

## SHEET LIST

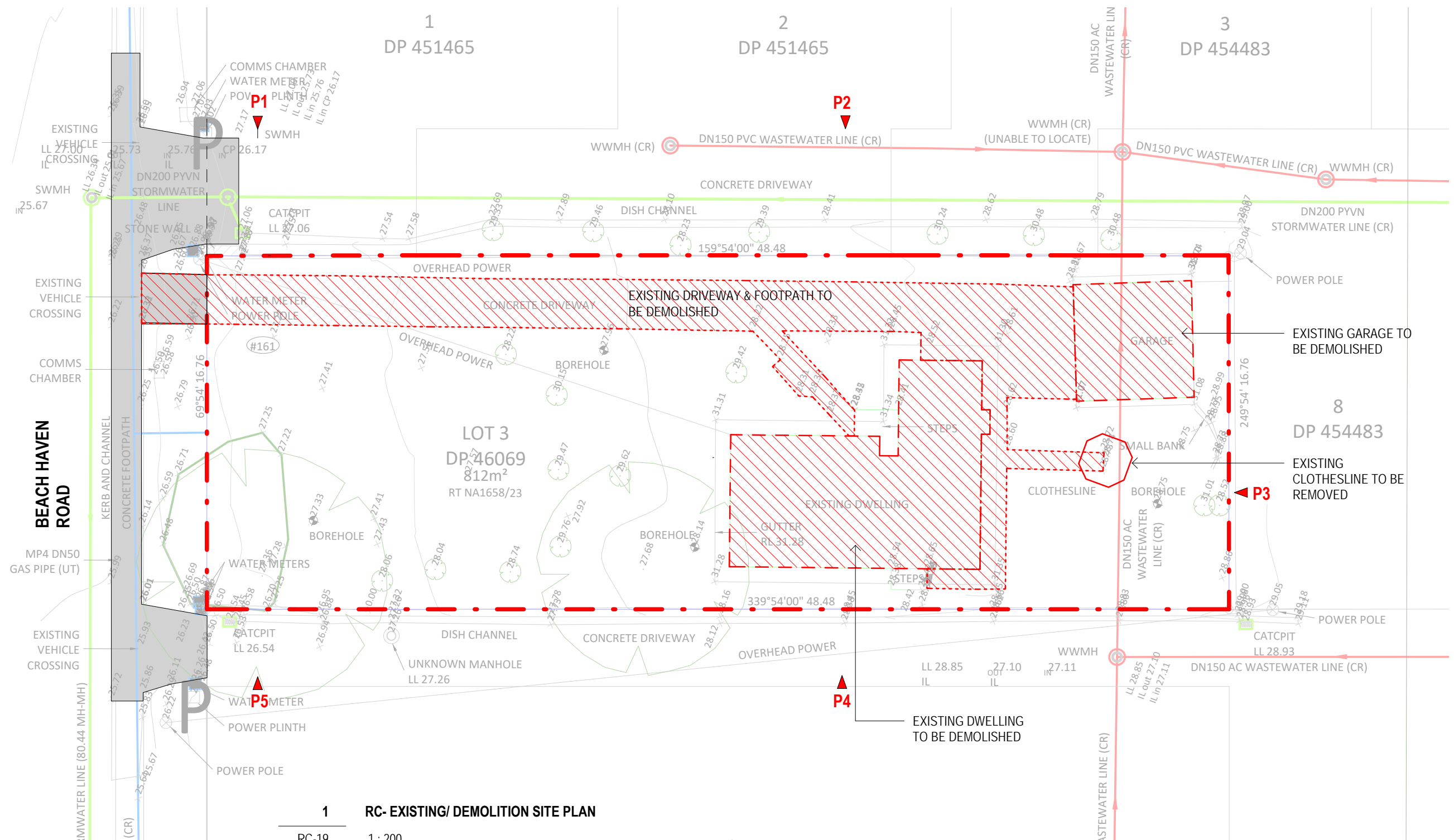
SHEET NUMEBR	SHEET NAME	REVISION	CURRENT STATUS
RC-01	COVER SHEET	H	RC S127 APPLICATION
RC-02	OPTIONS EXPLORED		
RC-03	EXISTING DEMOLITION PLAN	D	RC S127 APPLICATION
RC-04	SITE - PROPOSED PLAN	G	RC S127 APPLICATION
RC-05	SITE - GROUND FLOOR PLAN	G	RC S127 APPLICATION
RC-06	SITE - LEVEL 1 PLAN	E	RC S127 APPLICATION
RC-07	SITE - LEVEL 2 PLAN	E	RC S127 APPLICATION
RC-08	TYPICAL FLOOR PLAN- APARTMENT A	E	RC S127 APPLICATION
RC-09	TYPICAL FLOOR PLAN- APARTMENT B	F	RC S127 APPLICATION
RC-10	SITE- HiRTB	G	RC S127 APPLICATION
RC-11	SITE - BUILDING COVERAGE	E	RC S127 APPLICATION
RC-12	SITE- IMPERMEABLE AREA	E	RC S127 APPLICATION
RC-13	SITE - LANDSCAPE AREA	E	RC S127 APPLICATION
RC-14	SITE - OUTDOOR LIVING SPACE	E	RC S127 APPLICATION
RC-15	SITE - GROUND FLOOR ROOM OUTLOOK	E	RC S127 APPLICATION
RC-16	SITE - LEVEL 1 ROOM OUTLOOK	D	RC S127 APPLICATION
RC-17	SITE - LEVEL 2 ROOM OUTLOOK	D	RC S127 APPLICATION
RC-18	SOLAR STUDIES	F	RC S127 APPLICATION
RC-19	PROPOSED SITE ELEVATIONS	H	RC S127 APPLICATION
RC-20	PROPOSED SITE ELEVATIONS	H	RC S127 APPLICATION
RC-21	PERSPECTIVES	G	RC S127 APPLICATION
RC-22	DESIGN DATA SHEET	E	RC S127 APPLICATION

