not amended to physically prevent the parking of two vehicles, then the garages will be treated as double garages and sufficient bin storage area is not provided within the garage and therefore not provided for the unit. Please clarify whether this is accepted or whether further amendments are to be made to appropriately address this matter.	The internal laundry area has been reconfigured to accommodate the bins without affecting the width of the garage.	
48	Please update Sheet 7 of the provided vehicle tracking to reflect the revised location of Unit 1.	TPC – Please refer to additional tracking enclosed.	Sufficient information has been provided in response to this request. However, it is suggested that the extent of pavement opposite Lot 1 be slightly increased in order to avoid the need for an additional manoeuvre.		
49	Please update Sheet 15 of the provided vehicle tracking to reflect the revised location of the southern-most 90 degree parking space off JOAL 4.	TPC – Please refer to additional tracking enclosed.			
50	On Sheet 22 of the provided vehicle tracking, please complete the manoeuvres from the garage of Unit 35 (shown as Lot 34) out to Compass Point Way.	TPC – Please refer to Sheet 6 in the additional tracking enclosed.	However, it would be beneficial to receive further comment from a traffic engineer regarding the suitability of requiring an additional manoeuvre in the location specified (the main entrance to the complex used by all 100+ parking spaces).		
51	Please provide vehicle tracking for Unit 8. Please consider whether it would be more appropriate to “flip” this typology in order to provide for greater clearance from the section of narrowed accessway and pedestrian crossing.	TPC – Please refer to additional tracking enclosed.			
52	Please comment on the appropriateness of all manoeuvres existing the garages of Units 1 to 8) being required to undertake	A mountable kerb is designed to be mountable to all vehicle types, it is not considered there is any issue with	Please assess the effects on pedestrian amenity (noting that this is the primary pedestrian access for 10 dwellings), not just the functionality of the	Updated tracking (attached) confirms that vehicles are able to reverse into the garages	

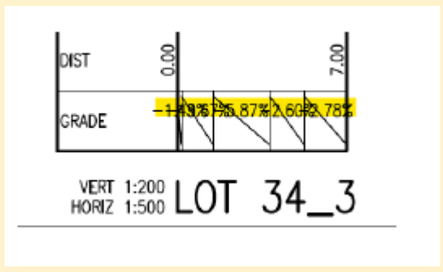
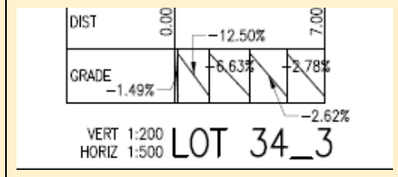
	turning movements over the proposed mountable kerb footpath.	manoeuvring over a mountable kerb and manoeuvring is anticipated to occur.	mountable kerb for vehicles. Regard should be given to the provisions of Plan Change 79, decisions of which may be released prior to decisions on this resource consent. Please demonstrate whether vehicles are able to reverse into the garages with fewer conflicts with the mountable kerb footpath.	with no conflict to the mountable kerbed footpath.	
53	Please clarify whether all external parking spaces will be provided with wheel stops. This is recommended in order to avoid overhanding onto adjacent footpaths.	All external parking spaces will be provided with wheel stops.	Please show on the plans the wheel stops for the parking spaces in Lots 41 to 58.	Wheel stops will be added to all plans for all external parking spaces.	Wheel stops have been added to all plans.
54	Please provide plans that demonstrate that “all footpaths will be grade separated, including at crossings” as advised in the email dated 2 October 2023. In relation to this, please identify any implications on the gradient of parking spaces directly adjacent to pedestrian crossings, such as the parking spaces outside of Units 90 and 95.	Please refer updated architecture and landscape plans. They have been achieved by mountable kerbs therefore are not considered to have any implications on parking spaces.	The architecture and landscape plans do not appear to provide any details regarding the vertical separation of pedestrian paths from accessways or mention mountable kerbs (other than in front of Lots 1 to 8). Please clarify. No information is provided regarding vertical separation at pedestrian crossings. Please provide this information.	A cross section detail of the raised pedestrian paths will be provided by the civil engineer and cross referenced on the architecture and engineering plans.	Please refer to sheet 321 which contains a standard detail for the speed table crossings. For the areas in front of Lot 82 and Lot 13, a speed bump has been added. 
55	Please clarify how the turning area adjacent to Unit 60 will be kept clear at all times and not be used by residents as additional parking spaces.	TPC - ‘No parking’ road markings are illustrated on the architectural plans.			
56	Please clarify whether rubbish trucks are expected to travel along JOAL 1. a. If so, please identify how the rubbish truck will be able to undertake a turning manoeuvre. b. If not, please explain where bins for Units 35 to 48 are expected to be collected from.	TPC – Rubbish Direct have confirmed that they would temporarily park within the main accessway to collect refuse bins along JOAL 1 and as such will not be required to do a turning manoeuvre here. Given that vehicles could still pass the truck when parked, and collection will be done outside of peak hours when the likelihood of vehicular interaction is minimal it is considered acceptable.	• Please identify the specific location of the loading space within JOAL 5 that a rubbish truck would be required to stop at. • Please demonstrate how bins for 13 dwellings are able to be positioned on collection day adjacent to JOAL 5 in a safe and efficient manner without blocking the footpath or driveway, recognising the limited berm space available and the gradient of the accessway. • Please provide assessment regarding pedestrian access (moving bins) along JOAL 1 given that it serves 18 parking spaces and no dedicated pedestrian path is provided. • Please demonstrate how the truck is able to manoeuvre to and from this loading space, noting that the tracking diagrams	• The following has been discussed and agreed as suitable with Rubbish Direct. The WMP is being updated to reflect the below. • Per the WMP, a 7.5m truck is proposed to serve the development. • To serve JOAL 1, the truck can pull by the bottom of JOAL 5 which has the flattest gradient on the JOAL, approximate location	The bin stores for Lot 41-47 have been revised to be next to the path of Lot 79. Units 35-40 have been located to the upper terrace side for street collection, with access over pavers. It is confirmed there are no steps or retaining required here. The maximum height difference is 250mm which the footpath can accommodate as a minor gradient.

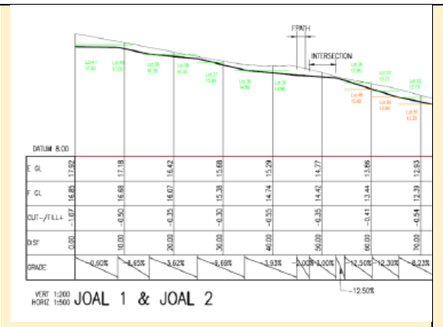
			show the rubbish truck is required to cross over the centreline of the JOAL. • Please demonstrate how vehicles will be able to safely pass this parked truck in both directions, including tracking curves and visibility assessment. • Please provide an assessment of the appropriateness of rubbish loading on a driveway with a gradient of up to 14.28% (as shown on Sheet 310). • Council does not currently support this arrangement.	around ch35-40. The gradient at this section is approximately 9% therefore suitable for  • Rubbish collection occurs once a week, or fortnightly for recycling. • Rubbish collection is scheduled for outside peak times. This will be noted in the updated WMP. • Rubbish Direct confirms it would take 6.5minutes to empty bins at this location if emptied one at a time (30 seconds to collect, empty, and return each bin). Rubbish Direct advises that in reality it is likely to be less as the driver can move two bins at a time. • As the internal access is a 1-way loop, this does not impede any vehicles from Exiting the site. • Tracking confirms any vehicles can pass safely. • JOAL 1 has no gradient exceeding 12.5%	

				 • From the intersection with JOAL 1 to the indicated idle space, there is no gradient exceeding 9%. 	
57	Please provide a lighting plan prepared by suitably qualified lighting engineer to demonstrate that consistent and uniform lighting is proposed at communal areas where people movement is expected. JOAL and the common access areas need to ensure safe access after dark, as required under Standard E27.6.3.7. AUP recommends that lighting for pedestrian areas should be calculated in accordance with AS/NZS1158 series of standards and that is following Chapter E24 Lighting of the AUP (OP).			Updated lighting plan to be provided.	
58	In relation to those sections of the proposed accessway that is less than 5.5 m:	TPC - The sections where the width of access is less than 5.5 metres are proposed to operate as one-way flow and as such the widths are considered sufficient and there	While the provided assessment is appreciated and understood, please provide the requested		It is considered there is no infringement to T151 as T151 enables the accessway to be reduced to 2.75m where passing bays are provided every 50m.

	a. Please provide dimensions of the minimum widths of each of these sections on the proposed plans, alongside the lengths where the width is less than 5.5 m. b. E27.6.4.3.2(T151) specifies that "The formed width is permitted to be narrowed to 2.75m if there are clear sight lines along the entire access and passing bays at 50m intervals are provided" [emphasis added]. Please clarify whether clear sight lines are provided along the entire access where a width of less than 5.5 m is proposed for part of that access.	will be no two-way conflict. The section adjacent to unit 9 where the access is reduced, sightlines are considered good in both directions but in any event the access is one-way only from the west. Sightline drawings are provided in the attached plans demonstrating the sightlines for the areas with a reduced accessway width. Further to that, vehicle speeds within the site will be low as pedestrian crossing points will be raised acting as traffic calming measures. These are provided on both approaches to the one-way sections. In addition, users will be residents and as such regular users who will be familiar with the layout and the need to check the way is clear. The proposed accessway arrangements are therefore considered to be consistent with T151 and the risk of two way collisions is minimised through design.	dimensions in order for the infringement of the E27 width standards to be quantified.		Read another way, the access can be narrowed to 2.75m for a maximum length of 50m, before a passing bay or two way access is provided. There is no length of access less than 5.5m that exceeds 50m, and one way access is provided (see below measurements). Therefore the design complies with the standard and there is no infringement to E27 pursuant to standard T151. 
59	Please clarify whether the following transition within JOAL 3 complies with Standard E27.6.4.4(2). If an infringement is identified, please provide the relevant assessment of environmental effects associated with this (including any positive effects compared to a compliant transition).	TPC - Transitions within the site will be provided in all areas necessary and gradient changes will not be greater than 12.5%. This is consistent with E27.6.4.4 (2).	This request is no longer relevant following changes to the gradient of JOAL 3 (the change in gradient at summit is now less than 12.5%).		



60	Significant clarification is requested in order to demonstrate that the proposed gradients of JOALs 1 and 2 and the parking spaces for Units 34 to 60 comply with Standards E27.6.3.6(3) (maximum 5% in any direction for parking spaces), E27.6.3.6(4) (maximum 12.5% for manoeuvring areas) and E27.6.4.4(1) (maximum 12.5% for vehicle access used by heavy vehicles, measured on the inside radius). While the provided longitudinal section for JOALs 1 and 2 shows a maximum gradient of 12.5%, there is doubt in regard to practicality of tying into adjacent garages and parking spaces while not exceeding this gradient in any direction. This doubt results from the following observations, amongst others: a. The finished levels for the adjacent lots being up to 0.7 m different from the levels of the adjacent accessway, as shown on the provided longitudinal section for JOALs 1 and 2. It is further noted that the levels shown for Lots 23 to 41 are the flat levels of the proposed garages, and the levels for Lots 33 and 34 are over 0.5 m higher than level of the adjacent accessway.		JOAL Number / Number of Parking Spaces / Maxi Grac JOAL 1: 4 / 8.0 JOAL 2: 2 / 6.9; 2 / 5.6; 2 / 7.8-8 JOAL 3: 3 / 5.3-5; 14 / 7.0-7 TPC – The table above summarises the proposed parking spaces that are considered non-compliant with the maximum gradient of 5% under E27. They are also illustrated in the updated civil engineering package of plans. The following assessment is made with regards non-compliance: ▪ For three spaces located in JOAL 1 the gradient of 8% is only at the front of the spaces and there is a complying gradient of 5% is provided at the opposite end of the space. Therefore, the non-compliance reduces as it progresses along the bay and the difference in compliance becomes minimal at the point of which people will be stepping from the cars and there will be no noticeable effect.	Thank you for the detailed information provided in the engineering plans in response to this item, including the significant changes to the gradient of JOAL 2. • Please provide a legible version of the grades specified in the Lot 34_3 long section (refer below).  • Please provide a plan similar to Sheets 302 and 303 that correlates with the long sections for Lots 24 to 31 and 35 to 40 provided on Sheets 318 and 319. • The long sections for LOT 36_IN and LOT 38_IN include summit with a change in gradient exceeding 12.5% (17.54% and 15.18%, respectively) without a 2 m transition. This is not consistent with Standard E27.6.4.4(2). Please amend the levels and gradients to achieve compliance or provide assessment of the effects of the infringement. • Please also refer to the comment against item 1 regarding the consistency of the elevations in the architectural drawing set to the garage floor levels used in the engineering plans.	Being updated.	The long sections have been updated for legibility.  Lot 36 and 38 have been updated to show the 2m transition. The architectural elevations have been updated and checked for consistency.

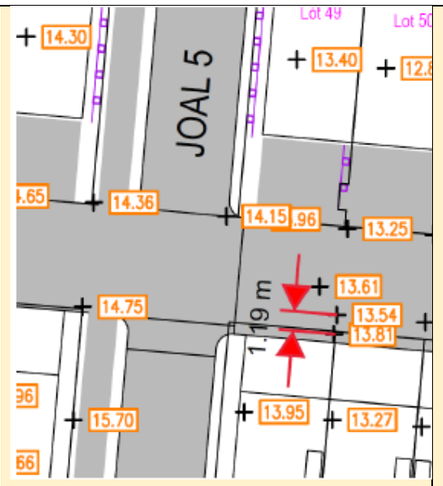


b. The 3D imagery provided within the architectural plans seemingly shows JOAL 2 is not flush with the garages of Units 23 to 41, including 'covering over' part of the garage doors.

c. The spot heights of 13.54m and 13.81 m adjacent to Lots 33 and 34 shown on Sheet 202 are approximately 1.2 m apart, indicating a gradient of 22.7% (1 in 4.4) in this location.

- The remaining non-complying space in JOAL 1 will have a flat gradient at the rear of the space and as such users will likely open their doors onto a compliant grade of 5% at its midpoint and therefore will be no noticeable effect on the users.
- For those spaces along JOAL 2 where an 8% grade is proposed, this is at the front of the spaces only and the gradient at the rear of the spaces is also flat. As above, the likelihood of the gradient where users will be opening their car door will be at or close to a compliant 5% grade.
- Along JOAL 3, three spaces have a non-compliant grade by no more than 0.6% resulting in a difference in height at the edge of the parking bay of 16.5mm to a complying space which is minimal and unlikely to be noticed by users.
- For those spaces with a gradient of up to 7.8% the level difference of 82.5mm at the edge of the space is still considered minimal and unlikely to be noticed by users. As the difference is measured from the edge of the space so the actual level where users will be opening their doors will be lower further reducing any potential impact.
- Wheel stops are provided within the spaces, assisting users whilst parking and preventing any overrun of the spaces;
- Gradients of up to 1 in 8 (12.5%) are permitted on public roads under the subdivision code and as such the proposed grades are considered acceptable.
- Any impact will be retained within the site and not effect the local road network.
- The parking spaces will be used by residents and as such regular users who are familiar with the gradients and will find the optimal methods to use the spaces with minimal effect..

Considering the above, the parking spaces are expected to operate safely, with less than a minor effect on the operations of the surrounding road network and within the site, and therefore is considered acceptable.

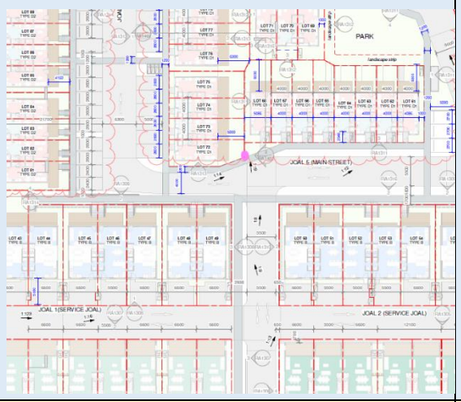


d. The parking spaces for Lots 43 to 60 commence direct against JOALs 1 and 2. Where the JOAL has a grade of more than 5%, part of those parking spaces would subsequently be more than 5%. This appears to impact the parking spaces for Lots 46, 49, 50, 51 and 54. It is calculated that an additional depth of at least 1.65 m would be required between the edge of a 12.5% grade accessway and a 5% grade parking space (with a grade of 12.5% for the transition). Therefore, in order for compliant gradients to be achieved for the parking spaces of Lot 49, its depth from the edge of the 5.5 m accessway would need to be at least 6.65 m, when it is only 5 m (when excluding consideration of a 1 m overhang).

A highly-detailed finished contour plan should be provided in order to demonstrate how the proposed levels can be achieved while complying with the relevant maximum gradients. It would also be helpful to provide sections showing the change in gradient along the tracking curves for some of the steeper manoeuvres, such as to and from the parking spaces for Lots 49 to 51 and 32 to 34.

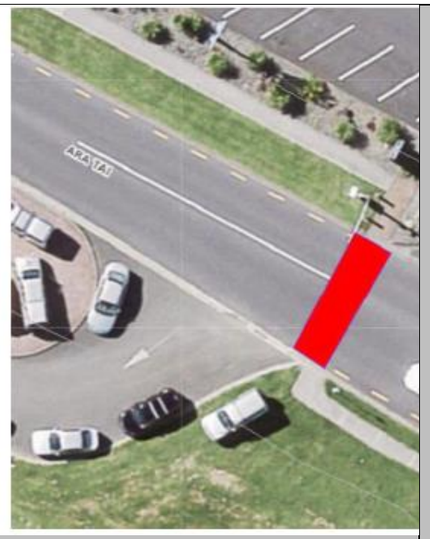
If any infringements to Standards E27.6.3.6(3), E27.6.3.6(4) and/or E27.6.4.4(1) are identified as a result,

	please provide the relevant assessment of environmental effects associated with this.				
61	The plans demonstrate that part of the 5 m depth for the parking spaces associated with Units 43 to 60 are to be planted. In relation to this: a. Please confirm the depth of this planting strip, noting that an overhang of up to 1 m is provided for by Note 2 to Table E27.6.3.1.1. b. Please confirm whether the species proposed within this planting strip are suitable within a parking space overhang and would not promote vehicles not using this overhang and 'sticking out' on to the adjacent vehicle accessway. *Any structures or landscaping that can grow beyond a height of 170 mm above the car park level has the potential to hinder parking and cause damage to parked vehicles and would not be considered appropriate within a parking space overhang.*	All planting within overhang areas are low-lying and suitable as vehicle overhang areas.	This request is no longer relevant following the changes to the extent of parking for Lots 41 to 56.		
62	Please provide a context site plan that shows all details at the road frontage (both Compass Point Way and Pigeon Mountain Road) and its relationship to the location of the two-way vehicle crossings. This should include the number of traffic lanes, flush median including width, edge line markings, on street parking, street lighting pole, catch pit and any other road furniture for the full frontage of the site. *Note that any change in sign and markings will require resolution report to be approved by Auckland Transport*	TPC - Context plan provided. Although it should be noted that the provision of the access will have no impact up on any on-street parking, catch pits or street furniture.	Comments on this response is pending feedback from Council's traffic engineer.		
63	Please provide signage and markings plan (directional arrows within the boundary to route traffic flows) including analysis of how cross-roads (private) and 90-degree bends will function within JOALs. This information is required to ensure operations and safety of internal driveway traffic is maintained.	TPC - Signage details are shown within updated architectural plans.	Comments on this response is pending feedback from Council's traffic engineer.		
64	Please confirm if there will be any sightlines issue (visibility envelope) given 90-degree bends around the proposed driveway. Please provide assessment and	TPC - Sightline drawings have been provided demonstrating sufficient sightlines at any interaction points. The bend in the driveway near lot 21 is two-way, however it is recommended convex mirrors are located in	Comments on this response is pending feedback from Council's traffic engineer.		