NOT INCLUDED

NOTES:




ARCHITECTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH OTHER CONSULTANTS DOCUMENTATION : CIVIL, GEOTECHNICAL, TOWNPLANNING, LANDSCAPING AND TRAFFIC ENGINEERING

## RC S127 APPLICATION

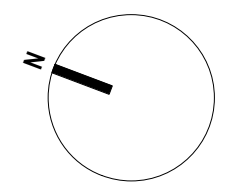


**1 RC- EXISTING/ DEMOLITION SITE PLAN**  
 RC-19 1 : 200

**SITE PLAN GENERAL LEGEND:**

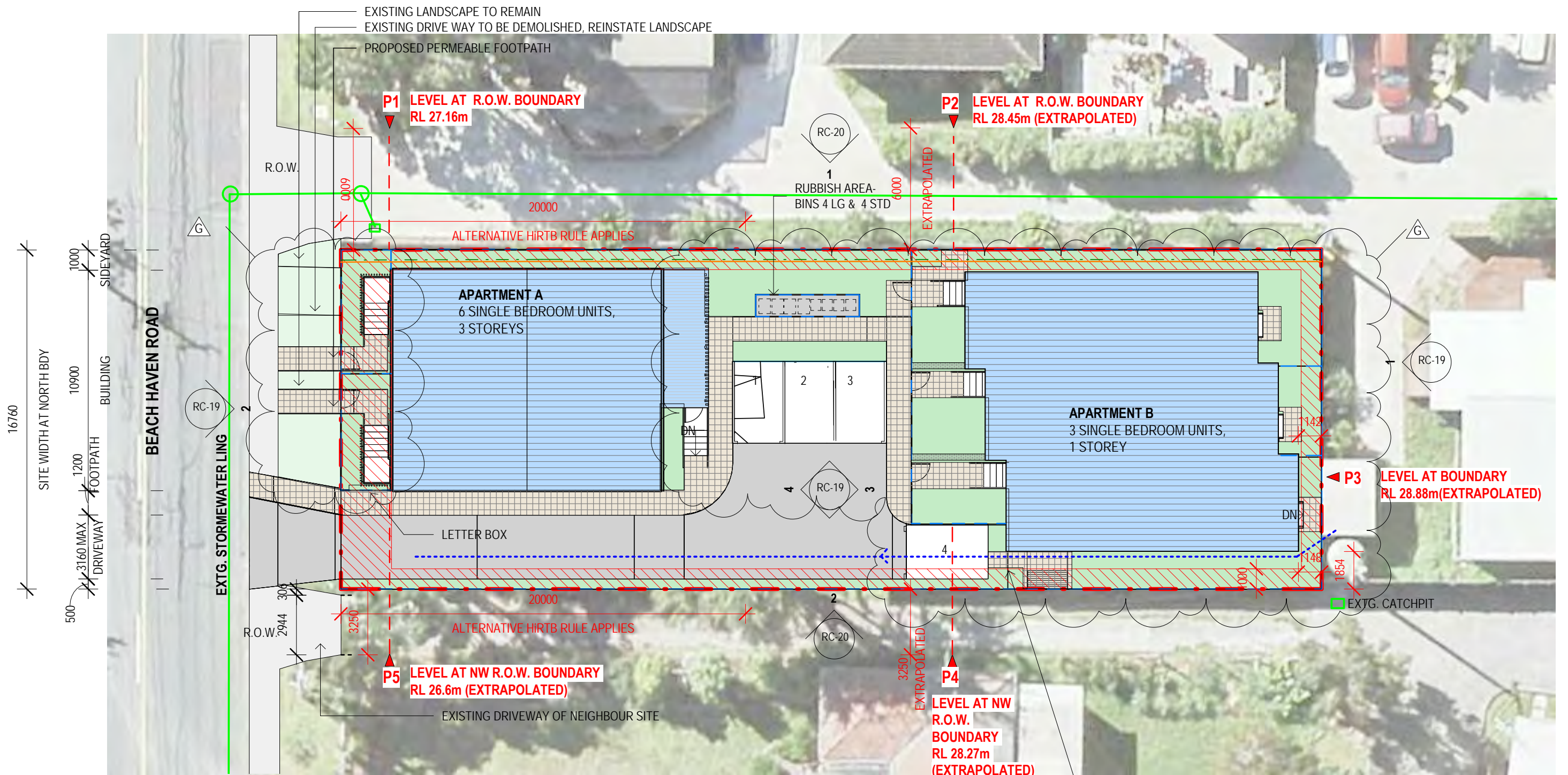
-  EXISTING BUILDING TO BE DEMOLISHED
-  EXISTING DRIVEWAY/ FOOTPATH TO BE DEMOLISHED
-  EXISTING DRIVEWAY/ FOOTPATH TO REMAIN

**NOTE:**  
 REFER TO PROPOSED SITE PLAN AND LANDSCAPE PLAN FOR EXTENT OF REMOVAL OF EXISTING VEGETATION.  
 REFER TO CIVIL DOCUMENTATION FOR MORE INFORMATION



**RC S127 APPLICATION**

ISSUE	DATE	REVISION
A	2019/07/26	RC
B	2019/09/11	RC APPLICATION
C	2019/10/16	RC APP AMENDMENT
D	2021/10/15	RC S127 APPLICATION



1 SITE - PROPOSED SITE PLAN

RC-19 1:200