	accordingly provide mitigations to ensure safe ingress/egress of vehicles at all times. *Auckland Council recommends use of convex mirror to mitigate safety effect.*	the areas shown in pink to further assist with sightlines. These are demonstrated on the plans attached and below.  			
65	Please provide mitigation of how slow speed environment will be maintained along the proposed JOAL. *Auckland Council suggests use of speed humps to maintain 30km/hr environment.*	TPC - The pedestrian crossing points throughout the site are to be raised, and in effect acting as speed calming measures.	Please provide further details of the raised pedestrian crossing points, such as a cross-section with gradients specified.	As above, this detail will be provided.	Refer updated civil package for standard detail.
66	Visibility splays should be provided on either side of the vehicle crossings in accordance with Figure 3.3 of Standard ASNZS2890.1-2004 (2.0m x 2.5m splays), whereby any vegetation within the splay area should be limited to 0.6m in height and any fencing should be permeable and restricted to a maximum of 1m in height. In this regard, adequate visibility can be achieved between exiting vehicles and oncoming pedestrians. Please provide detailed analysis as to whether this can be achieved and annotate the same on the plans.	TPC - Drawings have been provided demonstrating intervisibility to the east from the vehicle crossing. No intervisibility splay is required to the west given that the vehicle crossing is two-way which in effect provides the appropriate visibility splay to the west.	Comments on this response is pending feedback from Council's traffic engineer		
67	Please provide inter-visibility assessment around crossroads and around 90 degree bends to ensure cars can pass each other (tracking) without any blockage from infrastructure (such as fence).	TPC - Vehicular interaction on bends within the site is no different to scenarios within shopping centre parking areas where users are not regular users who are familiar with the layout and these scenarios operate well. Further to that, convex mirrors are located on the bends to aid sightlines. In the two areas where convex mirrors are located adjacent to bends, the JOAL will serve up to 26 units which will have a peak hour trip generation of some 17 trips. This equates to one vehicle movement about every 3minutes. Assuming an 80/20 split for departures/arrivals in the AM and vice versa in the PM, this would equate to 13 departures and four arrivals. As such, the likelihood of vehicular interaction is considered to be very low. Further to that,	Comments on this response is pending feedback from Council's traffic engineer		

		this is assuming properties in the NE corner (1-8) will access their properties via JOAL 5/JOAL 4 where they may utilize JOAL 3. In addition to the above, users will be regular users who will be familiar with the layout and the need to check the way is clear before continuing. It is also our experience that by narrowing accessways, and limiting sight lines, cars proceeed with more caution and at slower speeds reducing the risk of any collisions and enhancing pedestrian safety in any areas. Providing unopposed two-way flow can increase confidence in drivers and increase speeds, therefore increasing the risk of collisions.			
68	Please show and annotate on the Engineering drawings the proposed (all) car park spaces with their associated Length, Width and depth dimensions.	TPC – these have been provided in architectural plans.	Comments on this response is pending feedback from Council's traffic engineer		
69	Please provide reasoning for not providing the single vehicle crossing to Auckland Transport's commercial standards, given that it will serve 92 dwellings.	TPC - Plans provided demonstrate a VC in line with AT's commercial standards.	Please update the engineering plans to refer to AT's Commercial vehicle crossing standards (VX0203) rather than the residential standards (VX0103).	The crossing will be updated to the commercial vehicle crossing standard.	
70	Visibility at the proposed vehicle crossing has been assessed using RTS6 Guidelines for Visibility at Driveways. Please provide assessment using AustRoads standards, as recommended by the Transport Design Manual.	TPC – Please refer to the table below that provides an assessment under the Austroads standard as requested. On further review, given the presence of the Pigeon Mountain Road/Compass Point Way intersection to the east, horizontal bend in the road to the west, on-street parking and traffic calming features along Compass Point Way the 85th percentile speed is not expected to be greater than 40 km/h. Whilst there is a shortfall to the west for SSID, this is only minimal and vehicle speeds are generally expected to be slower to the west as users will either be negotiating a bend in the road along Compass Point Way and the central built-up landscaping area, or turning from an intersection. As such, the impact of the shortfall is considered minimal, and the sightlines are considered acceptable. Further to that, users of the access are generally only expected to turn left out of and right into the site access where there is a compliant MGSD further reducing any risk of a collision. **Sight Distance Assessment - AUSTROADS** Safe Interse			

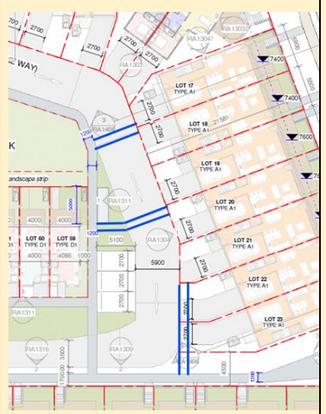
		Direction / Speed / Recomm To the East / 40 km/hr To the West / 40 km/hr Approac Direction / Speed / Recomm From the North / 30 km/hr Minimum Direction / Speed / Recomm From the East / 40 km/hr From the West / 40 km/hr			
71	The drawings have not shown tracking for large vehicles (trucks/refuse) turning into JOAL 1 and 2 from JOAL 5. Please provide tracking curves to demonstrate that trucks can safely manoeuvre into these areas considering the lack of turning head at the end of JOAL 1.	TPC - Trucks will not access JOAL 2 as demonstrated in the WMP.	The Waste Management Plan (the version dated 18 May 2023, as an updated version has not been provided) does not state that "Trucks will not access JOAL 2". The provided tracking diagrams show a truck turning at the end of JOAL 1, with it understood that the turning bay is provided at the end of JOAL 1 for that reason. Please clarify whether Units 24 to 58 are expected to move their bins to JOAL 5 as per the scenario referred to in the response to item 56 or otherwise provide the requested tracking diagram.	Response as above, WMP will be updated to reflect proposal as above. It is confirmed that trucks are intended to access JOAL 2 and use the turning bay.	The Waste Management Plan has been updated to reflect the changes.
72	Regarding the footpath connection to Ara-Tai Road, the proposed development is expected to increase the demand for road crossings towards the shopping centre and bus stops. The Transport Assessment, specifically in Section 4.1 and 4.2, mentions the provision of pedestrian connections, primarily in the form of pram crossings. Please provide mitigation measures to address pedestrian safety concerns in the specific section of the road shown below considering factors such as pedestrian traffic, crossing points, visibility and any potential challenges.	TPC - There is a retail complex area and marina which currently generates regular pedestrian activity, and CAS history demonstrates no trend in safety issues relating to this. It is expected that any future pedestrians from the site are anticipated to cross Pigeon Mountain Road in the same manner. Sightlines are considered acceptable in both directions onto Ara Tai Road, and vehicles to the east will likely be slowing down as they negotiate the corner and enter the marina area. It should be noted that any issues relating to pedestrian activity in the area should have been dealt with by AT previously.	Sufficient information has been provided in response to this request. However, note that Auckland Transport continues to considers an upgrade of the pedestrian crossing at Ara Tai to be necessary in response to the increased pedestrian demand resulting from the proposal.		

					
73	Please confirm whether any footpaths within the will be accessible to non-residents, and if an easement in gross will be granted for this footpath. If so, please refer to ATCOP on acceptable gradients for footpath (Table 14 Footpath Gradients).	TPC - Given the revised layout, it is not anticipated that the footpath will be accessible to non-residents as there is no longer a direct route straight through the site.	Sufficient information has been provided in response to this request. However, note that Auckland Transport considers that, given that the through route would not be publicly accessible, that the footpaths along Pigeon Mountain Road and Ara Tai directly adjoining the site should be widened to 1.8 m in response to the increased pedestrian demand resulting from the proposal.		
Infrastructure and Servicing					
74	The please clarify how mail services will readily access each dwelling's letterboxes. The landscape drawings show that the letterboxes for Units 42 to 92 (now Units 43 to 93) will be adjacent to the internal communal path network, where legal public access is not provided. Evidence that NZ Post would service these letterboxes should be provided. Otherwise, there may be the need to provide for communal letterboxes, with suitable access arrangements, adjacent to a public road.	An easement will be provided for mail box access.	Please provide further details regarding the proposed easement. If this easement is to be in gross in favour of Auckland Council, please identify whether the footpath(s) within this easement will meet Auckland Transport's standards for a public footpath. Please clarify whether consultation with NZ Post has been undertaken.		Scheme plans currently being updated.
75	Drawing RA0120 shows that individual bins for Units 36 to 49 would be collected from JOAL 1. However, the application has not assessed the suitability of rubbish truck access along JOAL 1, including how rubbish truck turning would occur (this has only been demonstrated for JOAL 2). Please clarify where individual bins for Units 36 to 49 would be collected from and demonstrate that those routes can be traversed by a rubbish truck without resulting in adverse traffic safety issues.	See previous comments regarding waste collection.	This request incorrectly replicated matters covered by a previous request (item 56). Please response to the additional comments against that item.		

76	Please carry out and present a report on wastewater assessment to the nearest existing 300mm diameter sewer pipe as per Watercare Code of Practice.	It is not possible to carry out assessment to the nearest existing 300mmØ sewer pipe as the existing WW drainage discharges into a Wastewater Pump Station (GIS ID 961653.)	Comments on this response is pending feedback from Council's development engineer and Watercare Services Limited.		
77	Please provide comments on how the lots will connect to the power and telecommunications networks.	This is designed at the detailed design stage with input from utility providers however given the connectivity of the wider area, there is not considered to be any issues with providing power and telecoms.	Comments on this response is pending feedback from Council's development engineer.		
Stormwater Management and Flooding (Comments from Healthy Waters were provided on 28 August 2023. These comments did not support the lack of stormwater treatment and attenuation. Regard should be given to those comments went providing responses to the below matters.)					
78	Please clarify whether a Stormwater Management Plan has been provided to Healthy Waters independently to this resource consent application and whether that SMP has been adopted.	A Stormwater Management Plan (Rev 2) has been submitted.	Comments on this response is pending feedback from Council's development engineer and Healthy Waters.		
79	Please complete the SMP checklist provided on 28 August 2023.	Please refer to SMP-Rev 2. Checklist is attached as appendix B	Comments on this response is pending feedback from Council's development engineer and Healthy Waters.		
80	Please confirm the existing impervious area of the site in order to understand the extent of increase proposed.	Please refer to SMP-Rev 2. The existing impervious areas measures to 5632.4m² (40.02%). The post imperviousness is approximately 64.83%. Detention systems are now proposed to limit the site runoff to no greater than existing site runoff for the 10% AEP rainfall events.	Comments on this response is pending feedback from Council's development engineer and Healthy Waters.		
81	Please clarify the impervious area that is associated a "High contaminant generating car park" as per the definition in Chapter J of the AUP – therefore including associated accessways, manoeuvring, entries and exits. If this is more than 5,000 m², please provide an assessment against the relevant matters of control listed in section E9.7.1(1).	Please refer to SMP-Rev 2. Stormwater 360 stormwater filters are proposed to provide stormwater quality treatment for TSS.			
82	Please clarify whether the proportion of the impervious area associated a "High contaminant generating car park" in relation to the total proposed impervious area. Where this is more than 50%, please specify how all impervious areas will be treated by a stormwater management device as required by Standard E9.6.1.3(4) (or E9.6.2.1(3)).	Please refer to SMP-Rev 2. Stormwater 360 stormwater filters are proposed to provide stormwater quality treatment for TSS.			
83	Please confirm the locations of the proposed Stormwater360 treatment devices on the engineering plans, in order to demonstrate that these will service all	Please refer to SMP-Rev 2. Stormwater 360 stormwater filters are proposed to provide stormwater quality treatment for TSS.	Sufficient information has been provided in response to this request. However, please note that Sheet 400 (engineering drawings does not show a line between 'SW filter	Noted this has been corrected.	

	applicable impervious areas as per section E9 of the AUP.		2' and 'SWMH 4-1', which is assumed to be proposed.		
84	The proposal includes the redirection of an overland flow path, including the amendment to the exit point at the site boundary. The AEE states that "The flow has a catchment less than 4ha therefore does not require further assessment under the AUP" – however, this is incorrect, as the definition of overland flow path in Chapter J of the AUP excludes catchments less than 4,000 m². The overland flow path at the site has a catchment of between 4,000 m² and 1 ha (the infrastructure report estimates this to be 5,485 m²) and therefore: a. Please identify rule E36.4.1(A41) and the infringement of Standard E12.6.2(12) as reasons for consent associated with the change to the overland flow path exit point and provide the associated assessment of environmental effects. b. Please identify rule E36.4.1(A42) as a reason for consent associated with the establishment of buildings and structures within the (existing) overland flow path and provide the associated assessment of environmental effects. The assessment of environmental effects must incorporate the special information requirements specified in section E36.9 of the AUP. As part of this response, please provide a plan showing the pre and post development overland flow path alignment and the changes to flow.	Please refer to OLFP Assessment-Rev 2. Please refer to Catchment plan in the appendix of OLFP Assessment-Rev 2. The post developed areas have been split into 12 smaller catchments to assess the overland flow paths within the subdivision. Please note the impervious areas used in the OLFP flow assessment is of a previous site layout with greater impervious areas. With latest layout has lesser impervious areas, hence the actual post development flow and impact will be lesser than outlined in the OLFP Assessment – Rev 2.	Comments on this response is pending feedback from Council's development engineer and Healthy Waters.		
Works within public reserve and road berms					
85	Please clarify whether an application has been made to Auckland Council for Land Owner Approval in order to complete all works proposed within the public reserve between the site and Ara Tai.	An application has been lodged for Land Owner Approval. Based on feedback, only the central path has been retained and the individual path has been removed. The central path is considered by the LOA team to provide adequate pedestrian access within the site.		This LOA will be continued at a later date.	

		Access is still provided from the northern frontage of Lot 1-14 by internally swinging gates, and residents can traverse the reserve (if desired).			
86	Please confirm whether works associated with the existing pohutukawa trees within the reserve land will comply with the following standards. If they will not, please identify any additional reasons for consent and provide the relevant assessment of environment effects. a. For any tree trimming or alteration, Standard E16.6.1. b. For any works within the protected root zones, Standard E16.6.2.	No tree trimming or alterations is required. The extent of works within the protected root zones would comply being less than 4% of the protected root zone.	Please provide comment from an arborist to verify that compliance with these standards can be achieved.	As above	No longer required as no earthworks are proposed within the protected root zones of any street tree.
87	Please clarify the grades of the pedestrian paths proposed within the public reserve and assess whether these are suitable for the sole dedicated pedestrian access routes to Units 1 to 15.	The gradient of the pedestrian path has been reviewed by the project architect and confirmed to be suitable without requiring any retaining structures.	Please confirm the grades of the remaining pedestrian path within the public reserve. The requested assessment should include consideration of specify how individuals such as wheelchair users and parents with prams will be able to utilise the proposed footpath connections. Note that public footpaths (including paths within reserves) are expected to have a maximum gradient of 5%.	Detailed design to be addressed via the LOA application. A switch back can be incorporated to reduce grades, alternatively steps can be incorporated to reduce the length. The preference between the two options to be confirmed via the LOA.	The plans show an option for a switch back which confirm this design option is feasible. Detailed design to be confirmed at LOA stage.
88	Please clarify the grades of the individual path connections proposed within berm of Pigeon Mountain Road and assess whether these are suitable for the sole dedicated pedestrian access routes to Units 16 to 22.	The gradient of the berm has been reviewed by the project architect and confirmed to be suitable without requiring any retaining structures.	Please specify the grades proposed. It appears that these may be grades of up to 30%. Please note that Councils is of the view that if public access to Units 15 to 23 directly from Pigeon Mountain Road is not achievable, the alternative primary pedestrian access along JOAL 4 would currently prevent safe and separated access to these dwellings.	We have investigated the grades further and due to maintaining the retaining height as being similar to existing, we acknowledge there are areas where the grades are up to 30%. The applicant accepts the request to widen the footpath on Pigeon Mountain Road adjoining the site. During these works, there may be an opportunity to reshape the berm which may create a more suitable gradient for paths to be established (to be discussed with AT as part of the footpath upgrade). The approval for these works would be covered by a Corridor Access Request to AT, as part of the footpath upgrade. However the units would not rely on this occurring for pedestrian access. The following additional crossing points in Fig. 1 are proposed within the site to	Following the feedback that AT is open to the berm width being lowered, we propose lowering the berm approximately 1m which enables all paths from Lot 17-23 to be reduced to a 1:8 (12.5%) gradient, which is considered a suitable pedestrian slope. To ensure no change to retaining wall heights, the height difference (dropping) has been accommodated by internal stairs within the dwelling (along the corridor alongside the garage) and larger floor to ceiling heights within the dwellings. So there is no change to the external retaining walls (which were maintained at the existing height). We will provide more detailed long sections to demonstrate this. I note that with the same retaining wall height, and lowered berm, this also addresses the combined effect of the existing berm height + retaining that was raised. The berm will be graded to slope back into existing levels, earthworks plans are being updated to reflect this.

				improve the safety of the pedestrian access to these units. Due to the low speed environment in this area created by the bends in the JOAL, these are proposed as flush crossings with delineated paving. It is also noted that the JOAL is a one way access only, which is considered a safe environment for pedestrians to cross. These units are in close proximity to the wider pedestrian entry point to Pigeon Mountain Road, and this is considered to be a suitable option. Additionally, pedestrians are more likely to be travelling to the site from Ara Tai (where the public transport terminal and local shops) are located, and the distance is comparible – with the blue route along the internal footpaths to the site (see Fig.2) being 110m, and the red route along the public footpath being 100m. The stairs and gates to the berm of Pigeon Mountain Road will be retained, so that residents can choose cross over the berm if it is accessible for them. 	
89	Please clarify the grades of the individual path connections proposed within berm	The gradient of the berm has been reviewed by the project architect and confirmed to be	Sufficient information has been provided in response to this request. While specifying the		

<table>
<tr><td></td><td>of Compass Point Way and assess whether these are suitable for the sole dedicated pedestrian access routes to Units 23 to 41.</td><td>suitable without requiring any retaining structures.</td><td>grades would be appreciated, the existing berm (unaltered by the proposal) appears to be relatively level.</td><td></td><td></td></tr>
<tr><td>90</td><td>Please demonstrate the practicality of establishing the proposed paths within the public reserve and the path connections in the adjacent road berms and advise of any additional earthworks or retaining structures that would be necessary to complete these works. If an additional works would be required, please identify any further reasons for resource consent and provide an appropriate assessment of environmental effects.</td><td>No additional works or retaining are required, as confirmed by the project architect.</td><td>Despite the response provided, the engineering plans have been updated to show that earthworks are proposed within the berms and the public reserve. In addition, the architectural plans continue to show stairs within the public reserve, which are expected to require change to the adjacent landform.
Please provide an accurate response to this item.</td><td>The earthworks for the establishment of the paths are covered by the encroachment licence from AT for pedestrian paths.
The earthworks areas will be updated per item 3 for the resource consent.</td><td>The following earthworks areas are proposed

3 Pigeon Mountain Road
<table><tr><td>Area</td><td>14,000m2</td></tr><tr><td>Cut</td><td>4,076m3</td></tr><tr><td>Fill</td><td>6,690m3</td></tr><tr><td>Total volume</td><td>10,766m3</td></tr></table>
Ara Tai Reserve
<table><tr><td>Area</td><td>225m2</td></tr><tr><td>Cut</td><td>19m3</td></tr><tr><td>Fill</td><td>8m3</td></tr><tr><td>Total volume</td><td>27m3</td></tr></table>
Earthworks up to 500m2 are a permitted activity.
Earthworks up to 1,000m3 are a permitted activity. No additional reasons for consent are required.
LOA for the earthworks will be included with the LOA for the path.

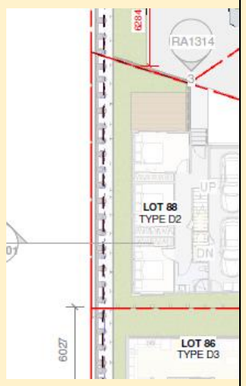
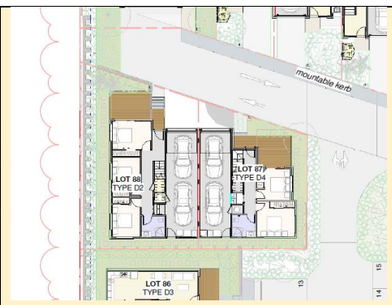
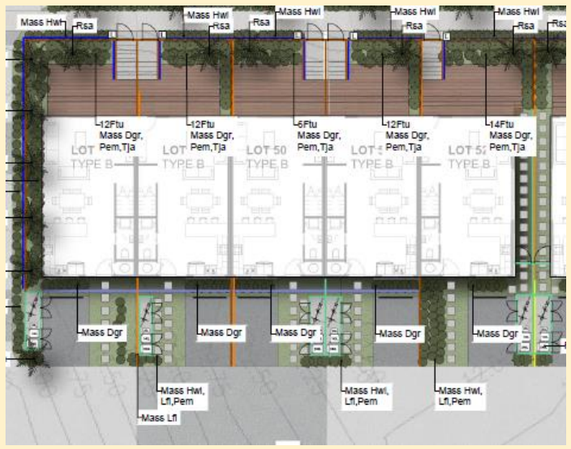
Road Reserve
<table><tr><td>Area</td><td>245m2</td></tr><tr><td>Cut</td><td>35m3</td></tr><tr><td>Fill</td><td>0m3</td></tr><tr><td>Total volume</td><td>35m3</td></tr></table>
Earthworks up to 2,500m2 are a permitted activity.
Earthworks up to 2,500m3 are a permitted activity. No additional reasons for consent are required.
LOA for the earthworks will be included with the encroachment licence approval / CAR with AT for the footpaths.</td></tr>
<tr><td>91</td><td>Please clarify whether you would accept conditions of consent that prevent construction of Units 1 to 16 and section 224(c) certification for the proposed subdivision prior to the completion of all proposed footpaths within the public reserve. If this is not accepted, please provide assessment of urban design and traffic safety effects associated with pedestrian access to Units 1 to 16 solely being from JOAL 4.</td><td>This is not accepted, a largely grade separated pedestrian network (including with raised crossings and kerbs) has been provided within the site which provides safe pedestrian movement within the site. All units will have adequate legal access.</td><td>Sufficient information has been provided in response to this request. It is recognised that changes to JOAL 4 have since been proposed in order to reflect this now being the ‘frontage’ of Units 1 to 14.</td><td></td><td></td></tr>
</table>

	It would be at the applicant's risk as to whether all necessary approvals, including Land Owner Approval, for those paths could be obtained. Approval of the resource consent would not guarantee that all other necessary approvals are granted.				
92	Please clarify whether you would accept conditions of consent that prevent construction of Units 17 to 23 and section 224(c) certification for the proposed subdivision prior to the completion of individual path connections to the footpath along Pigeon Mountain Road If this is not accepted, please provide assessment of urban design and traffic safety effects associated with pedestrian access to Units 17 to 23 solely being from JOAL 4. *It would be at the applicant's risk as to whether all necessary approvals for those path connections could be obtained. Approval of the resource consent would not guarantee that all other necessary approvals are granted.*	This is not accepted; all of the units would have appropriate legal access. Secondary access is provided by the internal pedestrian path network, noting the vast majority of the path network is fully grade separated and pedestrians would only need to make one crossing over JOAL 4. Additionally, irrespective of the forming of the individual path connections, residents still have access from Pigeon Mountain Road, albeit it would be over grass berm.			
93	Please clarify whether you would accept conditions of consent that prevent construction of Units 24 to 42 and section 224(c) certification for the proposed subdivision prior to the completion of individual path connections to the footpath along Compass Point Way If this is not accepted, please provide assessment of urban design and traffic safety effects associated with pedestrian access to Units 24 to 42 solely being from JOAL 1 or JOAL 2. *It would be at the applicant's risk as to whether all necessary approvals for those path connections could be obtained. Approval of the resource consent would not guarantee that all other necessary approvals are granted.*	As above. Irrespective of the forming of the individual path connections, residents still have legal access from Compass Point Road, albeit it would be over grass berm.			
Subdivision (*As subdivision plans reflecting the updated architectural plans have not been provided, all references to Lots in the RFI items below are to the lodged scheme plan)*					
94	The scheme plan appears to suggest that the lots solely containing external parking space lots would be created as separate landlocked sites with their own Records of	All parking lots will be amalgamated with units.	Thank you for confirming that the parking lots will be amalgamated with the dwelling lots.	To be provided.	Scheme plan being updated.