OLFP DETAILS REFER TO CIVIL ENGINEER DOCUMENT FOR MORE INFORMATION

SITE PLAN GENERAL LEGENDS:

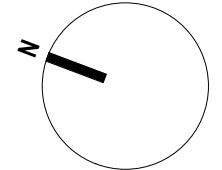
- YARDS SET BACK
- LANDSCAPE AREA SHOWN INDICATIVELY, REFER TO LANDSCAPE DOCUMENTATION FOR MORE INFORMATION
- PROPOSED FENCING. REFER TO LANDSCAPE DOCUMENTS FOR MORE INFORMATION
- EXISTING FOOTPATH
- EXISTING LANDSCAPE OUTSIDE OF BOUNDARY
- PROPOSED UNDERGROUND POWER LINE
- PROPOSED FOOTPATH PERMEABLE PAVING/ PAVING STONES
- BUILDING FOOTPRINT
- EXISTING SW LINE, REFER TO CIVIL DOCUMENTATION
- PROPOSED PARKING AREA- PERMEABLE
- HIRTB REFERENCE POINT, REFER TO RC-19 & RC-20 BUILDING ELEVATIONS FOR MORE INFORMATION
- PROPOSED DRIVEWAY IMPERMEABLE SURFACE/ STEPS

SITE INFORMATION

CLIMATE ZONE: 1  
 EARTHQUAKE ZONE: 1  
 EXPOSURE ZONE: D  
 LEE ZONE: NO  
 RAINFALL RANGE: 80-90  
 WIND REGION: A  
 WIND ZONE: MEDIUM  
 LEGAL DESCRIPTION: LOT 3, DP 46069