	Title, which is not acceptable to Council. Please either: a. Confirm what amalgamation conditions are proposed in order to ensure that the parking space lots are held with one of the dwelling lots; or b. Identify what parameters will be followed when determining amalgamations at section 223 stage. For example, it could be identified that certain groups of parking space lots would be attributed to certain groups of dwelling lots.		Please provide the additional information requested regarding the specific amalgamation conditions proposed. This may be provided as part of the updated subdivision scheme plan, which has not yet been sent through.		
95	As outlined in Council's Standard Conditions Manual for Subdivision, Council must ensure that appropriate consent conditions are in place to enable the continued operation and maintenance of the privately-owned common infrastructure over its lifetime. For this application, this applies to the common accessway, footpaths, rubbish bin enclosures and bicycle storage areas within the proposed commonly owned access lots. Please confirm the intention for either a common entity, resident association or incorporated society to be established that would be responsible for the ongoing operation, maintenance and repair of the access (which the owners of all lots would be required to be members of), or otherwise identify an alternative method by which this would be achieved.	A common entity will be established that will be responsible for the ongoing operation, maintenance, repair of the access and other communal spaces and infrastructure.			
96	Please confirm whether the following condition of consent can be adopted as part of the proposal: The subdivision must be undertaken in accordance with the land use resource consent referenced as LUC60419133 (BUN60419132). To ensure that this condition is complied with on a continuing basis, the following must be registered as a consent notice on the records of title to be issued for all lots: "This lot has been created in accordance with	Yes this condition can be adopted.			

	approved land use resource consent LUC60419133 (BUN60419132). All development on this lot must be in accordance with the approved land use resource consent referenced as LUC60419133 (BUN60419132), including all its conditions. In particular, there must be no increase to impervious area, increase in building coverage or decrease in landscaped area from that shown in the lot on the plans stamped and referenced by the council as resource consent number LUC60419133 (BUN60419132), in order to ensure that any adverse future development effects arising as a result of the subdivision are avoided. If land use resource consent LUC60419133 (BUN60419132) lapses prior to being given effect to, then a new land use resource consent will be required, unless the proposed use and development of the lot is otherwise able to be undertaken as a permitted activity." If this condition is not adopted in full, please identify how the creation of any future development effects as a result of the distribution of impervious area, building coverage or landscaped area will be avoided. This could be achieved through imposing restrictions on increased in impervious area and building coverage or reductions in landscape area for specific lots, following an assessment				

	of each of these coverages for each of the proposed allotments.				
97	The AEE identifies that “two new roads and accessways will either be vested with Council or managed by a Residents Association allowing for access and improving pedestrian accessibility”. However, the scheme plan does not show any lots to be vested in Council. Please confirm that all roads and accessways will be held in Lot 200 and managed by a residents association (or similar, as per the response to the item above), with none vested in Council.	No roads are proposed to be vested.			
98	The inclusion of landscaped areas, cycle storage areas, rubbish bin storage areas and pedestrian paths – all of which are not intended to be trafficable by vehicles – within a commonly-owned access lot containing a vehicle accessway is in conflict with section 298 of the Property Law Act 2007, which gives all owners of a share in a access lot that includes a driveway the right to pass and repass over all of the COAL, including the right to have the COAL kept free of obstructions at all times. Council’s preference is for either: a. Additional commonly own lots to be created for non-trafficable areas, separate to a COAL for the accessway; or b. Lot 200 to be owned by an incorporated society that the owners of all other lots are required to be members of (this would result in the requirements of section 298 of the Property Law Act 2007 not being applicable). Please advise whether you will make any changes to the subdivision scheme plans based on this advice.	The subdivision scheme plan is being updated.			Scheme plan being updated.
Changes to the Proposal					
99	Should any changes be made to the proposal in conjunction with the response to this section 92 request, please provide all information necessary to satisfy the requirements of Schedule 4 of the RMA for those changes. This includes any		As a result of the various changes made since preparation of the original section 92 request: a. Please provide an assessment of the outdoor living spaces for Units 87 and 88 against the purpose of Standard H4.6.13. In particular, please clarify how	• The outdoor living spaces of Units 87 and 88 have been enlarged to comply. Preliminary excerpt included below.	The internal layout of Lot 87 and 88 have been amended so that the outdoor living area is accessible from a communal space i.e. not only through a bedroom.

	additional assessment (to the satisfaction of Council) related to any new reasons for consent or any new or increased infringement of or inconsistency with any relevant AUP standards.		the provided depth and area of the provided balconies are of a functional size and dimension for the likely number of occupants. b. The removal of the paved second parking space for Units 41 to 58 results in a number of outcomes that are considered to not be appropriate. Please consider further changes to avoid the following outcomes, or otherwise provide assessment to support the arrangements: • The bike and bin storage areas for Units 42, 43, 45 to 48, 52, 53 and 56 to 58 are now only accessible across grass. During meetings regarding design changes in response to the section 92 requests, it was understood that these would be located to be accessible from paved areas. This arrangement is also inconsistent with the Auckland Design Manual Design Element Guide R7 – Design for Waste. • The entrance doors for Units 41 to 58 are directly onto the vehicle parking space. During meetings regarding design changes in response to the section 92 requests, it was understood that the single parking spaces would be located to not be in front of the doors. • The grass provided in place of a second vehicle parking space is expected to still be used as an unformed parking space (which would not comply with the E27 standards). In order to avoid this unintended outcome, this area should be subject to planting instead. Please note that further requests related to other changes may arise following receipt of feedback from the remaining Council specialists.	• Note that these units also have a 8m^2 deck at the first floor level.  • The areas outside Units 41 and 58 are being reconfigured to include planting, shift the space so that it is not located in front of the door, and bike and bin storage areas to be accessible from paved areas.	 The access, parking space, bin and bike storage areas for units 41-58 have been revised. Excerpt provided below. 
			A number of the dwellings contain combined kitchen-dining-living space that appear to be well below the 44.2 m² recommended by the Auckland Design Manual Design Element Guide R6 for a three-bedroom dwelling. These room sizes – particularly for Unit types A1, A2, C1, C2 and E1 – may compromise providing for the day-to-day needs of residents.	The ADM is a non-statutory document. I note that the furniture layout shown is consistent with the expected occupancy of the units.	
			The Housing Improvement Regulations 1947 specify that the minimum permissible size for a bedroom is 6 m² and prevents two or more adults sleeping in bedrooms less than 10 m². Some of the	All bedrooms comply with Building Code regulations.	All bedrooms comply with Building Code regulations.

			proposed bedrooms – for example, Unit type A2 – includes bedrooms less than 10 m² with double bedrooms and some bedrooms are close to 6 m².	However any double bedrooms less than 10m² will be shown with a single bed. Can you please clarify why this is being cited as it seems to be a very outdated piece of legislation, provision 6 notes that “Every living room shall be fitted with a fireplace and chimney or other approved form of heating.”.	Any double bedrooms less than 10m² are shown with a single bed.
			Council continues to not support the infringement of Standard E27.6.2(8) as per the non-s92 comment included in the letter dated 24 October 2023. The issues raised in relation to BUN60419132 item 56 are indicative that a dedicated on-site loading space would be beneficial for the proposal.	An updated response to item 56 has been provided. I note that the provision of a loading space at a location on the site would not address item 56 in any event. However, given the common areas will be managed by a RA, and the Waste Collection will occur infrequently at specified times, it is considered that the turning bay at the end of JOAL 2 could also be utilised for temporary loading. The management of the use of this area will be undertaken by the RA.	We do not consider there is any benefit to the development by incorporating a formal loading bay, practically, it is likely to only be used by immediately adjoining properties. Wherever a loading bay is located on the site, it will not be a practical location to serve other units. As noted previously, given the common areas will be managed by a RA, and the Waste Collection will occur infrequently at specified times, it is considered that the turning bay at the end of JOAL 2 could also be utilised for temporary loading. The management of the use of this area will be undertaken by the RA. The width of the majority of lots range from 5.5m to 6.6m, which means a truck would be accommodated within 2 frontages easily. 1 of which would be the dwelling it is loading to. As the JOAL is one way, but 5.9m in width, this can accommodate a truck pulled over, while still allowing vehicles to pass. Co-ordinating with 1 additional property, in the event that property needs to enter or exit the site, is considered to be a reasonable outcome which can be easily managed. The parking spaces off JOAL 3 serve the smaller 2-bedroom units, these are less likely to require larger trucks, and any loading can likely be accommodated by a van – which fits in a normal parking space. I note that a van is able to transport a king size bed which is likely the largest piece of furniture commonly moved. Fridge/freezers are smaller than king size beds.
			Any pedestrian connection within the road reserve requires an approved encroachment license from AT.	Noted.	

Aaron Grey

From: Yujie Gao <yujie@campbellbrown.co.nz>
Sent: Friday, 1 March 2024 2:39 pm
To: Aaron Grey
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road - Section 92 update

Hi Aaron

Just been working through the other matters and wanted to get our response on item 88 to you ahead of the meeting next week.
Acknowledge that this response is coming to you later than agreed so you might not have time to get to it before the meeting, but sending through in case you are able to look it over.

88	Please clarify the grades of the individual path connections proposed within berm of Pigeon Mountain Road and assess whether these are suitable for the sole dedicated pedestrian access routes to Units 16 to 22.	The gradient of the berm has been reviewed by the architect and confirmed to be suitable without req retaining structures.

We have investigated the grades further and due to maintaining the retaining height as being similar to existing, we acknowledge there are areas where the grades are up to 30%.

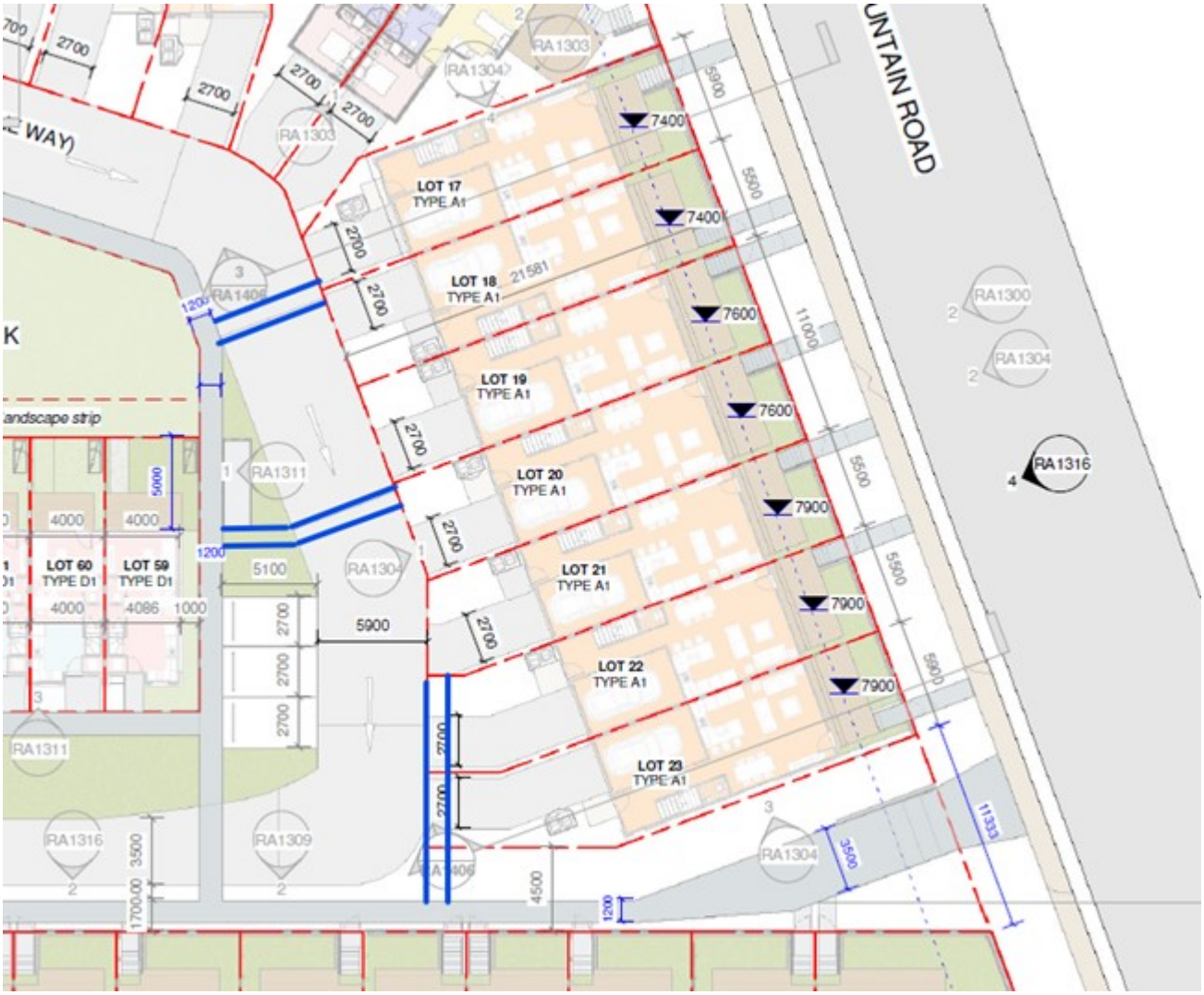
The applicant accepts the request to widen the footpath on Pigeon Mountain Road adjoining the site. During these works, there may be an opportunity to reshape the berm which may create a more suitable gradient for paths to be established (to be discussed with AT as part of the footpath upgrade). The approval for these works would be covered by a Corridor Access Request to AT, as part of the footpath upgrade.

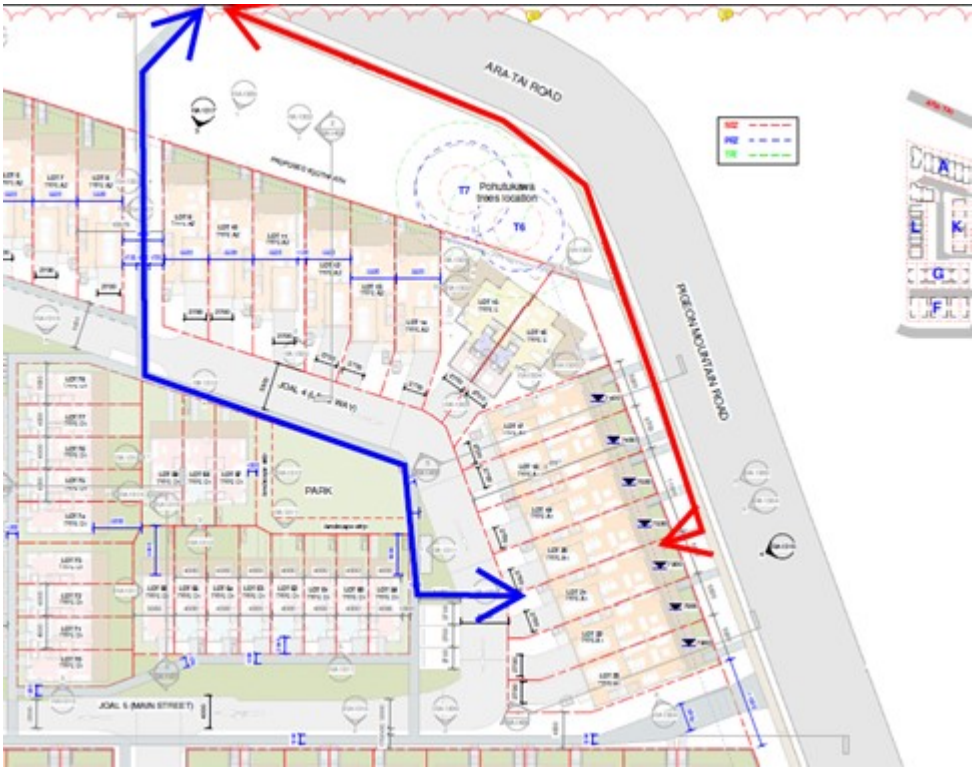
However the units would not rely on this occurring for pedestrian access.

The following additional crossing points in Fig. 1 are proposed within the site to improve the safety of the pedestrian access to these units. Due to the low speed environment in this area created by the bends in the JOAL, these are proposed as flush crossings with delineated paving. It is also noted that the JOAL is a one way access only, which is considered a safe environment for pedestrians to cross.

These units are in close proximity to the wider pedestrian entry point to Pigeon Mountain Road, and this is considered to be a suitable option.
Additionally, pedestrians are more likely to be travelling to the site from Ara Tai (where the public transport terminal and local shops) are located, and the distance is comparible – with the blue route along the internal footpaths to the site (see Fig.2) being 110m, and the red route along the public footpath being 100m.

The stairs and gates to the berm of Pigeon Mountain Road will be retained, so that residents can choose cross over the berm if it is accessible for them.





Have a good weekend, talk next week.

Cheers

Yujie Gao | Senior Planner | B.UrbPlan (hons) | Int.NZPI

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Cell 021 0265 9036 | Ph 09 378 4936 | DDI 09 394 1697
yujie@campbellbrown.co.nz | www.campbellbrown.co.nz

From: Yujie Gao
Sent: Thursday, 29 February 2024 2:40 pm
To: Aaron Grey <Aaron@civilplan.co.nz>
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road - Section 92 update

Hi Aaron

Please find attached a written response to a number of the outstanding matters outlining the proposed changes. We are working on updating the architecture, civil and landscape plans and co ordinating to ensure they are consistent however I have outlined the changes or included excerpts where possible.

For ease of reference-

- Items in yellow are ones with responses.
- White is still being updated
- Grey is satisfied per your letter.

Thanks
Yujie

From: Aaron Grey <Aaron@civilplan.co.nz>
Sent: Thursday, 29 February 2024 9:15 am

Aaron Grey

From: Yujie Gao <yujie@campbellbrown.co.nz>
Sent: Tuesday, 20 February 2024 12:29 pm
To: Aaron Grey
Subject: RE: WAT60423590 - 3 Pigeon Mountain Road, Half Moon Bay - Section 92 request
Attachments: Pages from 220803 VTP.pdf; 810.030523-R01-v1.0_ 3 Pigeon Mountain Road.pdf; 810.030523-R02-v0.2 Pigeon Mountain Road.pdf; 810.030523-L01-V1.0 3 Pigeon Mountain Road.pdf

Hi Aaron

Hope you had a good meeting.

Further to our discussion I would like to advise that we are making the following amendments. We will provide updated plans later this week but just for your reference:

- Lot 15 and 16 building will be revised to have larger/complying outdoor living space.
- Lot 1 is proposed to be deleted, Lot 2 will instead become a standalone dwelling – compliant with standard HIRB setback.
    - (Project engineer suggests we rename one of the JOALs Lot 1 to avoid the renumbering of all of the units just FYI)
- Confirming the bin locations will be shifted for the central 'single garage' units
- Updated tracking attached for the northern units adjacent to the mountable kerb
- Have discussed Lot 34 tracking with the TE and will add a concave mirror for visibility per their recommendation
- The outdoor living spaces for Lot 87 and 88 will be increased
- I will send you a separate note regarding the rubbish collection of JOAL 1 later this afternoon
- We will provide updated information regarding the retaining wall fronting PMR, but essentially it is more or less the same height as the existing white retaining wall
- Inconsistencies regarding gradients of ODL, coverages, landscape materials etc are all being updated

- Regarding noise effects, due to the layout changes adjoining the western RT wall, we have been able to revert to the original RT wall design.
  I confirm the construction methodology that I updated in my email 12/02 is the correct/most up to date one. This is also the design and methodology reflected in the WAT response and updated geotech report.
  For completeness, I have had the project acoustic engineer confirm the attached documents and assessments are the correct and applicable versions.

I was wondering whether you have heard back from any of the other specialists yet?

Also, could we please have a meeting to run through the changes described above. If you are available, Friday morning would be good.

Many thanks
Yujie

Aaron Grey

From: Yujie Gao <yujie@campbellbrown.co.nz>
Sent: Monday, 12 February 2024 3:12 pm
To: Aaron Grey
Subject: RE: WAT60423590 - 3 Pigeon Mountain Road, Half Moon Bay - Section 92 request
Attachments: J00538AB Design Report_r2_Opt.pdf; 200 SITE_240208.pdf; 206a SECTION_240208.pdf

Hi Aaron

Please find attached the updated design report for the western boundary in accordance with the latest architecture and civil set, and also responding to the s92 WAT queries.

Please note there are 2 updated civil sheets which just updates the cross section 3 location to the deepest cut location for the geotech report. There are no design changes. Let me know if you would like me to update the onedrive link with these 2 sheets (wasn't sure if that would be confusing).

This also addresses item 19 of the spreadsheet, and the response for item 18 (construction methodology) as follows, I will add this to the table.

Cheers
Yujie

Plant and Equipment:
10-14 t excavators, piling rig, backfill compactors, surveying instruments.

Establishment:
The drilling rig and other equipment would be unloaded into the work site following the site traffic management plan. Set up temporary fencing and barriers to ensure site security and public safety.

Piling Operation:

- Perform a detail survey of the existing timber retaining wall, recording the pole size, spacing, and locations which confirms the exact setout of the new wall.
- Conduct a condition survey of neighbouring properties to assess potential impacts during and after construction, including ground settlement.
- Excavate the 5-meter-wide drilling platform with a hard stand as per engineering specifications.
- Install the new retaining wall piles, following a sequential approach from the south end to the northern end. Ensure proper quality control during piling operations, monitoring pile depths, alignment, and integrity.
- During the piling operation, immediately address the backfilling of drainage material between the existing and new retaining wall to ensure the structural integrity and drainage efficiency of the entire system.
- Simultaneously with the piling operation, coordinate the backfilling and compaction of hardfill between the existing and new retaining walls. Employ compaction equipment and methods that are compliant with the detail design specs to achieve the desired impact testing values. Regular testing by qualified engineers is necessary to verify compaction levels.
- After completing installation of the wall, excavate the area in front of the new retaining wall to the required finished level, which should be 0.55 meters below the Finished Ground Level (FGL) as specified.

Continuously monitor the excavation process to ensure that the desired depth is achieved and take appropriate measures to prevent over-excavation.

Monitoring During and After Construction:
Follow the monitoring regime and contingency plan per the geotechnical design report. The monitoring results will be regularly reported to the designer and checked for deformation status during the whole construction process.

From: Aaron Grey <Aaron@civilplan.co.nz>
Sent: Thursday, 14 December 2023 3:39 pm
To: Yujie Gao <yujie@campbellbrown.co.nz>
Subject: RE: WAT60423590 - 3 Pigeon Mountain Road, Half Moon Bay - Section 92 request

Hi Yujie,

The CAWA specialist is unsatisfied with the response to addition Q7. His comments are:

> The response to Q7 is not satisfactory. Please note that differential settlement alert and alarm levels between retaining wall deflection markers are not required. However the alert and alarm trigger levels of 15mm and 21mm for lateral deflection of DM3 , DM8 and DM09 should be revisited if the retaining wall design is revised as described as above.

He has also advised that the response to Q2 indicates adverse effects on the owners of 82 Compass Point Way. I am likely to adopt his advice and conclude that they are an affected person. Please advise if you intend to obtain the written approval of this person or if you intend to make any changes to the design of the retaining wall in response to this position.

Regards

Aaron Grey
Associate
BPlan(Hons), MNZPI
027 461 2319
09 222 2445

CivilPlan Consultants Limited
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Job No: 220571/01
24/10/2023

SECTION 92 REQUEST TRACKING TABLE

3 PIGEON MOUTNAIN ROAD

	Item	Suggested Action/Response
	WW	
1.	The applicant/developer to carry out and present report on wastewater assessment to the nearest existing 300mm diameter sewer pipe as per Watercare CoP.	It is not possible to carry out assessment to the nearest existing 300mmØ sewer pipe as the existing WW drainage discharges into a Wastewater Pump Station (GIS ID 961653.)
	SW	
	SMP	
1.	There is no SMP checklist provided. Please ask the applicant to complete the checklist in the attachment.	Please refer to SMP-Rev 1. Checklist is attached as appendix B
	NDC requirement: Schedule 4	
2.	So basically, the development has not provided any treatment. Not acceptable.	Please refer to SMP-Rev 1.
	Stream Hydrology	
3.	Retention and detention need to be addressed in the SMP, even if it is not required as the site is discharging directly to the coast via pipe network.	Please refer to SMP-Rev 1. Detention systems are now proposed.
	Flooding	
4.	Zone: Residential - Residential - Mixed Housing Suburban Zone. Maximum imperviousness allowed 60%. Site is increasing imperviousness from ***** to 67.59%. Please state what is the existing imperviousness?	Please refer to SMP-Rev 1. The existing impervious areas measures to 5632.4m² (40.02%). The post imperviousness is approximately 66.47%. Detention systems are now proposed to limit the site runoff to no greater than existing site runoff for the 10% AEP rainfall events.
	Flooding 10% AEP: Mitigation needed for large brown field.	

5.	Flooding 10% AEP: For a large brownfield the capacity assessment of the full network downstream after the connection up to the outlet is needed as per NDC. Only the pipe to first manhole after the connection is presented. Also, the contributing catchment area is not correctly represented. The runoff coefficient is not correct. Not sure how the existing connection pipe slopes are calculated but for 300mm its not matching with as-builts. Not acceptable.	The 300mmØ drain (2000633032) grade was calculated from as-built plan obtained from property files. As per as-built plan, the subject site is currently connected to the public network via a stormwater connection off SWMH 2000234285. The two immediate pipes to first manhole already shows the pipe network is at capacity, hence, there isn't much point assessing the full network capacity assessment. Detention systems are now proposed to limit the site runoff to no greater than existing site runoff for the 10% AEP rainfall events.
6.	The proposal disregarded any attenuation stating location of the development 250m away from the coast. This principle is only applies for a very large catchment. Not applicable for subject catchment. Attenuation is needed. Not acceptable.	Please refer to SMP-Rev 1. Detention systems are now proposed to limit the site runoff to no greater than existing site runoff for the 10% AEP rainfall events
7.	The proposal is also exceeding the maximum zone impervious limit to 7.6%. Attenuation is needed. Not acceptable.	Please refer to SMP-Rev 1. Detention systems are now proposed to limit the site runoff to no greater than existing site runoff for the 10% AEP rainfall events
	Flooding 1% AEP: Mitigation needed for large brown field.	
8.	Cannot assess the post development overland flow path properly. Cannot understand properly the impact of the overflow due to development at downstream. If the change is adverse, then mitigation is needed. Please clearly demonstrate the impact with care, proper references, and adequate information. A proper map showing the post development overland flow path alignment and changes of flow to existing condition is needed.	Please refer to OLFP Assessment-Rev 1. Post Development Depth-Velocity products for overland flows within and discharging from the subject site are all less than 0.4 m²/s. As per Pedestrian and Motorist Flood Safety Study (GNS Science Report 2010/51, Nov 2010), the flow paths are considered safe to pedestrian and motorist and safe to discharge across the pedestrian footpaths along Pigeon Mountain Road and Ara-tai. The increase in 1% AEP runoff from the site is **95L/s** (431 - 336). This equates to around **2.2% increase only (**0.095/4.375) for the 1% AEP overland flow across Pigeon Mountain Road and into the Halfmoon Bay Marina

		business complex car park. This small increase in flow across the Marina Carpark has negligible increase in the depth of overland flow.
9.	Please provide assessment of flow paths within the subdivision.	Please refer to OLFP Assessment-Rev 1. The post developed areas have been split into 12 smaller catchments to assess the overland flow paths within the subdivision. Post Development overland flow depths are all less than 100mm and the Depth-Velocity products are all less than 0.4 m^2/s. As per Pedestrian and Motorist Flood Safety Study (GNS Science Report 2010/51, Nov 2010), the flow paths are considered safe to pedestrian and motorist and safe to discharge across the pedestrian footpaths along Pigeon Mountain Road and Ara-tai.
10.	Please provide assessment flow paths exiting the site for both pre and post development scenarios. Assessment will need to cover the entire site.	Please refer to OLFP Assessment-Rev 1.
11.	Please show post development overland flow path in a map. Cannot understand the statement without a proper map. Please also show the delineated catchment for each of overflows in map.	Please refer to Catchment plan in the appendix of OLFP Assessment-Rev 1. The post developed areas have been split into 12 smaller catchments to assess the overland flow paths within the subdivision.
12.	Please provide reference locations for all the cross-section provided in Overland Flow path calculation, Appendix-A in infrastructure report. Cannot understand where these cross-sections are taken. Please use Map. Also please include long sections.	Please refer to OLFP Assessment-Rev 1. The post developed areas have been split into 12 smaller catchments to assess the overland flow paths within the subdivision. Please refer to OLFP Plans.
13.	Demonstrate the changes from existing condition. Need to understand the change to existing condition otherwise cannot complete the assessment.	Please refer to OLFP Assessment-Rev 1. Post Development Depth-Velocity products for overland flows within and discharging from the subject site are all less than 0.4 m^2/s. As per Pedestrian and Motorist Flood Safety Study (GNS Science Report 2010/51, Nov 2010), the flow paths are considered

		safe to pedestrian and motorist and safe to discharge across the pedestrian footpaths along Pigeon Mountain Road and Ara-tai. The increase in 1% AEP runoff from the site is **95L/s** (431 - 336). This equates to around **2.2% increase only (**0.095/4.375) for the 1% AEP overland flow across Pigeon Mountain Road and into the Halfmoon Bay Marina business complex car park. This small increase in flow across the Marina Carpark has negligible increase in the depth of overland flow.
14.	I understand the affected overflows will originate from site but need to clearly demonstrate the downstream impacts due to the increase in impervious area. Will the flood level downstream increase from existing flood level. What is the impact on downstream property floor levels?	Please refer to OLFP Assessment-Rev 1. Post Development Depth-Velocity products for overland flows within and discharging from the subject site are all less than 0.4 m^2/s. As per Pedestrian and Motorist Flood Safety Study (GNS Science Report 2010/51, Nov 2010), the flow paths are considered safe to pedestrian and motorist and safe to discharge across the pedestrian footpaths along Pigeon Mountain Road and Ara-tai. The increase in 1% AEP runoff from the site is **95L/s** (431 - 336). This equates to around **2.2% increase only (**0.095/4.375) for the 1% AEP overland flow across Pigeon Mountain Road and into the Halfmoon Bay Marina business complex car park. This small increase in flow across the Marina Carpark has negligible increase in the depth of overland flow.
15.	Any modification to overland flow will trigger assessment against E36.9. Please submit E36.9 assessment. Please identify and quantify the risk and hazard (v*d) for the common accessways where the overflows will pass through. Guide line attached can be used to complete the assessment.	Please refer to OLFP Assessment-Rev 1. Post Development Depth-Velocity products for overland flows within and discharging from the subject site are all less than 0.4 m^2/s. As per Pedestrian and Motorist Flood Safety Study (GNS Science Report 2010/51, Nov 2010), the flow paths are considered safe to pedestrian and motorist and safe to discharge across the pedestrian footpaths along Pigeon Mountain Road and Ara-tai. The increase in 1% AEP runoff from the site is **95L/s** (431 - 336). This equates to around **2.2% increase only (**0.095/4.375) for the 1% AEP overland flow across Pigeon Mountain

		Road and into the Halfmoon Bay Marina business complex car park. This small increase in flow across the Marina Carpark has negligible increase in the depth of overland flow.
16.	Any new assets to be vested to Council need to be clear in the SMP.	Please refer to SMP-Rev 1. The new assets proposed to be vested with Council are: • SW1 up to SW Filter 1 – 33.7m (11.6+22.1) of 300mmØ uPVC SN16 and 1 x SWMH • SW4 up to SW Filters 2– 28.8m (3.8+25) of 300mmØ uPVC SN16 and 1 x SWMH • SW5 and SW 6 up to SW Filter 3 – 76.6m (68.9+7.7) of 300mmØ uPVC SN16 and 1 x SWMH .
17.	A manhole or chamber is needed instead of end cap according to SW CoP Table 7 and 9.	This can be addressed at EPA stage.
18.	Drainage plan will be checked in details during EPA stage.	Noted with thanks

Yours faithfully
AIREY CONSULTANTS LTD

Samson Weng
Civil Engineer
BE Hons (Civil)

Reviewed and approved by
AIREY CONSULTANTS LTD

Royden Tsui
Associate Director
CPEng(NZ), CMEngNZ, IntPE(NZ), MEPM (hons), BE (Civil)

Job No: 220571/01
24 October 2023

Auckland Council
Private Bag 92 300
Victoria Street West
AUCKLAND 1141

Dear Sir/Madam,

Resource Consent number:	BUN60419132
Address:	3 Pigeon Mountain Road
Description:	New Terraced Houses

We respond to your Earthworks s92 items dated 21 July 2023 requesting further information with respect to the above development. We respond to the items relevant to our inputs as below:

1. **The total area of earthworks requires consent under Chapter E11.4.1 of the AUP(OP). Please apply for this consent and provide an addendum to the AEE to provide an assessment of effects for the relevant activity, including the relevant objectives and policies.**
   Please refer to AEE by planners.
2. **The proposed total area of earthworks is 1.37ha. However, the drawings suggest that the earthworks will occur around the entire site (being 1.4073ha) and extend outside the site boundaries (e.g. for the construction of pathways and individual pedestrian accessways; installation of infrastructure). Please update the total volume and area of earthworks to include all proposed works.**
   Please refer to amended Site Plan Earthworks, Sheet 200 of Engineering Plan Set.
3. **The application provides various details of the type of buildings that will be constructed and page 41 of the AEE notes that the proposed building platforms will be formed. However, the Site Plan Earthworks, sheet number 200, notes 'volumes are from existing ground level to 300 below FFL'. To clarify, is the earthworks application intended to only address bulk earthworks up to the respread of topsoil and construction of the terraced platforms, retaining walls, road and infrastructure? (With the formation of the specific building footprints to be addressed via future earthworks applications (where necessary)?)**
   The earthworks application intended is for the entire project. The amended earthworks now models to the Finished Floor Levels and the Finished Ground Levels. Please note this cut and fill volumes now include the concrete thickness for common accessways and the new dwelling foundations.
4. **Please provide an estimate of the volumes of topsoil to be stripped, and volumes to be respread and removed from the site.**
   Please refer to amended Site Plan Earthworks, Sheet 200 of Engineering Plan Set for the amended estimate of volumes of topsoil to be stripped and volumes to be respread and removed. It is estimated 1/3 of topsoil is respread.

5. **Please provide a proposed final contour plan to better understand the proposed development levels, landform and slope direction following construction.**
   Please refer to final contour plan.
6. **Based on the total area of earthworks, the slope, the nature of the works (various levels, JOAL and retaining wall construction), and the potential that much of the site could be directed one primary treatment device (e.g. a Sediment Retention Pond (SRP)), the Erosion and Sediment Control Plan (ESCP) does not currently appear to be designed in accordance with GD05 to maximise the treatment of sediment-laden runoff anticipated from the site. Please review the ESCP to ensure the most efficient treatment device(s) are used for management of sediment laden water during earthworks. Where a SRP is not proposed, please provide further justification for why a SRP is not suitable, and further demonstrate how treatment efficiencies will be increased if using DEBs as the primary control.**
   Bulk earthworks is estimated to have a construction period of 15 weeks. It is proposed to split the earthworks into smaller stages and limit the disturbed areas to maximum 6,400 m² at any time. The disturbed areas will be progressively stabilized with topsoil, grass and mulch. Consequently, a Sediment Retention Pond is considered to be the most efficient treatment device in terms of construction time and effectiveness.
7. **Please provide an Earthworks Management Plan (EMP) to support the ESCP, and that includes**
   - **the sequence and methodology of works;**
   - **proposed erosion and sediment control design details and any staging requirements for each phase of works (e.g. for bulk earthworks, retaining wall construction, installation of underground infrastructure and works within the adjacent reserve / road areas);**
   - **further details on progressive stabilisation;**
   - **monitoring and maintenance of erosion and sediment controls; and**
   - **USLE.**

   Please refer to Earthworks Management Plan enclosed.
8. **Please update the ESCP to clarify the contributing catchments directed to the proposed sediment control devices. If the ESCP relies on staging of catchments for each device, please clarify each individual catchment to demonstrate consistency with GD05.**
   Please find contributing catchment areas clarified on the amended Erosion and Sediment Management Control Plan.
9. **Please update the ESCP to include the shape and layout of the impoundment devices to demonstrate compliance with GD05, including the length to width ratio, single point entry (and/or forebay as applicable), decant locations, outlet pipes connecting to discharge point, and spillways. Please demonstrate that spillways will be directed to locations that will avoid erosion of batters, and nuisance to traffic / roading / pedestrians as practicable as possible.**
   Please find updated ESCP enclosed.
10. **Please provide a plan and long-section of the proposed impoundment devices to identify the RL levels of the design features, including the RL of the inlets, forebays (where applicable), device base, outlets (decants and spillways) and any connections to existing infrastructure.**
    Please find updated ESCP enclosed.

11. **Please clarify where the sediment control impoundment devices will discharge to (e.g. existing reticulation or via overland flow), and how the connections to any existing reticulation will be installed.**
    Please find updated ESCP enclosed.
12. **Please clarify whether any earthworks will be located within the protected root zone of trees that are to be retained.**
    a. **Please show the protected root zones on the ESCP and earthworks drawings, and include a key / annotation to identify this feature.**
    b. **In the EMP, please clarify what works are proposed within the protected root zone of those trees and provide a methodology of works to demonstrate works will not adversely affect those trees.**

    Please refer to arborists comments.
13. **The northwest corner appears to fall away from the proposed sediment treatment device catchment. Please clarify what sediment control measures will be used to manage runoff from this area.**
    The northwest corner only has a catchment of approximately 650 m². Silt fence is proposed all the way along the northern boundary to manage the sediment laden water runoff. For the remaining areas, dirty water diversion channel/bund lined with geocloth is proposed to convey the water towards the proposed sediment retention pond.
14. **In the Earthworks Memo and on the ESCP:**
    a. **Please clarify the timing of construction of the site boundary retaining walls and associated batters in relation to the bulk earthworks, particularly along the north and eastern boundaries.**
    b. **Please clarify whether these areas can be effectively managed via the proposed impounded devices, or whether staging and separate devices will be required to undertake the retaining wall construction works. Please update the ESCP where applicable.**

    Please refer to Earthworks Management Plan enclosed.
15. **Please include details within the Earthworks Memo and on the ESCP for the management of runoff from construction of the footpath, individual pedestrian accessways and underground infrastructure that are located outside of the catchments directed to the primary sediment treatment devices**.
    All works outside the site boundary (primary sediment treatment device catchment) will be undertaken in short sections. Any excavation will be backfilled by the end of the day for safety and stablised to minimise sediment runoff.

I trust this meets with your approval. Please do not hesitate to contact us should you have any queries or require further information.

Yours faithfully
AIREY CONSULTANTS LTD

Samson Weng
Civil Engineer
BE Hons (Civil)

Reviewed and approved by
AIREY CONSULTANTS LTD

Royden Tsui
Associate Director
CPEng(NZ), CMEngNZ, IntPE(NZ), MEPM (hons), BE (Civil)

Aaron Grey

From: Yujie Gao <yujie@campbellbrown.co.nz>
Sent: Monday, 2 October 2023 2:40 pm
To: Aaron Grey
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road, Half Moon Bay
Attachments: H4.6.13(3).png; 2023.09.27_22924 - 3 Pigeon Mountain_R21.pdf

Hi Aaron

Hope you had a good weekend.

In response to the below urban design comments (of both emails):

- The separation from Block J and Block I has been increased, please see attached revised section demonstrating compliance.
- The path to PMR will be widened as requested, an updated landscape plan will be sent through shortly. Note: the attached site plan does not yet reflect this wider path.
- I can confirm all footpaths will be grade separated, including at crossings.
- A grade separated pedestrian path in front of Units 1-8 will be provided as requested. These will be shown on the updated civil plans, currently in progress.
- Bedroom windows facing Block I have been reduced.
- Additional variation has been introduced to the side facades.

We will come back to you separately on the response to Block L, however I trust that the above responds to all the other UD comments.