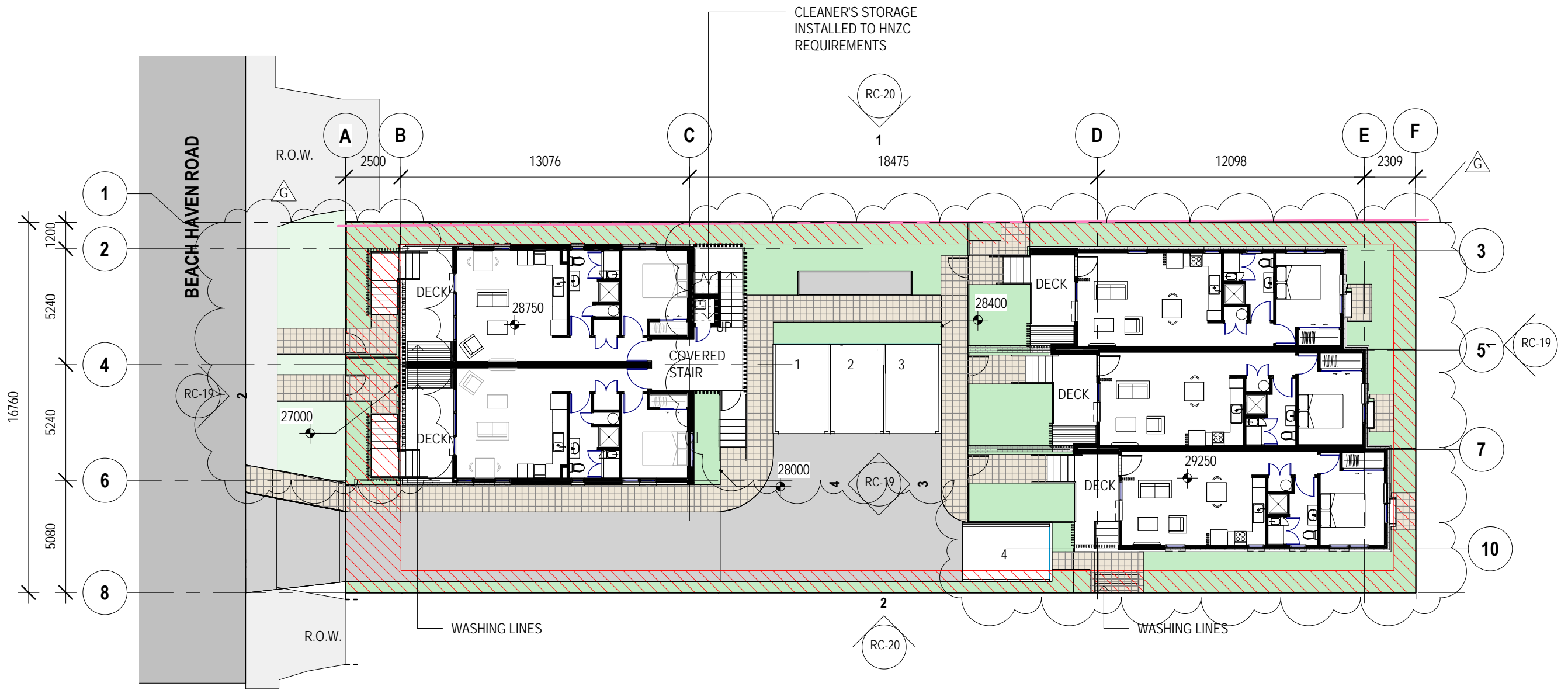
NOTE:

REFER TO LANDSCAPE DOCUMENTATION FOR MORE INFORMATION OF LANDSCAPE, FENCING TYPE AND LAYOUT  
 ALL EXTERIOR STAIRS ARE OPEN TIMBER SLATS UNLESS NOTED OTHERWISE



RC S127 APPLICATION

ISSUE	DATE	REVISION
D	2019/09/06	FOR INFO
E	2019/09/11	RC APPLICATION
F	2019/10/16	RC APP AMENDMENT
G	2021/10/15	RC S127 APPLICATION



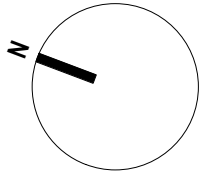
**1 SITE - GROUND FLOOR PLAN**  
RC-19 1 : 200