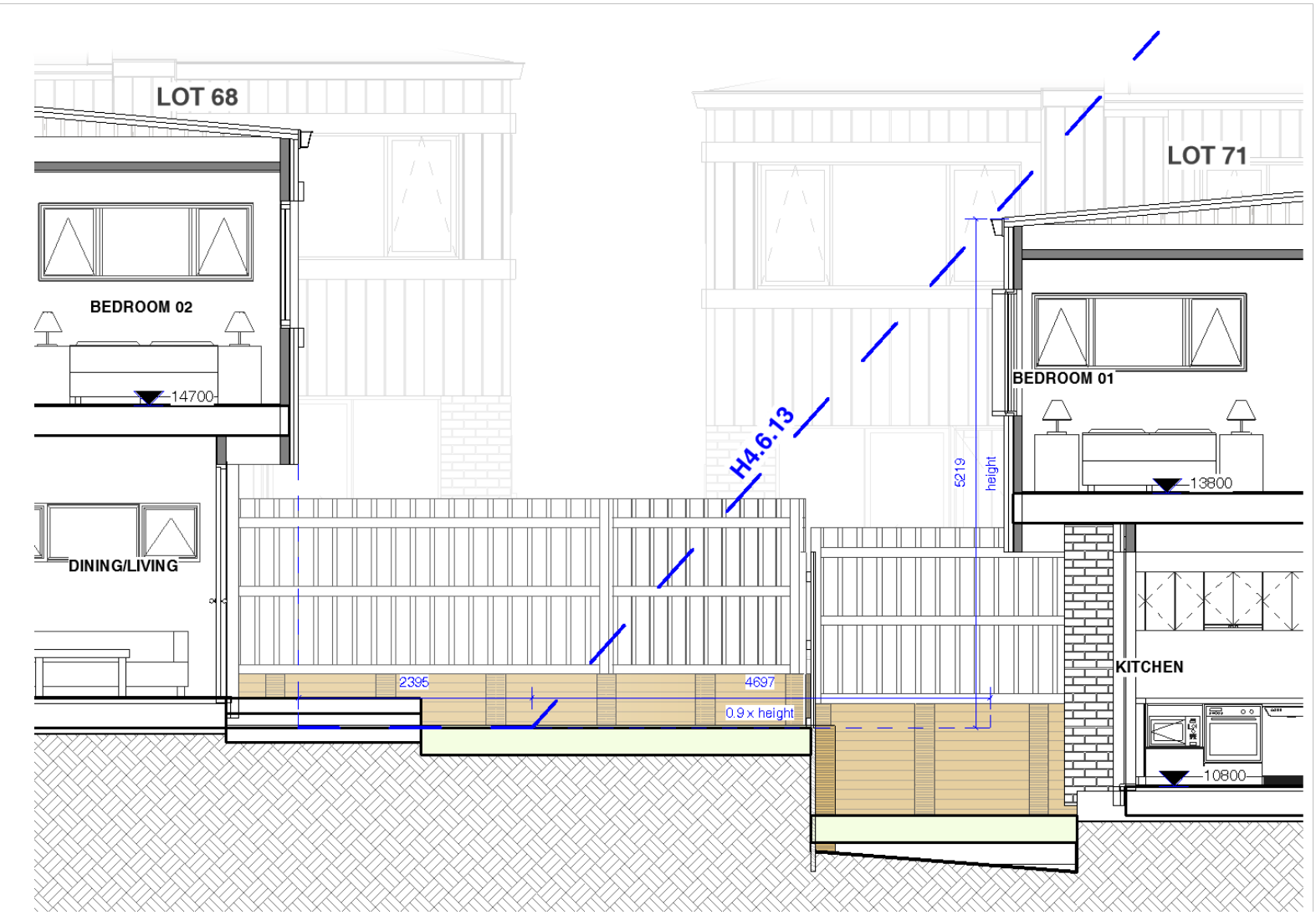
Cheers
Yujie

From: Aaron Grey <Aaron@civilplan.co.nz>
Sent: Thursday, 21 September 2023 1:37 pm
To: Yujie Gao <yujie@campbellbrown.co.nz>
Subject: RE: BUN60419132 - 3 Pigeon Mountain Road, Half Moon Bay

Thanks, Yujie.

I also had Nick follow up with me this morning to close off our conversations with each other and he has added the following comments to the list sent yesterday:

- The shading from Block J to Block I is considered to be a poor urban design outcome and an increase in separation is strongly recommended between these blocks.
- I generally support the entry shown to Pigeon Mountain Road, however for the purpose of increasing visibility through this aperture, it is strongly recommended to increase the pavement surface as below:


LOT 68
LOT 71
BEDROOM 02
14700
BEDROOM 01
13800
H4.6.13
5219
height
DINING/LIVING
KITCHEN
2395
4697
0.9 x height
10800

TOTAL GROUND ENGINEERING

Ref: J00538AC: BC RFI Response rev0

20 September 2023

Civil Plan Consultants Limited
Resource Consents

by email: Aaron@civilplan.co.nz

Attention: Aaron Grey

BUN60419132 3 Pigeon Mountain Road, Half Moon Bay
s92 RFI Groundwater Monitoring and Assessment

Hi Aaron,

We refer to your email to Campell Brown dated 11 August requesting further information to determine a water permit.

Please see our responses to your recommendations below and the attached revised report with the amendments noted below:

1. *Two additional hand auger boreholes are required with standpipe piezometers installed in the vicinity of proposed deepest excavations adjacent to the western boundary of the site. Response zones are to be set over the excavation interval and groundwater level measurements are to be undertaken as follows: 48 hours after augering, 7 days and 14 days after augering*

Response:

We have installed two additional hand augers (ref: HA09 & HA10) with standpipe piezometers in the proposed deepest excavation area along the wall as shown in the attached plan. The piezometers were screened from 2.0 m to 5.0 m below ground level. We have carried out the groundwater monitoring as requested and summarised the measurements in below Table 1:

Table 1. Groundwater Monitoring Results.

Groundwater Monitoring Results (bgl, m)											
Piezo Location	Excavation depth (m)	16/06/2022 (installation)	22/02/2023	22/03/2023	5/04/2023	23/08/2023 (installation)	25/08/2023	1/09/2023	11/09/2023	18/09/2023	Average from Aug to Sept
HA01	< 0.5 m	4.90	1.40	2.40	3.00	/	1.54	1.72	1.52	1.50	1.57
HA07	< 0.5 m	3.70	2.10	2.70	2.00	/	Removed				
HA09	2.2 m	/	/	/	/	3.00	1.42	1.58	1.37	1.44	1.35
HA10	2.3 m	/	/	/	/	4.00	1.35	1.49	1.32	1.27	1.36

2. *Once the groundwater levels measurements have been completed the Applicant should provide Council with an assessment of the proposed activity against AUP (OP) Standards E7.6.1.6 (1 to 3) and E7.6.1.10 (1 to 6), based on the most up to date Architects & Engineers plans.*

Response:

Based on the monitoring results, it is reasonable to assume the groundwater level fluctuates around 1.4 m bgl across the site. The proposed excavation plan indicates that a permanent groundwater drawdown ranging from 0.1 – 0.8 m along the western boundary wall. This does not align with AUP (OP) Standards E7.6.1.6 (2 - 3) *, which state "(2)* The water take must not be for a period of more than 10 days where it occurs in peat soils, or 30 days in other types of soil or rock; and (3) The water take must only occur during construction." However, the proposed excavation plan complies with AUP E7.6.1.6 (1) and E7.6.1.10 (1 to 6). Consequently, a water permit is required for the

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Email njacka@tge.co.nz

27C Waipareira Ave, Henderson 0610
PO Box 27294, Glen Eden 0604
Auckland, New Zealand

WWW.TOTALGROUNDENGINEERING.COM

intended excavation activities.

3. *If the assessment indicates that a consent for dewatering and groundwater diversion is required, then the Applicant should provide an updated assessment of the effects of the proposal on the environment, adjacent buildings, structures and public services that is commensurate with the risk.*

We will perform the groundwater drawdown analysis integrated with the wall design. The analysis will include an update assessment on the effects of drawdown on neighbouring structures, in order to support the separate consent application.

Please contact the undersigned if you have any further questions.

Yours Faithfully,

Reviewed and Authorised by:

Neil Jacka
Principal Geotechnical Engineer
BE(Hons), CMEngNZ, IntPE

Total Ground Engineering

Appendix A

Additional HAs location plan overlaid with the proposed earthworks

Proposed additional HAs location plan 2023.08.18

Isopachs shown have been calculated from existing ground level to FFL

ELEVATIONS TABLE			
NUMBER	MIN. ELEVATION	MAX. ELEVATION	COLOUR
1	−3.00	−2.00	
2	−2.00	−1.00	
3	−1.00	0.00	
4	0.00	1.00	
5	1.00	2.00	
6	2.00	3.00	
7	3.00	4.00	

76 Compass Point Way

78 Compass Point Way

80 Compass Point Way

82 Compass Point Way

84 Compass Point Way

PROPOSED RETAINING WALL
SEE ELEVATION DWG 203

EXTG TIMBER RETAINING WALL
MAX HEIGHT 2.78m

PROPOSED RETAINING WALL
SEE ELEVATION DWG 204

ARA-TAI

PIGEON MOUNTAIN ROAD

COMPASS POINT WAY

HA09 HA10 HA07 HA01

JOAL 1 JOAL 2 JOAL 3 JOAL 4 JOAL 5

Fill

Cut

1
DP 212125
1.4073 ha

EARTHWORKS AREA: 13700m²

EARTHWORKS VOLUMES:

Cut = m³

Fill = m³

Net Cut = m³

Volumes are from existing ground level to FFL (including topsoil, subgrade, concrete).

Note:
Earthworks volumes for consent only. Not to be used for tender purposes.

SITE PLAN
1:500

S92 - prelim
11/08/2023

Airey
CIVIL, STRUCTURAL AND FIRE ENGINEERS

AIREY CONSULTANTS LTD
TEL: (09) 534 6523 www.aireys.co.nz
TAKAPUNA **BOTANY** QUEENSTOWN

CLIENT:
HND HMB LTD

JOB TITLE:
3 PIGEON MOUNTAIN ROAD
HALF MOON BAY

NOTES:

REV	AMENDMENT	DATE	BY
1	S92 - LAYOUT/LEVELS REVISED	?/07/2023	LP

DRAWING STATUS:
FINAL

ISSUE PURPOSE:
RESOURCE CONSENT

DESIGN: SW
DRAWN: LP
CHECKED: RT
DATE: 22/05/23
SCALE: 1:500 @ A3

DO NOT SCALE FROM DRAWINGS

ORIGINAL SIZE:
5 0 5 10 15 20 25

DRAWING TITLE:
SITE PLAN
EARTHWORKS

JOB No:	SHEET No:	REV:
220571-1	200	1

J:\220000\220571 3 Pigeon Mountain Rd\CAD\WRKING DRAWINGS\3 PIGEON MOUNTAIN RD 220571-1 EW_May 2023.dwg, 11/08/2023 3:01:35 pm, DWG To PDF.pc3

Appendix B

Groundwater monitoring data

Project Name:	3 Pigeon Mountain, Half Moon Bay
Project Number:	J00538
Author:	BL

Groundwater Monitoring Results (bgl, m)											
Piezo Location	Excavation depth (m)	16/06/2022 (installation)	22/02/2023	22/03/2023	5/04/2023	23/08/2023 (installation)	25/08/2023	1/09/2023	11/09/2023	18/09/2023	Average from Aug to Sept
HA01	< 0.5 m	4.90	1.40	2.40	3.00	/	1.54	1.72	1.52	1.50	1.57
HA07	< 0.5 m	3.70	2.10	2.70	2.00	/	Removed				
HA09	2.2 m	/	/	/	/	3.00	1.42	1.58	1.37	1.44	1.35
HA10	2.3 m	/	/	/	/	4.00	1.35	1.49	1.32	1.27	1.36

Aaron Grey

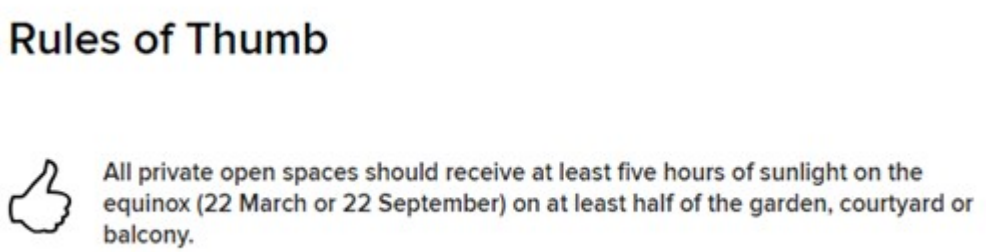
From: Yujie Gao <yujie@campbellbrown.co.nz>
Sent: Monday, 4 September 2023 2:43 pm
To: Aaron Grey
Subject: RE: 3 PMR - s92 (1) [Filed 05 Sep 2023 16:41]
Attachments: 20230830_RA0201 - SITE PLANNING AREA (IMPERVIOUS AREA).pdf; RA0200 - SITE PLANNING AREA (BUILDING COVERAGE).pdf; 20230830 _SunShadingDiagrams_PigeonMountain.pdf; 810.030523-L01-V1.0 3 Pigeon Mountain Road.pdf; 810.030523-R02-v0.1 3 Pigeon Mountain Road.pdf

Categories: Filed by Mail Manager

Hi Aaron

Hope you had a good weekend.
Further to the below-

- Please find attached updated impervious and building coverage plans. I identified the error was due to using the impervious area (roof area) for the building coverage plan and vice versa. This has now been corrected.
- Please find attached updated shading diagrams. The outdoor living spaces are able to meet the rule of thumb from the ADM, in addition to compliance with the sunlight plane for southern outdoor living spaces.



- Please also find the acoustic further s92 response, and updated acoustic report.
  I confirm the applicant proposes a condition that a finalised CNVMP be provided to Council for certification prior to the commencement of works.
  A draft CNVMP has been provided as part of the s92 response.

Have you had any feedback from the UD yet please?

Thanks
Yujie

From: Yujie Gao
Sent: Tuesday, 29 August 2023 2:33 pm
To: Aaron Grey <Aaron@civilplan.co.nz>
Subject: RE: 3 PMR - s92 (1)

SLR Consulting NZ
201 Victoria Street West, Auckland 1010, New Zealand

28 August 2023

Attention:
HND HMB LTD

SLR Project No.: 810.v030523

RE: "Further Information Request (Acoustics)

SLR prepared an assessment of acoustic effects associated with the construction of the proposed residential development at 3 Pigeon Mountain Road, Half Moon Bay, Auckland (the **SLR assessment**)[1]. Auckland Council have requested further information relating to the SLR assessment via an email sent to the applicant's planner (the Council request).

This letter serves as an addendum to the SLR assessment in order to provide the information requested in the Council request.

The Council request identified the following points for clarification:

Council Request

1 *The plans show four soil stockpiles are proposed. Please clarify if handling of soil (e.g. use of dump trucks, loader) and associated noise effects were included as part of the excavation works assessment.*

SLR Response

In addition to the construction activities outlined in the SLR assessment, the applicant has now advised SLR that stockpiling would form part of the proposed works. Based on the information provided by the applicant, the following equipment (see **Table 1**) is proposed to be used on site for handling of stockpiles.

Table 1 Proposed Construction Equipment (during stockpiling)

Plant Item[(B)]	Plant Noise Level at 10 m, dB LAeq [(C)]	Approximate Setback Distance to Compliance [(A)] (Without Mitigation),	Approximate Setback Distance to Compliance at Ground Level (With Mitigation)	Comment
Excavator (≤20-ton)	70	12m	4m	Closest receiver located 45m away from the area where excavator is likely to be operational. Compliance with the AUP noise limits is therefore expected.

[1] SLR Report 810.v30523-R01-v1.0 dated 3 August 2023.

Plant Item[(B)]	Plant Noise Level at 10 m, dB LAeq [(C)]	Approximate Setback Distance to Compliance [(A)] (Without Mitigation),	Approximate Setback Distance to Compliance at Ground Level (With Mitigation)	Comment
Dump trucks (20- ton)	80	36m	17m	Closest receiver located 50m away from the area where dump trucks are likely to be. Compliance with the AUP noise limits is therefore expected.
Bulldozer (<20-ton)	80	36m	17m	Closest receiver located 38m away from the area where bulldozer is likely to be operational. Considering the location of the dump trucks and the bulldozer relative to receivers, cumulative effects are not expected to be material in this case. Compliance with the AUP noise limits is therefore expected.

Notes:

(A) AUP noise limit is 70 dB LAeq, representative of the day-time limit (7:30 am to 6:00 pm).

(B) Calculations are based on the following source heights above the ground level: Excavator 2m, dump truck and bulldozer 1.5m.

(C) Noise levels are based on SLR measurements and published data[2].

Council Request

2 *Please confirm all works associated with construction of the five JOAL's (e.g. asphalt and concreting works) will be managed to enable compliance with E25.6.27 and E25.6.30 (1).*

SLR Response

Noise and vibration from equipment associated with the construction of the JOAL's is presented in **Table 2** and **Table 3.**

[2] BS 5228-1: 2009 'Code of practice for noise and vibration control on construction and open sites – Part 1; Noise.

Table 2 Proposed Construction Equipment (during concreting works)

Plant Item[B]	Plant Noise Level at 10 m, dB L_{Aeq} [C]	Approximate Setback Distance to Compliance [A] (Without Mitigation),	Approximate Setback Distance to Compliance at Ground Level (With Mitigation)
Concrete mixing truck	70	12m	4m
Concrete pump	75	22m	6m
Compactor (vibratory <100kg)	70	12m	2m

Due to the distance from works to properties and with temporary acoustic screening in place (as recommended in the SLR Assessment), compliance during concreting work is anticipated at most of the neighbouring receivers. However, exceedances are predicted at 76, 78 and 84 Compass Point Way (multi-storey dwellings located in close proximity).

SLR anticipates the following noise levels for a duration of up to two days during concreting works when closest to the identified properties:

- 75-80 dB L_{Aeq}: at 84 Compass Point Way.
- 70-75 dB L_{Aeq}: at 76 Compass Point Way and 78 Compass Point Way.

Effects at 76 Compass Point Way and 78 Compass Point Way would be as discussed in **Section 4.2** of the SLR assessment.

At 84 Compass Point Way, we would expect internal noise levels in the range of 55-60 dB L_{Aeq}. For reference, an internal level of up to 60 dB L_{Aeq} is the recommended internal reasonable noise limit in NZS 6803: 1999 *Acoustics - Construction Noise* for construction activities lasting up to 15 days weeks, in this instance this level may be anticipated for up to two days. At these levels phone conversations would become difficult and face to face conversations would need raised voices; people may actively seek respite (for example moving to rooms on a quieter side of their property). It is likely that these activities due to their short duration, can be scheduled to avoid periods when occupants are at home (i.e., before 9 am or after 4 pm close to the boundary) to minimise impact on the occupants. Nonetheless, if this is not possible these internal levels are considered reasonable in NZS 6803 noting the temporary nature.

Table 3 Proposed Construction Equipment and Typical Vibration Levels (during concreting works)

Plant Item[B]	Approximate distance to compliance (with 2 mm/s PPV limit)	Approximate distance to compliance (with 5 mm/s PPV limit)	Comment
Plate Compactor (vibratory <100kg)	4-5 m	<2m	Closest receiver 5m from the closest compaction location. Compliance with the human amenity vibration limits and DIN 4150-3 cosmetic damage limit would be expected.

It is important to emphasise that no particularly vibration intensive activities form part of this activity therefore compliance with the AUP vibration requirements would be expected at neighbouring receivers.

Council Request

3 *The receiver at 84 Compass Point Way is predicted to be exposed to noise infringements (i.e. >70 dB LAeq) for up to an estimated total of 12 days. To better understand effects, please comment on the expected frequency and duration of infringements and any respite periods that this neighbour may benefit from until all the works responsible for the infringements are completed.*

SLR Response

The expected duration of infringement per activity at this property would be as follows:

- Demolition works up to three to four days.
- During piling works: up to two to three days.
- During compaction works: up to four to five days.
- During concreting works: up to two days.

As noted above the total duration are expected to be approximately 14 days. However, the receiver would not experience these levels continuously either on any given day or for a straight period of 14 days. There would be periods between activities on the same day where noise levels would be lower while other works are taking place or works take place on parts of the site further removed from the receiver. There would also be periods between the different phases of the work where noise levels would be quieter, providing respite between periods of higher noise levels.

Council Request

4 *Although not recommended by SLR, can the applicant advise if the various recommended management and mitigation measures will be contained in a Construction Noise and Vibration Management Plan to be submitted to Council prior to works commencing, and will the applicant accept a condition of consent in this regard.*

SLR Response

Please refer to the draft construction Noise and Vibration Management Plan (CNVMP) prepared in support of response to the above. SLR understands that the applicant is willing to accept a condition of consent requiring works being undertaken in accordance with such a CNVMP.

Council Request

5 *Please clarify that it will be practicable to manage works to comply with E25.6.30 (1) (b) namely that vibration levels may potentially exceed the vibration amenity limit of 2mm/s PPV but will not exceed 5 mm/s PPV for no longer than 3 days at an individual receivers (note: longer than 3 days duration will require resource consent).*

SLR Response

Based on the outcome of SLR assessment, through management of works and equipment we consider it practicable for vibration from the proposed construction activities to comply with the relevant vibration criteria during construction activities. As an additional measure, as noted in Section 5.0 of the SLR assessment, we have also recommended verification monitoring to be undertaken at the first instance of compaction works to site specific vibration levels and inform the management strategy as set out in the CNVMP.

We trust the above serves to supply the information required, should you have any queries please do not hesitate to contact us.

Regards,

SLR Consulting NZ

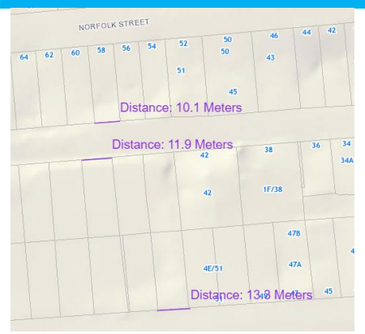
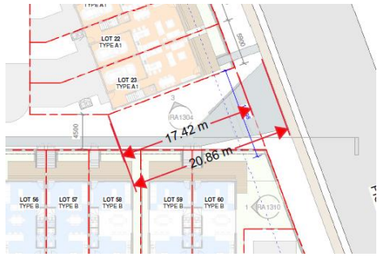
Yolima Zabala
Project Consultant
yzabala@slrconsulting.com

Peter Runcie
Technical Director
pruncie@slrconsulting.com

S92 Queries – 3 Pigeon Mountain Road, Half Moon Bay – BUN60419132

Section 92	Action	Comment
Urban Design		
1. Landscape sections		
• Please provide landscape sections that clarify how the landscape design including planting will work in the location of retaining walls proposed to the western boundary of lots 81-92.		The area between the retaining wall and the building will be a paved courtyard.
2. Retaining wall elevations:		
• Please clarify if the retaining wall height shown in sections on pg 39 / sheet RA1401 of the architectural set are accurate, where the retaining wall appears to rise much higher than the ground being retained.		Refer to section RA1401
• Please clarify in the engineering elevations where the top of the proposed retaining wall on the western boundary is to be designed. The elevations and sections provided by Airey (Sheet 203) imply the top of the proposed retaining wall and its height is always aligned with the bottom of the existing retaining wall. Are there any instances where the proposed retaining wall is higher or lower than the bottom of the existing retaining wall, with cut or back fill provided?		Following further investigation, the proposed retaining wall on the western boundary will be 1m below the top of the existing retaining wall.
• The urban design report refers to retaining walls internally on the site that rise to above 1m, up to 1.5m to the southern side of JOAL 5 in reference to units 42-59. Pease provide an elevation of this retaining wall(s).		Refer to sheet RA1316
• It is noted the architectural retaining wall plan (p8, sheet RA0104 of architectural set), shows walls less than 1m in this location to the south of JOAL 5. Please confirm the retaining wall plan is accurate. It is noted that the cut/fill plan (Airey, sheet 200) shows retaining of up to 3m for lots 15-16, where the architectural retaining wall plan only indicates 1-1.5m		Refer to updated sheet RA0104 and RA1316
• Please also provide elevations of retaining walls to Lots 81-88 and 72-80.		Refer to sheet RA1316
Preliminary Design Review		
The following does not form part of our Section 92 request but identifies preliminary design opportunities and concerns from our initial design assessment. The applicant is strongly encouraged to consider these matters further: Since review at the pre-application stage, the proposed development has undergone a number of significant changes. These include the addition of 7 units, from 85 to 92 total units, revised site layout of JOALs, removal of secondary vehicle access to Pigeon Mountain Road, new orientation of mid-block terraces, a through-site link, and the consolidation or removal of pedestrian footpaths. I agree with the urban design assessment that the through-site link as designed creates significant issues to the overall development, including dwelling amenity and way-finding legibility. This is discussed further below. It is noted that while a through-site link has been described as a design constraint, the pre-application meeting did not impose this condition. The pre-application discussion centred on pedestrian amenity, viewshafts through the site, and common landscape area in the middle of the site for residents, to create amenity and a sense of spaciousness for residents. This suggestion was captured in the pre-application notes as "pedestrian links, sightlines through the blocks, open space and common landscape amenity will be important to resolve in order to achieve a successful design." With the exception of the configuration of the central block of Units (Lots 60-80) and the overall sense of spaciousness and arrival to the site along the eastern site boundary, the layout is broadly supported, with dwellings addressing Ara-Tai, Pigeon Mountain and Compass Point roads, with appropriate breaks in these blocks. While there is a lower metric of landscaped area than that prescribed by the zone standard, it is acknowledged the landscape design is comprehensive and well considered where provided.		Addressed in following responses.
3. Through-site link and mid-site block layout		
• I agree with the urban design assessment that the through-site link as designed creates a conflict with fronts and backs of dwellings to the mid-block, between Block K and J. The orientation of Block J towards the through-site link also diminishes the legibility of JOAL 5 as a 'main street' within a hierarchy of private lanes. • A through-site link for non-residents is also not seen as desirable or efficient for this site. • The link from JOAL 4 to Ara-Tai Road is still positive and should be retained, providing convenient access to public transport and amenity at the town centre for residents. • For these reasons, I would recommend the midblock through-site link be removed, with pedestrian access to Block K from the east. Block J is recommended to be re-orientated with front doors to JOAL 5. The remainder of the mid-block to the north is recommended to be given as common landscaped amenity for residents and separated footpath to the south of JOAL 4. • The Ara-Tai link may move to connect directly with the common space provided. While the break between block D and H gives some public presence to the site link to Pigeon Mountain Road, a larger break would assist giving prominence and legibility of JOAL 5 as well as provide for a greater sense of spaciousness to views of the development from Pigeon Mountain Road.		The through site link and mid-block orientation has been revised, please refer updated architecture plans. The pedestrian connection to Pigeon Mountain Road has been revised in design to feature a wider pathway which directs any pedestrians in. I note that the width of the path at the boundary is 11.7m. This is approaching or exceeding the width of some residential lots. The pedestrian connection would also have a wider effective appearance, as the buildings are set back from the boundaries.

S92 Queries – 3 Pigeon Mountain Road, Half Moon Bay – BUN60419132

Section 92	Action	Comment
		
		At the 'narrowest' point of the access, the access is 4.5m, and I note this section is some 17.5m from the site boundary, and 20m from the footpath on Pigeon Mountain Road. I consider that the revised design, with landscaping, provides a suitably prominent pedestrian entry to the development.
		
Comments following meeting with Council • We remain concerned about the scale of the retaining wall along the western boundary. Noting that I have not yet received any comments from the DE upon review of the provided geotechnical reports, we would be interested to understand whether it would be plausible to reconstruct the existing retaining wall in its current location (and provide for a tiered retaining outcome) rather than constructing a new wall around 1 m in front of the existing wall. • Given the revised arrangement of buildings within the central part of the site are now to be located directly adjacent to outdoor living spaces, we will be expecting shading diagrams demonstrating that these outdoor living spaces are able to be provided with sufficient access to sunlight. I note that the three outdoor living spaces directly to the south of the block of three dwellings appears to not be compliant with Standard H4.6.13(3).  • The increase in parking spaces along JOAL 3 – with around 15 continuous spaces on both sides – looks to significantly reduce the extent of landscaping that is achievable in this location, which is considered to be a poor amenity outcome. To address this issue, we would expect to see a minimum two gaps on both that provide decent breaks for landscaping.		 <u>Retaining adjoining western boundary</u> We have enquired with the project structural and geotechnical engineer and it is not feasible to remove the existing retaining wall and reconstruct it for the following reasons: - The existing timber pole retaining wall is supporting the neighboring property and land. - If we remove the timber pole and reconstruct it, there will be a large settlement to the upper ground level which will damage the properties.

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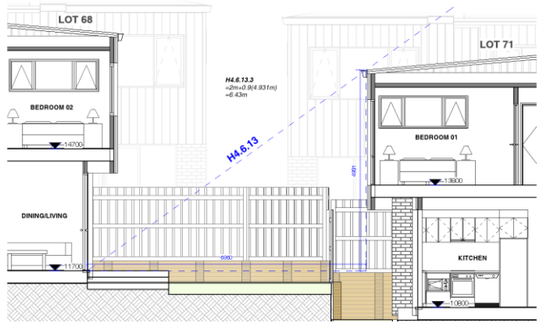
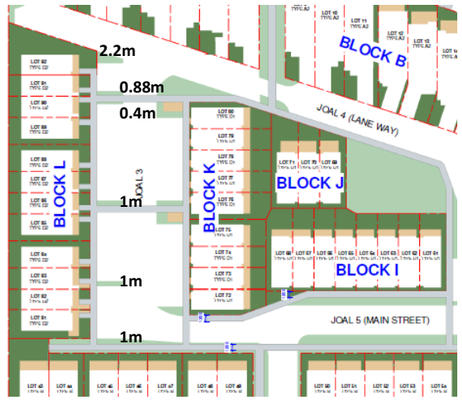
		- Adding the new retaining wall in front of the existing is the most practicable construction methodology to minimize any potential ground settlement and impact on the adjoining properties. I note that while removing and reconstructing small retaining walls can be feasible, depending on what it is supporting (i.e. yard, or a deck), the existing retaining wall is fairly substantial in height. Hence why it is not feasible in this circumstance. <u>Central courtyard area</u> Shading diagrams are attached, refer sheet RA1706 and RA1707. The outdoor living spaces for Lot 66 to Lot 68 complies with H4.6.13.3.  <u>Parking spaces</u> The following gaps are provided within the parking areas off JOAL 3. 
4. Pedestrian safety and JOAL design		
• The loop created by joining JOAL 3 to JOAL 4 for vehicular traffic works to make JOAL 4 a more significant through-route or additional 'main street', but without the amenity of separate pedestrian pathways.		JOAL 3 must be connected to JOAL 4 in order to allow for the rubbish truck to internally circulate.

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		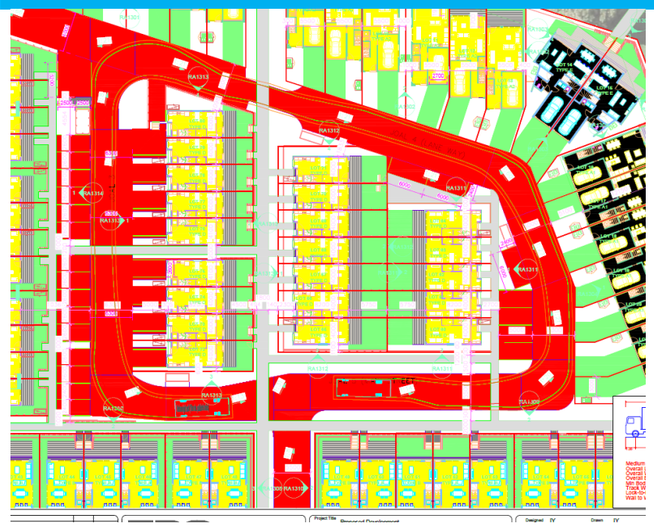
• It is acknowledged Lots 1-22 are proposed to have primary pedestrian access from Ara-Tai / Pigeon Mountain Road. However, for this scale of development, a separated pedestrian path to the south of JOAL 4 is recommended for this alternative route, given the often steep pedestrian access to Ara-Tai.		A path has been added to the south of JOAL 4.
• I agree with the urban design assessment that JOAL 2 should be more legible as a service lane rather than primary shared road. This may be assisted by the suggested narrower entry points. Specific pavement treatment to differentiate service lanes from primary circulation zones is also recommended.		Alternative paving treatments will be investigated. The entry is not able to be lower as it needs to accommodate maneuvering requirements.
5. Western boundary treatment		
• While it is acknowledged that units 81-92 are orientated so as to provide their primary living, outlook and outdoor space to the east, the small western outdoor space remaining provides the opportunity for a shaded courtyard space with careful landscape design.		The area is provided as a hardscaped courtyard as a landscaped courtyard is not practicable in terms of maintenance, or sunlight access (for survival of plants). This has been discussed with the project landscape architect previously.
• The presence of large retaining walls and fences still have the possibility to cause visual dominance on-site to adjacent dwellings without mitigation, even if their primary outlook is not towards these walls.		At the ground floor level, as you note the primary outlook is toward the east. There is no requirement to have windows or openings from a kitchen, nevertheless we have provided windows and a door as we felt there is still benefit to be gained by providing these as the rear courtyard can still serve a functional purpose (i.e. store food waste bin). At the first-floor level, the outlook to the retaining wall is equivalent to any boundary fence. The height to these buildings does not exceed 2m.
6. Architectural design		
• Overall, the architectural design provides an acceptable amount of modulation and articulation. • It is recommended that each block limits itself to the use of three primary cladding materials only.		Each block uses maximum 3 cladding material, the only difference is the color of the cladding.
Earthworks		
1. Please provide evidence (e.g. comments from a suitably qualified professional) to demonstrate that construction noise and vibration levels will comply with permitted noise and vibration levels set out in Standards E25.6.27 and E25.6.30(1) of the AUP. Council is concerned that unless works are managed carefully, compliance will not be practicable when assessed at 76, 78, 80, 82 and 84 Compass Point Way during retaining wall construction, cut and fill works, compaction works and road construction works carried out within approximately 10-15m of the western site boundary.		Acoustic report sent through 17/08/2023. I confirm an additional reason for consent pursuant to E25.4.1 (A2) activities that do not comply with a permitted activity standards, as a restricted discretionary activity. The following activities/durations would result in temporary noise exceedances: • During demolition works: an approximate period of three to four days, at the upper floor level at 84 Compass Point Way. • During piling works: an approximate period of two to three days per receiver, at the upper floor level at 84 Compass Point Way, 80 Compass Point Way, 78 Compass Point Way, and 76 Compass Point Way. • During compaction works: an approximate period of four to five days at the upper floor level at 84 Compass Point Way. The following comments are provided:

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		SLR have undertaken a review of the proposed development, including excavation and compaction required. The following comments are noted from the Acoustic Report. Standard and routinely employed measures shall be implemented to mitigate noise effects. Such measures may include the selection of plant which generates less noise, careful maintenance of plant, controlling 'on-time' of plant and verification monitoring of noise and vibration levels. SLR has identified the following site-specific mitigation measures which, in combination with advising neighbours prior to commencing works, can be considered BPO and can assist in achieving acceptable construction noise outcomes: • Temporary acoustic screening to block the line of sight between activities and receivers during demolition, excavation, piling, and compaction works as per Figure 6. The temporary acoustic screening should be constructed of solid material such as plywood or mass loaded 'acoustic blankets' with a surface mass of at least 7 kg/m². • Using a <30-ton excavator with pulveriser for demolition works, where practicable. • Using a <5-ton excavator (breaker wrapped with an acoustic shroud) and localised screening for demolition works. • Using a <20-ton excavator for excavation and piling works. • Using a <20-ton vibratory compactor and <100 Kg plate compactor for compaction works. • Compaction within 15m of neighbours only undertake with a <100 Kg plate compactor and the recommended acoustic screening described above or within 20m of neighbours, no screening required. • Complete all work as quickly as possible and control the on-time of plant when onsite. • Where practicable, scheduling of the works closest to the neighbouring properties to avoid periods where the buildings are occupied. A suite of conditions have been proposed by SLR, and the applicant confirms these conditions are offered as part of the application. The exceedances are predicted to occur for short durations and in some instances are likely to be able to be scheduled at times to avoid when neighbouring properties are occupied. Standard E25.6.30(1) relating to construction vibration levels is expected to be complied with at neighbouring properties through managing activities and equipment sizes relative to distance from receivers. With consideration of the limited duration of these works and the identified mitigation measures (see Section 4.4), the associated noise and vibration effects are considered to be reasonable and acceptable.
Additional comments received 22/08/2023 1) The plans show four soil stockpiles are proposed. Please clarify if handling of soil (e.g. use of dump trucks, loader) and associated noise effects were included as part of the excavation works assessment. 2) Please confirm all works associated with construction of the five JOAL's (e.g. asphalt and concreting works) will be managed to enable compliance with E25.6.27 and E25.6.30 (1). 3) The receiver at 84 Compass Point Way is predicted to be exposed to noise infringements (i.e. >70 dB LAeq) for up to an estimated total of 12 days. To better understand effects, please comment on the expected frequency and duration of infringements and any respite periods that this neighbour may benefit from until all the works responsible for the infringements are completed. 4) Although not recommended by SLR, can the applicant advise if the various recommended management and mitigation measures will be contained in a Construction Noise and Vibration Management Plan to be submitted to Council prior to works commencing, and will the applicant accept a condition of consent in this regard. 5) Please clarify that it will be practicable to manage works to comply with E25.6.30 (1) (b) namely that vibration levels may potentially exceed the vibration amenity limit of 2mm/s PPV but will not exceed 5 mm/s PPV for no longer than 3 days at an individual receivers (note: longer than 3 days duration will require resource consent). Note that I will be considering the infringement of the construction noise standard carefully when determining if there are any affected persons. While Council's specialist has indicated that a Construction Noise and Vibration Management Plan should be required as a condition of consent in order to manage potential adverse effects, I would only be able to give regard to that plan as part of the section 95E assessment if such a condition has been proposed by the applicant as forming part of the proposal.		

S92 Queries – 3 Pigeon Mountain Road, Half Moon Bay – BUN60419132

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Dwellings and Retaining Walls		
2. Please clarify the retaining wall and fencing outcome to the rear of Units 81 to 92, noting that: a. The application material specifies that the existing retaining wall will be maintained and a new retaining wall will be constructed in front of this (approximately 1.7 m from the boundary); b. Sheet 203 specifies the height of the proposed retaining wall being the difference between proposed finished ground levels and the bottom of the existing retaining wall (i.e. a stepped retaining wall); c. Drawing L112 does not specify any fencing on top of the proposed retaining wall, but shows a 1.8 m fence at the existing boundary (top of the existing retaining wall); d. Drawing RA1401 appears to show that a fence will be constructed above the proposed retaining wall to a height up to the top of the existing retaining wall (refer below) e.  e. During the site visit, the applicant indicated that the area between the existing retaining wall and the proposed retaining wall (and fence indicated on Drawing RA1401) would be backfilled; and f. Sheet 200 does not show any earthworks between the existing and proposed retaining walls. In particular, please confirm: g. The height at the top of the proposed retaining wall (is this consistently the same as the bottom of the existing retaining wall?). h. The height of any fencing above the proposed retaining wall (noting that a fence above this wall will likely be required by the Building Code where the fence is more than 1 m in height). i. Whether any fill earthworks are proposed between the existing and proposed retaining walls (and its fence).		a. Yes b. Refer to Sheet RA1316 – Elevation – Western Retaining Wall c. Fencing will be on the existing retaining wall d. Refer to updated section on sheet RA1401 and read in conjunction with sheet RA1316 for 2b e. Yes. Refer to updated sections on sheet RA1401 f. To be updated by Civil g. The top of the proposed retaining wall will be 1m lower than the top of the existing retaining wall. Refer to sheet RA1316 h. Noted. Fencing will be on the existing retaining wall. Refer to updated sections on sheet RA1401 i. Yes. Refer to updated section on sheet RA1401. The retaining is 1m lower than the existing retaining and is backfilled in between.
3. Based on the response to RFI item 2, please provide further commentary regarding the extent to which Units 81 to 92 are provided with access to daylight and sunlight as required by Policy H4.3(5)(b).		At the ground floor, daylight will be on one side of dwelling @ 8m deep which is no different from apartments. At the upper floor, the bedroom units have adequate separation from the retaining relative to the top of retaining.
4. While intrusions of the 8 m height plane are noted, please clarify for each intrusion, whether: a. Where the intrusion if only by roofs with slopes of 15 degrees or more, the height of the roof is more than double the height of the intrusion, resulting in the intrusion being provided for by Standard H4.6.4 (refer Figure H4.6.4.1) – it appears that this may be the case for the intrusions by Units 3 to 6. b. Compliance would be achieved when determining maximum height in accordance with the average ground level method described in the definition of 'height' in Chapter J of the AUP and shown in Figure J1.4.3, to be determined in relation to each individual building – it appears that this may be the case for the intrusions by Units 15, 26 to 41 and 45 to 56.		a. Roofs are less than 15° b. Refer to updated elevations on sheets RA1305, RA1307, RA1308, RA1309 – showing the maximum building height based on the average ground level.
5. Under Standard H4.6.5, the 2.5 m and 45 degree recession plane remains applicable to the site's boundary with the reserve land between the site and Ara Tai, noting that the exemption under Standard H4.6.5(2)(b) only applies to Open Space zoned areas with a width greater than 20 m. Therefore, please: a. Identify the extent to which Units 1 to 14 intrude the 2.5 m and 45 degree recession plane from the northern boundary of the site; and b. Provide an appropriate assessment of environmental effects associated with the infringements.		a. Refer to sheet RA1301 Elevation 1
6. Please identify on elevation 4 on Drawing RA1301 the extent to which Lot 1 intrudes the 2.5 m and 45 degree recession plane from the eastern boundary in order to confirm that this is consistent with the exemption provided in Standard H4.6.5(5).		Refer to sheet RA1301 Elevation 4
7. The AEE refers to an intrusion by Unit 92 into the 2.5 m and 45 degree recession plane from the eastern boundary that is consistent with the exemption provided in Standard H4.6.5(5). However, the elevations provided on Drawing RA1314 does not show any intrusion. Please clarify.		I confirm there is no infringement here.
8. For each retaining wall proposed along the northern, eastern and southern boundaries, please identify the height of the top of wall in relation to the ground level of the adjacent footpath in Compass Point Way, Pigeon Mountain Road and Ara Tai. This could be provided by adding the footpath height to the retaining wall elevations on Sheet 204. Please then provide assessment of dominance effects of the proposed retaining walls on users of these footpaths. *During the site visit, it was observed that the footpaths along Pigeon Mountain Road and Ara Tai were much lower than the ground level at the site's boundary, which would result in the retaining walls having greater dominance effects on the streetscape than if the ground level at the boundary was the same as the ground level at the footpaths.*		
9. Please clarify the height of the retaining walls adjacent to Units 14 to 17 and 23. While the AEE and Drawing RA0104 specifies these are a maximum of 1.5 m, Sheet 200 shows that over 2 m of fill earthworks are proposed behind these walls and Sheet 204 specifies a maximum height of 2.43 m in front of Unit 15 and 2.42 m in front of Unit 23.		