**APARTMENT A**  
6 SINGLE BEDROOM UNITS, 3 STOREYS

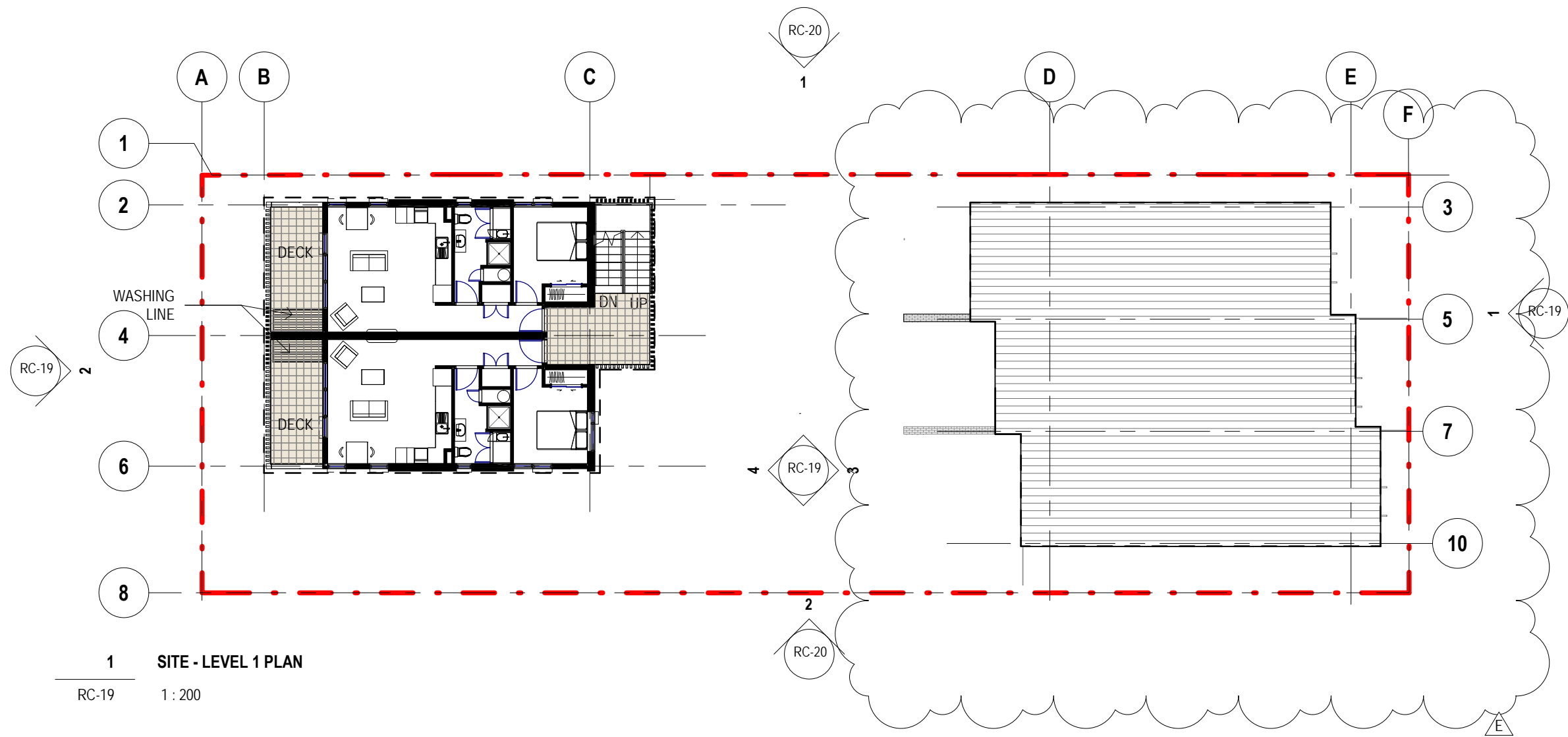
**APARTMENT B**  
3 SINGLE BEDROOM UNITS, 1 STOREY