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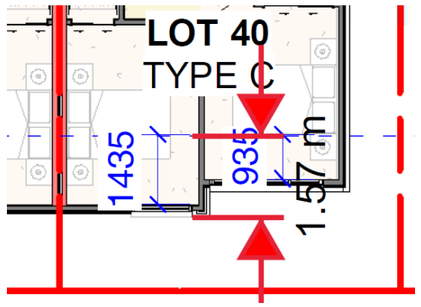
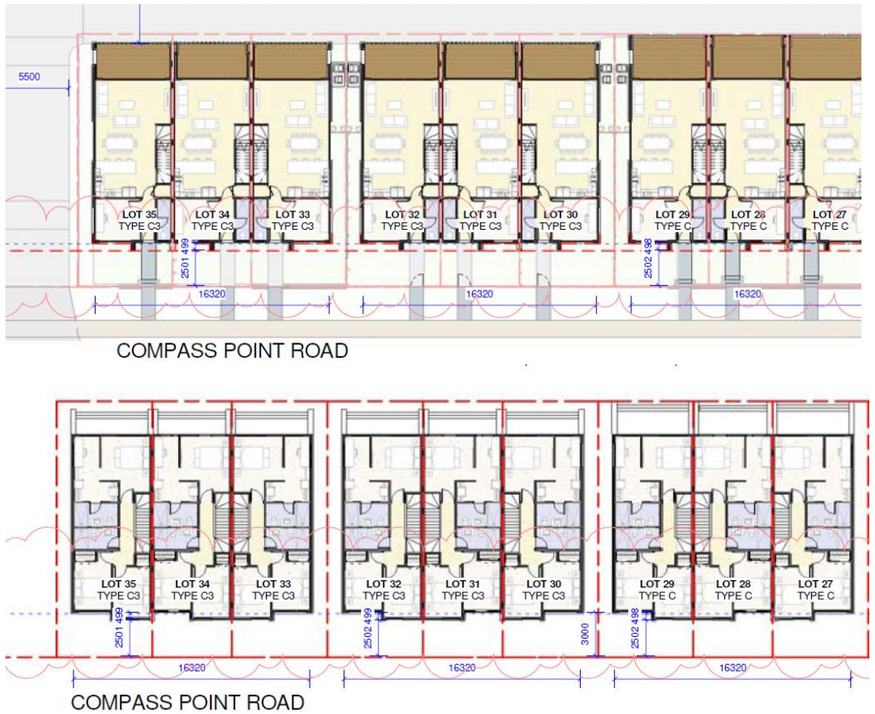
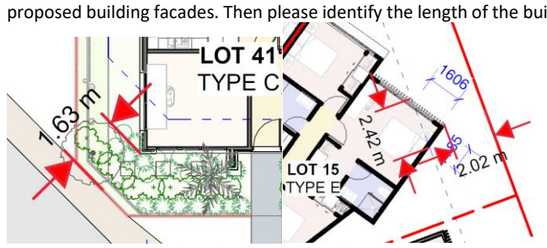
10. Please clarify the height of the retaining walls adjacent to Units 14 to 17 and 23. While the AEE and Drawing RA0104 specifies these are a maximum of 1.5 m, Sheet 200 shows that over 2 m of fill earthworks are proposed behind these walls and Sheet 204 specifies a maximum height of 2.43 m in front of Unit 15 and 2.42 m in front of Unit 23.		
11. Please clarify the proposed set back of Blocks E and F from Compass Point Way. Drawing RA0100 shows a yard intrusion of 1.049 m, associated with the ground/mid level, Drawing RA0151 shows a yard intrusion of 0.857 m for Block E and 0.980 m for Block F, associated with the ground/mid level, Drawing RA0152 shows a yard intrusions of 1.435 m and 0.935 for both Blocks E and F, associated with the upper level, while Drawings RA1306 and RA1307 do not show any upper level overhangs on the side elevations. It also appears that the provided dimensions for the yard intrusions are to the internal wall rather than the exterior face of the wall (refer below), which leads to misleading and inaccurate assessment of the proposal. If the front yard intrusion of Blocks E and F is greater than that identified in the AEE, please update the assessment. If the intrusion is over 1.5 m, as indicated below, then please acknowledge that this setback would also be infringing the MDRS standard, indicating that this outcome is inconsistent with the neighbourhood's planned urban built character. 		The units fronting Compass Point Road have been revised reduce the infringement to the front yard setback. A small portion of the building infringes by 0.5m at the first floor level. Refer to sheets RA0100, RA0151 and RA0152 for updated dimensions of infringement. Side elevations don't show the overhang because the wingwall carries down to the ground floor. 
12. Please identify the minimum setbacks of Units 15, 23 and 41 by measuring perpendicular to the road boundary rather than to the proposed building facades. Then please identify the length of the building parallel to the road boundary that intrudes the front yard.  *Please note that the intrusions by Lots 1, 2 and 14 into a 3 m yard from the northern boundary of the site are not infringements of Standard H4.6.7 as this boundary is a side boundary (adjoining the Council reserve land) rather than a front boundary (as it does not adjoin the road corridor of Ara Tai).*		Refer to sheets RA0100, RA0151 and RA0152 for updated dimensions.
13. Please demonstrate that the architectural features proposed out from the northern façades of Units 2, 4, 6, 8 and 11 do not intrude into the 1 m yard from the northern boundary.		No infringement. Refer to sheets RA0151 and RA0152
14. Please identify the height above existing ground level of all decks, steps and terraces within a 1 m yard from the northern boundary and 3 m yards from the eastern and southern boundaries. If any are more than 1.5 m above existing ground levels, please identify a further infringement of Standard H4.6.7 and provide an appropriate assessment of environmental effects.		Refer to front yard drawings on sheet RA0203 To be updated pending final civil levels

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The decks and steps associated with Units 14 and 15 are expected to be greater than 1.5 m in height, given that over 2 m of fill earthworks are proposed in this area. The deck associated with Unit 23 may also be greater than 1.5 m in height.		
15. Please identify those locations where the fencing above the proposed retaining walls within a 1 m yard from the northern boundary and 3 m yards from the eastern and southern boundaries will be greater than 2.5 m in height above existing ground levels. For these locations, please identify a further infringement of Standard H4.6.7 and provide an appropriate assessment of environmental effects. *Where a 1.2 m fence is proposed on top of retaining walls in these yards, this would be in all locations where the retaining wall height is greater than 1.3 m, such as adjacent to Units 6, 14 to 18, 24 and 59.*		
16. The following elements specified in the landscape plans are not shown as part of the impervious area delineated on Drawing RA0201 (all of which Council considers should be included): a. The full extent of the driveway paved area into Units 1 to 22, including the path extensions to front doors (identified on the landscape plan as exposed aggregate concrete). b. The stairs and paths out to the road/reserve in front of Units 1 to 41 (identified on the landscape plan as exposed aggregate concrete). c. The communal path network, including the north-south axis and along the front of Units 42 to 64 and 81 to 92 (identified on the landscape plan as medium trowel concrete). d. The stairs and paths out to the communal path network in front of Units 60 to 71 and 81 to 92 (identified on the landscape plan as exposed aggregate concrete). e. The paths out to the accessway in front of Units 72 to 76 and 78 to 80 (identified on the landscape plan as exposed aggregate concrete) – the path in front of Unit 77 has been shown as impervious area. f. The stairs and path to the communal bin storage area in front of Unit 91 (identified on the landscape plan as exposed aggregate concrete). g. Pavement between the driveway and communal bin storage areas next to Units 71 and 72 (identified on the landscape plan as exposed aggregate concrete). h. The roofed communal bicycle parking area adjacent to Unit 64. i. For all units providing these, external individual bin storage areas, which are assumed to be paved. j. Unless these can be confirmed as being pervious, the individual pavers that form part of private paths along the sides of Units 1, 14, 15 and 59. k. The bench seating paved areas between Units 22 and 59. *Please clarify why each of these elements are not included as impervious area. If it is determined that the total impervious area is greater than 9,512 m², please identify the increased inconsistency with Standard H4.6.8 and update the assessment of environmental effects proposed in relation to this inconsistency. Please also update the infrastructure report to identify the increased impervious area and specify any changes to the proposed stormwater management approach to address the increased adverse effects, including the consistency with Policy H4.3(7).* *Please note that under the definitions in Chapter J of the AUP, impervious area and landscaped area are not the inverse of each other. Drawings RA0201 and RA0202 appear to have been prepared on this basis. There will be a number of instances where elements of the proposal are both impervious area and landscaped area (e.g. non-permeable pathways not exceeding 1.5m in width).*		a. Noted and updated refer to sheet RA0201 b,c,d,e,f,g. Paths are permeable. Refer to the updated landscape plans. h. Central area layout has been updated as per planner's feedback i. Individual bins will be on permeable pavers. Refer to the updated landscape plans. j. individual pavers will be permeable pavers k. the bench seating area will be permeable pavers
17. In relation to Standard H4.6.9 (Building coverage) Drawing RA0200, please identify whether the areas delineated on Drawing RA0200, include any part of the eaves or spouting that projects more than 750mm horizontally from the exterior wall of the building (which should not be included as part of building coverage). If it is determined that the total building coverage is less than 5,695 m², please clarify whether there remains an inconsistency with Standard H4.6.9.		All eaves are less than 750mm
18. In relation to Standard H4.6.10 (Landscaped area) and Drawing RA0202: a. Please identify how the following elements specified in the landscape plans and shown as part of the landscaped area or permeable area delineated on Drawing RA0201 (all of which Council considers should not be included) fall within the definition of landscaped area in Chapter J of the AUP: I. All areas listed in RFI item 16 above related to impervious areas, other that paths not exceeding 1.5 m in width and pavers not exceeding 650 mm in dimension. II. Any decks that are more than 1 m above finished ground levels – please identify the height of each deck to confirm this. III. Any covered decks, such as parts of the decks in front of Units 14 and 15. IV. The side yards of Units 4, 5, 10, 11, 25, 26, 28, 29, 31, 32, 36, 37, 39 to 44, 46, 47, 53, 54, 57, 58, 84, 85, 88 and 89, the rear yards of Units 81 to 92 and all other areas identified on the landscape plans as pebble path. b. Please identify any areas beneath roof eaves less than 750 mm (but not beneath overhanging buildings identified as part of building coverage) that would fall within the definition of landscaped area in Chapter J of the AUP. c. Please split out the areas identified as "landscaped area" or "permeable area" into the following categories:		

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i. Areas that are grassed and planted in trees, shrubs, or ground cover plants. ii. Those elements which are listed in clause (1) of the definition of landscaped area in Chapter J of the AUP, which includes terraces and uncovered decks less than 1 m in height and pavers with dimensions less than 650 mm. iii. Non-permeable pathways not exceeding 1.5m in width. iv. All other permeable areas that are not landscaped area as per the definition in Chapter J of the AUP should not be shown on Drawing RA0202. d. Please then remove exclude any individual/non-contiguous areas less than 5 m². e. Please then identify whether those elements which are listed in clause (1) of the definition of landscaped area in Chapter J of the AUP consist of more or less than 25% of the total landscaped area. It is noted that the currently-identified permeable area (1,740 m²) is 34.3% of the currently-identified landscaped area (5,072 m²). If this is more than 25%, please only count towards landscaped area that portion of the elements listed in clause (1) that is no more than 25% of total landscaped area (i.e. no more than a third of all other areas that form part of landscaped area). If it is determined that the total landscaped area (when determining this in accordance with the definition in Chapter J of the AUP) is less than 5,072 m², please identify the increased inconsistency with Standard H4.6.10 and update the assessment of environmental effects proposed in relation to this inconsistency.		
19. Please demonstrate that the extent of landscaped area within the front yard of the site, which has been identified in the AEE as 84.8%, has: a. Been determined in accordance with the definition in Chapter J of the AUP, noting the various matters outlined in RFI item 18; and b. Relates only to the 3 m yard from the eastern and southern boundaries and not the northern boundary adjoining the reserve. If it is determined that landscaped area within the front yard is less than 50%, please identify the additional inconsistency with Standard H4.6.10 and update the assessment of environmental effects in relation to this inconsistency.		Refer to sheet RA0203 for the updated landscape area within the front yard, and compliance is achieved.
20. The view in the AEE that all units comply with outlook space requirements is disputed and not all required outlook spaces have been shown on Drawings RA0205 and RA0206. a. Please update Drawings RA0205 and RA0206 to ensure that all outlook spaces are positioned to be measured from the centre point of the largest window on the building face to which it applies, as per Standard H4.6.11(4). If located correctly, the principal living room outlook spaces for all Type A, D and E dwellings would be partly extending across into the outdoor living areas of adjacent buildings (contrary to Standard H4.6.11(9)(c)) or would partly intrude into an adjacent wall (contrary to H4.6.11(9)(a)). b. Please clarify the extent to which pergola posts would intrude into the principal living room outlook spaces for Units 2, 4, 6, 8 and 11. c. Please identify the extent of overlap of the principal living room outlook spaces for Units 60 to 64 and 65 to 69) with each other and outdoor living spaces of other dwellings. d. Please update Drawing RA0206 to identify a 1 m by 1 m outlook space from all studies within Type A and B dwellings. For Type A dwellings, please identify the proposed louvre screens in front of the study's window as part of a building within this outlook space. e. Please update Drawing RA0206 to identify a 1 m by 1 m outlook space from Bedroom 4 of Units 14 and 15. f. Please update Drawing RA0206 to correct the placement of outlook spaces associated with the Type D dwellings. Drawing RA3011 demonstrates that the principal bedroom (Bedroom 1) is located over the kitchen at the rear of the dwelling, while Drawing RA0206 indicated the principal bedroom is the bedroom above the lounge and the front of the dwelling (Bedroom 2). Bedroom 1 is larger than Bedroom 2 (by around 1 m²) and so is clearly the principal bedroom. Given that Units 81 to 92 are set back less than 3 m from the eastern boundary, correct outlook spaces from the principal bedrooms are anticipated to overlap this boundary. g. Based on the response to RFI item 2, please clarify whether the outlook space from Bedroom 1 in Units 81 to 92 is intruded by a retaining wall and/or fence. h. Subsequently, please identify and list all inconsistencies with Standard H4.6.11 and provide an assessment of environmental effects in relation to these inconsistencies.		a. Refer to sheets RA0205 and RA0206 b. The post is clear of the outlook refer to RA0205 c. Updated central area. Lots 61-65 outlook space extends to the park by 1m. d. Aluminum fixed louvres e. Refer to RA0206 for updated outlook plan LVL 01 f. Additional Typology on sheet RA3020 g. The principal bedroom is facing the JOAL which has a clear 3x3m outlook and the other bedroom facing the boundary has 1x1m clear outlook.
21. Based on the response to RFI item 2, please clarify whether by a retaining wall and/or fence would conflict with achieving the daylight angle under Standard H4.6.12 from Bedroom 1 in Units 81 to 92. If an inconsistency with this standard is identified, please provide an assessment of environmental effects in relation to this.		Refer to sheet RA1401 for daylight angle, confirming compliance is achieved.

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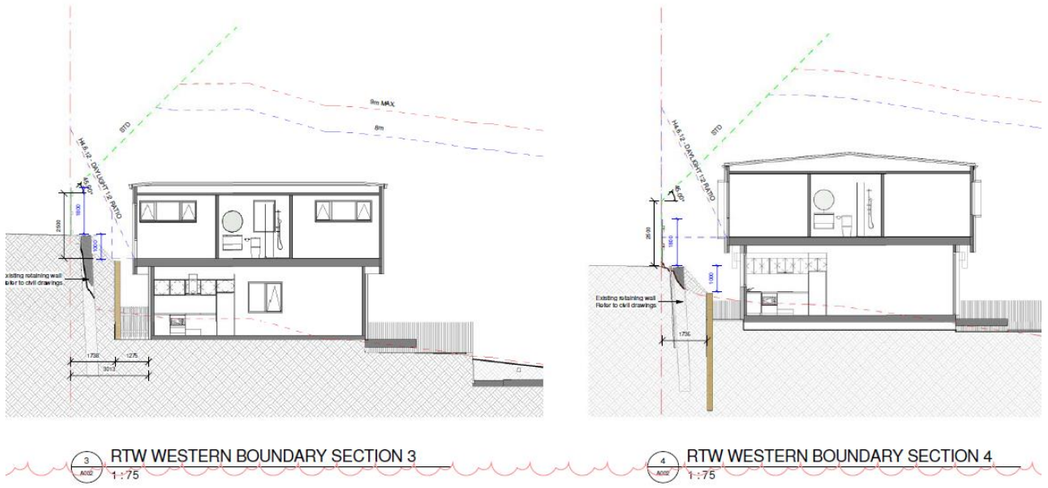
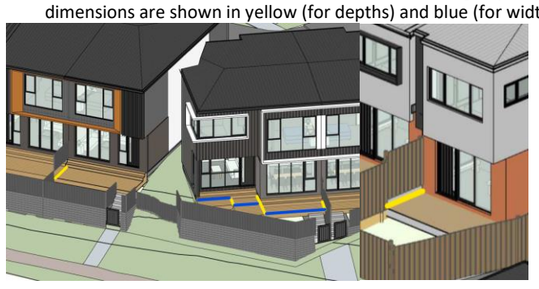
		
22. Please update Drawing RA0204 to remove the following areas from the shown outdoor living spaces: a. Those parts with a gradient exceeding 1 in 20, such as staircases to the street and gaps between retaining walls (e.g. at Unit 15) b. Those parts containing overhanging buildings (which is contrary to Standard H4.6.13(1)(d)), such as the overhand of the study for the Type A dwellings, the overhang of the master bedroom (and study) for the Type B and C dwellings, the overhang of Bedroom 2 for the Type D dwellings and the overhang of Bedroom 1 in the Type E dwellings. Please then identify the minimum dimension provided for each unit, including whether this is less than 4 m for any dwellings further to those identified in the AEE. Update the assessment of environmental effects proposed in relation to the inconsistencies with Standard H4.6.13.		a. To be updated with final landscape plan. b. The overhang is less than 750mm. c. To be updated with final landscape plan
23. Please confirm the dimensions of the decks excluding any steps proposed for the Type A, D and E dwellings. Specifically requested dimensions are shown in yellow (for depths) and blue (for widths) on the following images. 		Refer to Unit Plans sheets RA3000-RA3005, RA3011-RA3012
24. Please confirm the following dimensions of the decks for the Type B dwellings.		Refer to sheets RA3004-RA3005.

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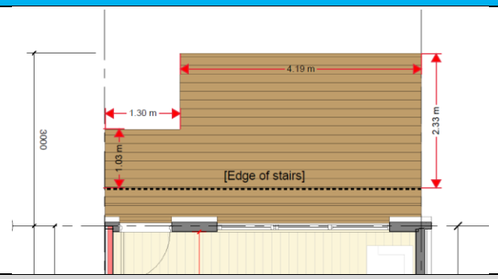		
25. Please provide an accurate assessment of the proposal against Standard H4.6.14. The AEE specified compliance with this standard without any explanatory comments. However, a number of inconsistencies have been identified. In relation to this: a. Please identify those locations where the combined height of retaining walls and fencing within a 3 m yards from the eastern and southern boundaries will be greater than 1.8 m in height above the ground level at the adjacent boundary. b. Where a 1.2 m fence is proposed on top of retaining walls in these yards, this would be in all locations where the retaining wall height is greater than 0.6 m, such as adjacent to Units 15 to 20, 23 and 24 and 59. c. Please identify those locations where the combined height of retaining walls and fencing within a 3 m yards from the eastern and southern boundaries will be greater than 1.4 m in height above the ground level at the adjacent boundary. Please identify if this is less than 50% of the site frontage. d. Please identify those locations where the combined height of retaining walls and fencing within a 1 m yard from the northern boundary will be greater than 2.0 m in height above the ground level at the adjacent boundary. e. Where a 1.2 m fence is proposed on top of retaining walls in these yards, this would be in all locations where the retaining wall height is greater than 0.8 m, such as adjacent to Units 3 to 7 and 14. f. Subsequently, please list all inconsistencies with Standard H4.6.14 and provide an appropriate assessment of environmental effects.		
26. Please identify those locations where the combined height of retaining walls and fencing within a 1 m yard from the northern boundary and 3 m yards from the eastern and southern boundaries will be greater than 2.0 m in height above the ground level at the adjacent boundary. For these locations, please identify an inconsistency with Standard H4.6.14 and provide an appropriate assessment of environmental effects. *Where a 1.2 m fence is proposed on top of retaining walls in these yards, this would be in all locations where the retaining wall height is greater than 0.8 m, such as adjacent to Units 6, 14 to 18, 23, 24 and 59.*		
27. The AEE (on page 46) refers to detention tanks for stormwater being provided, although the infrastructure report states that stormwater attenuation is disregarded. Please clarify whether any rainwater tanks are proposed and assess these against Standard H4.6.16 (which the AEE states the proposal complies with without providing any comments). If any inconsistency with this standard is identified, please provide an assessment of environmental effects proposed in relation to these inconsistencies.		No stormwater tanks are provided. The relevant section of the AEE should read 'N/A' rather than complies.
Parking and Access		
28. Please clarify the impervious area that is associated a "High contaminant generating car park" as per the definition in Chapter J of the AUP – therefore including associated accessways, manoeuvring, entries and exits. If this is more than 5,000 m², please provide an assessment against the relevant matters of control listed in section E9.7.1(1).		
29. Please clarify whether the proportion of the impervious area associated a "High contaminant generating car park" in relation to the total proposed impervious area. Where this is more than 50%, please specify how all impervious areas will be treated by a stormwater management device as required by Standard E9.6.1.3(4) (or E9.6.2.1(3)).		
30. Please confirm the locations of the proposed Stormwater360 treatment devices on the engineering plans, in order to demonstrate that these will service all applicable impervious areas as per section E9 of the AUP.		
31. Please clarify where secure bicycle parking spaces are provided for Units 60 to 71 and 81, as this is not identified on any of the provided plans. Please clarify how the bicycle parking spaces indicated for Units 42 to 59 and 72 to 80 are secure as these are not positioned behind lockable gates. If an infringement to Standard E27.6.2(6) is identified, please provide an assessment of environmental effects proposed in relation to this infringement.		
32. Please ensure that the plans show all necessary dimensions of the proposed parking spaces in order to confirm compliance with the requirements in Table E27.6.3.1.1. This includes: a. Specifying the widths of the open parking spaces in front of Units 1 to 22 (at least 2.7 m). b. Specifying the width and length of the parallel parking space to the east of Units 62 and 63 (at least 2.1 m in width and 6 m in length).		a. Refer to RA0100 – Proposed Site Plan b. No longer proposed c. No longer proposed d. Refer to RA0100 – Proposed Site Plan e. Refer to RA0100 – Proposed Site Plan

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c. Specifying the widths and lengths of the parallel parking spaces to the north of Unit 64 (at least 2.1 m in width and 6 m in length). d. Specifying the widths of the parking spaces in front of Units 72 to 79 (at least 2.6 m). e. Specifying the width of the parking space for Unit 80 (at least 2.7 m). f. Specifying the widths of the two parking spaces to the east of Units 91 and 92 (at least 2.7 m). It is noted that these spaces are shown as having a width of 2.5 m in the tracking diagrams attached to the Traffic Assessment Report. If these are to have a 2.5 m width, please demonstrate how a 6.7 m manoeuvring space is provided for these.		f. Refer to RA0100 – Proposed Site Plan
33. Units 24 to 41 are provided with double garages with an internal width of 5.3 m. Unit 23 is provided with a double garage with an internal width of 5.25 m. For Units 24, 27, 30, 33 to 35, 38 and 41, it is proposed to store rubbish bins within and against the side of these garages. The proposed 240 litre recycling bins are assumed to have a depth of 0.73 m, leaving only 4.57 m for two parking spaces. The AUP requires a minimum width of 4.8 m for two parking spaces, while NZS2890 identified that a minimum 5.4 m internal width should be provided for double garages (with 300 mm clearance on either side). Please provide additional commentary regarding the appropriateness of the proposed double garage internal widths, including the impacts of requiring bins to be stored in this location.		a. The garages are now proposed as a single car garage. Refer to RA0151 – Proposed Ground Level Floor Plan
34. On Sheet 22 of the provided vehicle tracking, please complete the manoeuvre from the garage of Lot 34 out to Compass Point Way.		
35. Please clarify whether all external parking spaces will be provided with wheel stops. This is recommended in order to avoid overhanding onto adjacent footpaths.		
36. Please clarify how the turning area adjacent to Unit 59 will be kept clear at all times and not be used by residents as additional parking spaces.		
37. Please clarify whether rubbish trucks are expected to travel along JOAL 1. a. If so, please identify how the rubbish truck will be able to undertake a turning manoeuvre. b. If not, please explain where bins for Units 35 to 48 are expected to be collected from.		
38. Please provide a concept lighting plan to demonstrate compliance with Standard E27.6.3.7.		
39. In relation to those sections of the proposed accessway that is less than 5.5 m: a. Please provide dimensions of the minimum widths of each of these sections on the proposed plans, alongside the lengths where the width is less than 5.5 m. b. E27.6.4.3.2(T151) specifies that "The formed width is permitted to be narrowed to 2.75m if there are clear sight lines along the entire access and passing bays at 50m intervals are provided" [emphasis added]. Please clarify whether clear sight lines are provided along the entire access where a width of less than 5.5 m is proposed for part of that access. c. Where an access width of less than 5.5 m is proposed near the intersection of two accesses or the corner of an access, please demonstrate whether clear sight lines are provided to ensure that vehicles do not enter the narrowed section at the same time – refer example below. 		
40. Please clarify whether the following transition within JOAL 3 complies with Standard E27.6.4.4(2). If an infringement is identified, please provide the relevant assessment of environmental effects associated with this (including any positive effects compared to a compliant transition).		

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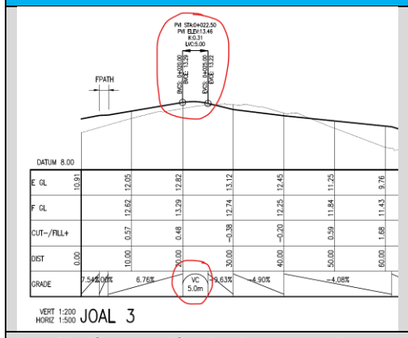
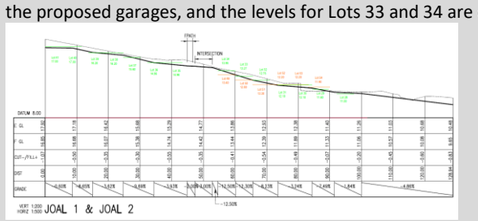
		
41. Significant clarification is requested in order to demonstrate that the proposed gradients of JOALs 1 and 2 and the parking spaces for Units 42 to 59 comply with Standards E27.6.3.6(3) (maximum 5% in any direction for parking spaces), E27.6.3.6(4) (maximum 12.5% for manoeuvring areas) and E27.6.4.4(1) (maximum 12.5% for vehicle access used by heavy vehicles, measured on the inside radius). While the provided longitudinal section for JOALs 1 and 2 shows a maximum gradient of 12.5%, there is doubt in regard to practicality of tying into adjacent garages and parking spaces while not exceeding this gradient in any direction. This doubt results from the following observations, amongst others: a. The finished levels for the adjacent lots being up to 0.7 m different from the levels of the adjacent accessway, as shown on the provided longitudinal section for JOALs 1 and 2. It is further noted that the levels shown for Lots 23 to 41 are the flat levels of the proposed garages, and the levels for Lots 33 and 34 are over 0.5 m higher than level of the adjacent accessway.  b. The 3D imagery provided within the architectural plans seemingly shows JOAL 2 is not flush with the garages of Units 23 to 41, including 'covering over' part of the garage doors.  c. The spot heights of 13.54m and 13.81 m adjacent to Lots 33 and 34 shown on Sheet 202 are approximately 1.2 m apart, indicating a gradient of 22.7% (1 in 4.4) in this location.		

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 c. The parking spaces for Lots 42 to 59 commence against JOALs 1 and 2. Where the JOAL has a grade of more than 5%, part of those parking spaces would subsequently be more than 5%. This appears to impact the parking spaces for Lots 46, 49, 50, 51 and 54. It is calculated that an additional depth of at least 1.65 m would be required between the edge of a 12.5% grade accessway and a 5% grade parking space (with a grade of 12.5% for the transition). Therefore, in order for compliant gradients to be achieved for the parking spaces of Lot 49, its depth from the edge of the 5.5 m accessway would need to be at least 6.65 m, when it is only 5 m (when excluding consideration of a 1 m overhang). A highly-detailed finished contour plan should be provided in order to demonstrate how the proposed levels can be achieved while complying with the relevant maximum gradients. It would also be helpful to provide sections showing the change in gradient along the tracking curves for some of the steeper manoeuvres, such as to and from the parking spaces for Lots 49 to 51 and 32 to 34. If any infringements to Standards E27.6.3.6(3), E27.6.3.6(4) and/or E27.6.4.4(1) are identified as a result, please provide the relevant assessment of environmental effects associated with this.		
42. The plans demonstrate that part of the 5 m depth for the parking spaces associated with Units 42 to 59 are to be planted. In relation to this: a. Please confirm the depth of this planting strip, noting that an overhang of up to 1 m is provided for by Note 2 to Table E27.6.3.1.1. b. Please confirm whether the species proposed within this planting strip are suitable within a parking space overhang and would not promote vehicles not using this overhang and 'sticking out' on to the adjacent vehicle accessway. *Any structures or landscaping that can grow beyond a height of 170 mm above the car park level has the potential to hinder parking and cause damage to parked vehicles and would not be considered appropriate within a parking space overhang.*		
Infrastructure and Servicing		
43. Please clarify whether a Stormwater Management Plan has been provided to Healthy Waters independently to this resource consent application and whether that SMP has been adopted.		
44. The please clarify how mail services will readily access each dwelling's letterboxes. The landscape drawings show that the letterboxes for Units 42 to 92 will be adjacent to the internal communal path network, where legal public access is not provided. Evidence that NZ Post would service these letterboxes should be provided. Otherwise, there may be the need to provide for communal letterboxes, with suitable access arrangements, adjacent to a public road.		
45. Drawing RA0120 shows that individual bins for Units 35 to 48 would be collected from JOAL 1. However, the application has not assessed the suitability of rubbish truck access along JOAL 1, including how rubbish truck turning would occur (this has only been demonstrated for JOAL 2). Please clarify where individual bins for Units 35 to 48 would be collected from and demonstrate that those routes can be traversed by a rubbish truck without resulting in adverse traffic safety issues.		
Natural Hazards		
46. The provided geotechnical report appears to relate specifically to the proposed retaining wall along the western boundary of the site. This refers to an earlier report referenced "J00538AA Geotechnical Investigation Report_r0", which is inferred to have considered the site as a whole. In order to confirm the geotechnical suitability of the site for the proposed development and the subdivision – in terms of compliance with Standard E36.6.1.11 (if applicable) and considerations under section 106 of the RMA – please provide a copy of this GIR.		Please see attached.
47. The proposal includes the redirection of an overland flow path, including the amendment to the exit point at the site boundary. The AEE states that "The flow has a catchment less than 4ha therefore does not require further assessment under the AUP" – however, this is incorrect, as the definition of overland flow path in Chapter J of the AUP excludes catchments less than 4,000 m^2. The overland flow path at the site has a catchment of between 4,000 m^2 and 1 ha (the infrastructure report estimates this to be 5,485 m^2) and therefore: a. Please identify rule E36.4.1(A41) and the infringement of Standard E12.6.2(12) as reasons for consent associated with the change to the overland flow path exit point and provide the associated assessment of environmental effects. b. Please identify rule E36.4.1(A42) as a reason for consent associated with the establishment of buildings and structures within the (existing) overland flow path and provide the associated assessment of environmental effects. c.		

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Works within public reserve and road berms		
48. Please clarify whether an application has been made to Auckland Council for Land Owner Approval in order to complete all works proposed within the public reserve between the site and Ara Tai.		
49. Please confirm whether works associated with the existing pohutukawa trees within the reserve land will comply with the following standards. If they will not, please identify any additional reasons for consent and provide the relevant assessment of environment effects. a. For any tree trimming or alteration, Standard E16.6.1. b. For any works within the protected root zones, Standard E16.6.2.		
50. Please clarify the grades of the pedestrian paths proposed within the public reserve and assess whether these are suitable for the sole dedicated pedestrian access routes to Units 1 to 15.		
51. Please clarify the grades of the individual path connections proposed within berm of Pigeon Mountain Road and assess whether these are suitable for the sole dedicated pedestrian access routes to Units 16 to 22.		
52. Please clarify the grades of the individual path connections proposed within berm of Compass Point Way and assess whether these are suitable for the sole dedicated pedestrian access routes to Units 23 to 41.		
53. Please demonstrate the practicality of establishing the proposed paths within the public reserve and the path connections in the adjacent road berms and advise of any additional earthworks or retaining structures that would be necessary to complete these works. If an additional works would be required, please identify any further reasons for resource consent and provide an appropriate assessment of environmental effects.		
54. Please clarify whether you would accept conditions of consent that prevent occupation of Units 1 to 15 and section 224(c) certification for the proposed subdivision prior to the completion of all proposed footpaths within the public reserve. If this is not accepted, please provide assessment of urban design and traffic safety effects associated with pedestrian access to Units 1 to 15 solely being from JOAL 4. *It would be at the applicant's risk as to whether all necessary approvals, including Land Owner Approval, for those paths could be obtained. Approval of the resource consent would not guarantee that all other necessary approvals are granted.* 55. Please clarify whether you would accept conditions of consent that prevent occupation of Units 16 to 22 and section 224(c) certification for the proposed subdivision prior to the completion of individual path connections to the footpath along Pigeon Mountain Road If this is not accepted, please provide assessment of urban design and traffic safety effects associated with pedestrian access to Units 16 to 22 solely being from JOAL 4. *It would be at the applicant's risk as to whether all necessary approvals for those path connections could be obtained. Approval of the resource consent would not guarantee that all other necessary approvals are granted*		
56. Please clarify whether you would accept conditions of consent that prevent occupation of Units 23 to 41 and section 224(c) certification for the proposed subdivision prior to the completion of individual path connections to the footpath along Compass Point Way If this is not accepted, please provide assessment of urban design and traffic safety effects associated with pedestrian access to Units 23 to 41 solely being from JOAL 1 or JOAL 2. It would be at the applicant's risk as to whether all necessary approvals for those path connections could be obtained. Approval of the resource consent would not guarantee that all other necessary approvals are granted.		
Subdivision		
57. The scheme plan appears to suggest that Lots 93 to 115 (parking space lots) would be created as separate landlocked sites with their own Records of Title, which is not acceptable to Council. Please clarify what amalgamation conditions are proposed in order to ensure that Lots 93 to 115 are held with one of Lots 1 to 92? If possible, please specify the exact lots the each of Lot 93 to 115 would be amalgamated with. Alternatively, please identify what parameters will be followed when determining amalgamations at section 223 stage. For example, it could be identified that certain groups of parking space lots would be attributed to certain groups of dwelling lots. The following arrangement (or similar) is assumed and would be accepted: Lots 93 and 91 Lots 99 and 85 Lots 105 and 66 Lots 111 and 62 Lots 94 and 90 Lots 100 and 84 Lots 106 and 67 Lots 112 and 63 Lots 95 and 89 Lots 101 and 83 Lots 107 and 68 Lots 113 and 64 Lots 96 and 88 Lots 102 and 82 Lots 108 and 69 Lots 114 and 71 Lots 97 and 87 Lots 103 and 81 Lots 109 and 60 Lots 115 and 70 Lots 96 and 86 Lots 104 and 65 Lots 110 and 61		
58. As outlined in Council's Standard Conditions Manual for Subdivision, Council must ensure that appropriate consent conditions are in place to enable the continued operation and maintenance of the privately-owned common infrastructure over its lifetime. For this application, this applies to the common accessway, footpaths, rubbish bin enclosures and bicycle storage areas within the proposed commonly owned access lots. Please confirm the intention for either a common entity, resident association or incorporated society		

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to be established that would be responsible for the ongoing operation, maintenance and repair of the access (which the owners of all lots would be required to be members of), or otherwise identify an alternative method by which this would be achieved.		
59. Please confirm whether the following condition of consent can be adopted as part of the proposal: The subdivision must be undertaken in accordance with the land use resource consent referenced as LUC60419133 (BUN60419132). To ensure that this condition is complied with on a continuing basis, the following must be registered as a consent notice on the records of title to be issued for all lots: *"This lot has been created in accordance with approved land use resource consent LUC60419133 (BUN60419132). All development on this lot must be in accordance with the approved land use resource consent referenced as LUC60419133 (BUN60419132), including all its conditions.* *In particular, there must be no increase to impervious area, increase in building coverage or decrease in landscaped area from that shown in the lot on the plans stamped and referenced by the council as resource consent number LUC60419133 (BUN60419132), in order to ensure that any adverse future development effects arising as a result of the subdivision are avoided.* *If land use resource consent LUC60419133 (BUN60419132) lapses prior to being given effect to, then a new land use resource consent will be required, unless the proposed use and development of the lot is otherwise able to be undertaken as a permitted activity."* If this condition is not adopted in full, please identify how the creation of any future development effects as a result of the distribution of impervious area, building coverage or landscaped area will be avoided. This could be achieved through imposing restrictions on increased in impervious area and building coverage or reductions in landscape area for specific lots, following an assessment of each of these coverages for each of the proposed allotments.		OK
60. The AEE identifies that "two new roads and accessways will either be vested with Council or managed by a Residents Association allowing for access and improving pedestrian accessibility". However, the scheme plan does not show any lots to be vested in Council. Please confirm that all roads and accessways will be held in Lot 200 and managed by a residents association (or similar, as per the response to the item above), with none vested in Council.		
61. The inclusion of landscaped areas, cycle storage areas, rubbish bin storage areas and pedestrian paths – all of which are not intended to be trafficable by vehicles – within a commonly-owned access lot containing a vehicle accessway is in conflict with section 298 of the Property Law Act 2007, which gives all owners of a share in a access lot that includes a driveway the right to pass and repass over all of the COAL, including the right to have the COAL kept free of obstructions at all times. Council's preference is for either: a. Additional commonly own lots to be created for non-trafficable areas, separate to a COAL for the accessway; or b. Lot 200 to be owned by an incorporated society that the owners of all other lots are required to be members of (this would result in the requirements of section 298 of the Property Law Act 2007 not being applicable). Please advise whether you will make any changes to the subdivision scheme plans based on this advice.		
Changes to the Proposal		
62. Should any changes be made to the proposal in conjunction with the response to this section 92 request, please provide all information necessary to satisfy the requirements of Schedule 4 of the RMA for those changes. This includes any additional assessment (to the satisfaction of Council) related to any new reasons for consent or any new or increased infringement of or inconsistency with any relevant AUP standards.		
Groundwater		
On the basis of the information provided we do not concur with the statement from TGE TGE has not established the groundwater levels at the two locations where the deepest excavations are proposed adjacent to the western boundary of the site. We consider that based on the information provided, it is not possible to determine whether or not a consent is required for dewatering and groundwater diversion. a. Two additional hand auger boreholes are required with standpipe piezometers installed in the vicinity of proposed deepest excavations adjacent to the western boundary of the site. Response zones are to be set over the excavation interval and groundwater level measurements are to be undertaken as follows: 48 hours after augering, 7 days and 14 days after augering		a. We have referred to the latest earthwork plan provided by Airey on 2023.08.11 as the attached. We propose two additional hand augers HA09 & HA10 as requested at the deepest excavation points (approximate 2.2 -2.4 m deep excavation). The hand augers will target 5.0 m bgl and the standpipe piezo will be screened from 2.0 m to the bottom. Please refer to the attached proposed HA plan and we will pass on the groundwater monitoring results once completed. b. We will carry out the groundwater taking & diversion assessment after the proposed groundwater monitoring regime.

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b. Once the groundwater levels measurements have been completed the Applicant should provide Council with an assessment of the proposed activity against AUP (OP) Standards E7.6.1.6 (1 to 3) and E7.6.1.10 (1 to 6), based on the most up to date Architects & Engineers plans.		
Traffic		
1. Please confirm the provision of pedestrian facilities and the exclusive route designated for Blocks E, F, G and H noting the rubbish placement location and bicycle parking spaces.		
2. Traffic report states that all parking spaces comply with the minimum standards. It was upon assessment of the Architect plans that the proposed Garage spaces are not compliant with the minimum dimensions (double garage clearance envelope – 5.5m wide x 5.4m length). Please provide further analysis of all the garage spaces proposed with garage dimensions annotated on the plans and accordingly show compliance.		
3. Please provide a context site plan that shows all details at the road frontage (both Compass Point way and Pigeon Mountain Road) and its relationship to the location of the two-way vehicle crossings. This should include the number of traffic lanes, flush median including width, edge line markings, on street parking, street lighting pole, catch pit and any other road furniture for the full frontage of the site. Note – any change in sign and markings will require resolution report to be approved by Auckland Transport		
4. Please provide signage and markings plan (directional arrows within the boundary to route traffic flows) including analysis of how cross-roads (private) and 90-degree bends will function within JOALS? This information is required to ensure operations and safety of internal driveway traffic is maintained.		
5. Please confirm if there will be any sightlines issue (visibility envelope) given 90-degree bend around the proposed driveway? Please provide assessment and accordingly provide mitigations to ensure safe ingress/egress of vehicles at all times. Note – Auckland Council recommends use of convex mirror to mitigate safety effect.		
6. Please provide mitigation of how slow speed environment will be maintained along the proposed JOAL. Note – AC suggests use of speed humps to maintain 30km/hr environment.		
7. Visibility splays should be provided on either side of all vehicle crossings in accordance with Figure 3.3 of Standard ASNZS2890.1-2004 (2.0m x 2.5m splays), whereby any vegetation within the splay area should be limited to 0.6m in height and any fencing should be permeable and restricted to a maximum of 1m in height. In this regard, adequate visibility can be achieved between exiting vehicles and oncoming pedestrians. Please provide detailed analysis and annotate the same on the plans.		
8. Please provide inter-visibility assessment around crossroads and around 90 degree bends to ensure cars can pass each other (tracking) without any blockage from infrastructure (such as fence).		
9. Please show and annotate on the Engineering drawings the proposed (all) car park spaces with their associated Length, Width and depth dimensions.		
10. Wheel stops are required where a parking space would otherwise (or has a potential to) overhang onto a pedestrian walkway/footpath. Please provide reasoning for not providing wheel stops as part of the proposal.		
11. Please provide a lighting plan prepared by suitably qualified lighting engineer to demonstrate that consistent and uniform lighting is proposed at communal areas where people movement is expected. JOAL and the common access areas need to ensure safe access after dark, as required under Standard E27.6.3.7. AUP recommends that lighting for pedestrian areas should be calculated in accordance with AS/NZS1158 series of standards and that is following Chapter E24 Lighting of the AUP (OP).		
12. The proposal is for 92 residential dwellings which will have only ONE access way to road reserve. Please provide reasoning for not providing vehicle crossing to Auckland Transport's commercial standards.		
a) Consent is required for ONE loading space to be provided for residential activities exceeding 5,000m2. No loading space is shown on the plans, and this is not supported by Council. Note – the proposed JOAL will be heavily shared amongst active mode transport and loading space utilising informal space around the JOAL is not supported.		