**SITE PLAN GENERAL NOTES:**

- YARDS SET BACK
- PROPOSED DRIVEWAY IMPERMEABLE SURFACE/ STEPS
- PROPOSED EAVE LINE
- EXISTING FOOTPATH
- LANDSCAPE AREA SHOWN INDICATIVELY, REFER TO LANDSCAPE DOCUMENTATION FOR MORE INFORMATION
- EXISTING LANDSCAPE OUTSIDE OF BOUNDARY
- PROPOSED FOOTPATH PERMEABLE PAVING/ PAVING STONES
- PROPOSED PARKING AREA- PERMEABLE

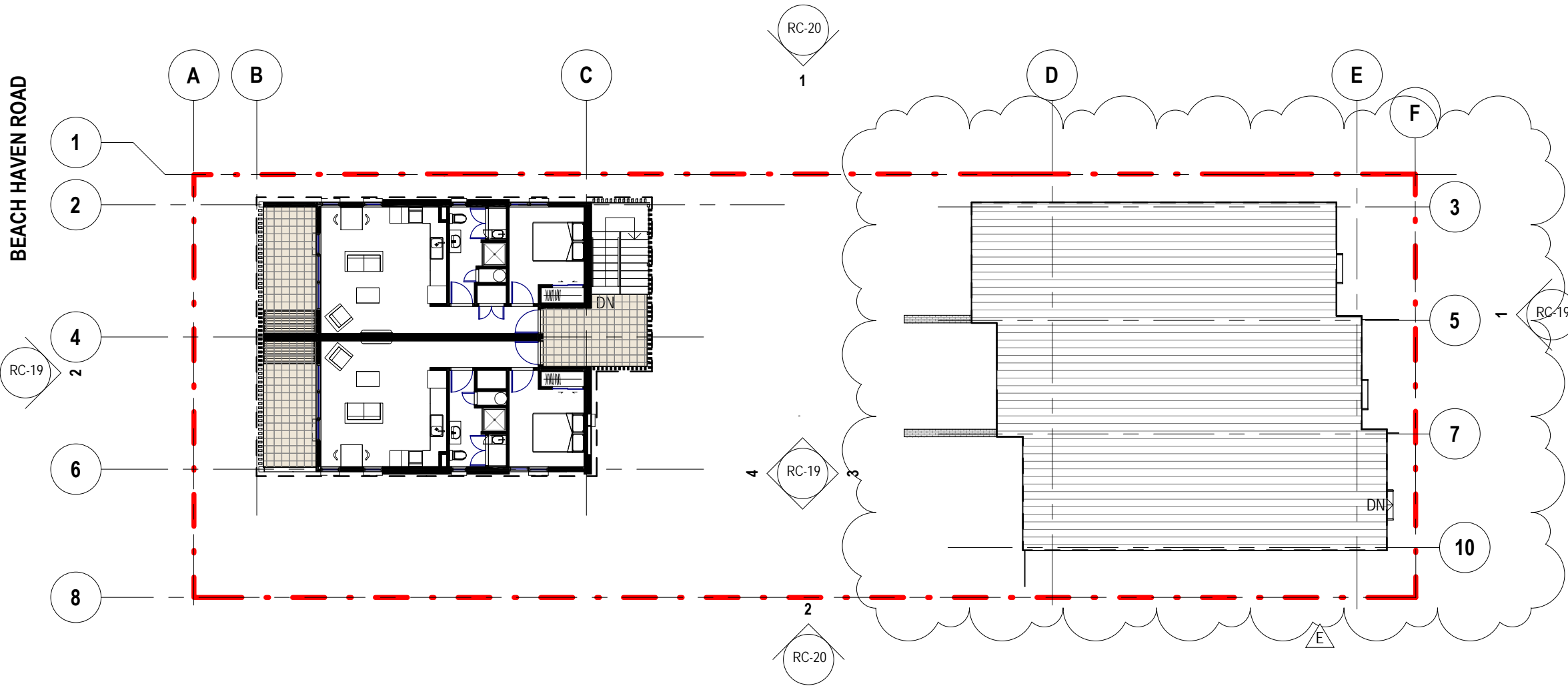


**RC S127 APPLICATION**

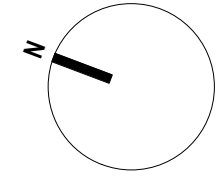


1 SITE - LEVEL 1 PLAN  
RC-19 1 : 200

# RC S127 APPLICATION



1 SITE - LEVEL 2 PLAN  
RC-19 1:200



**RC S127 APPLICATION**

### RISK MATRIX- APARTMENT A

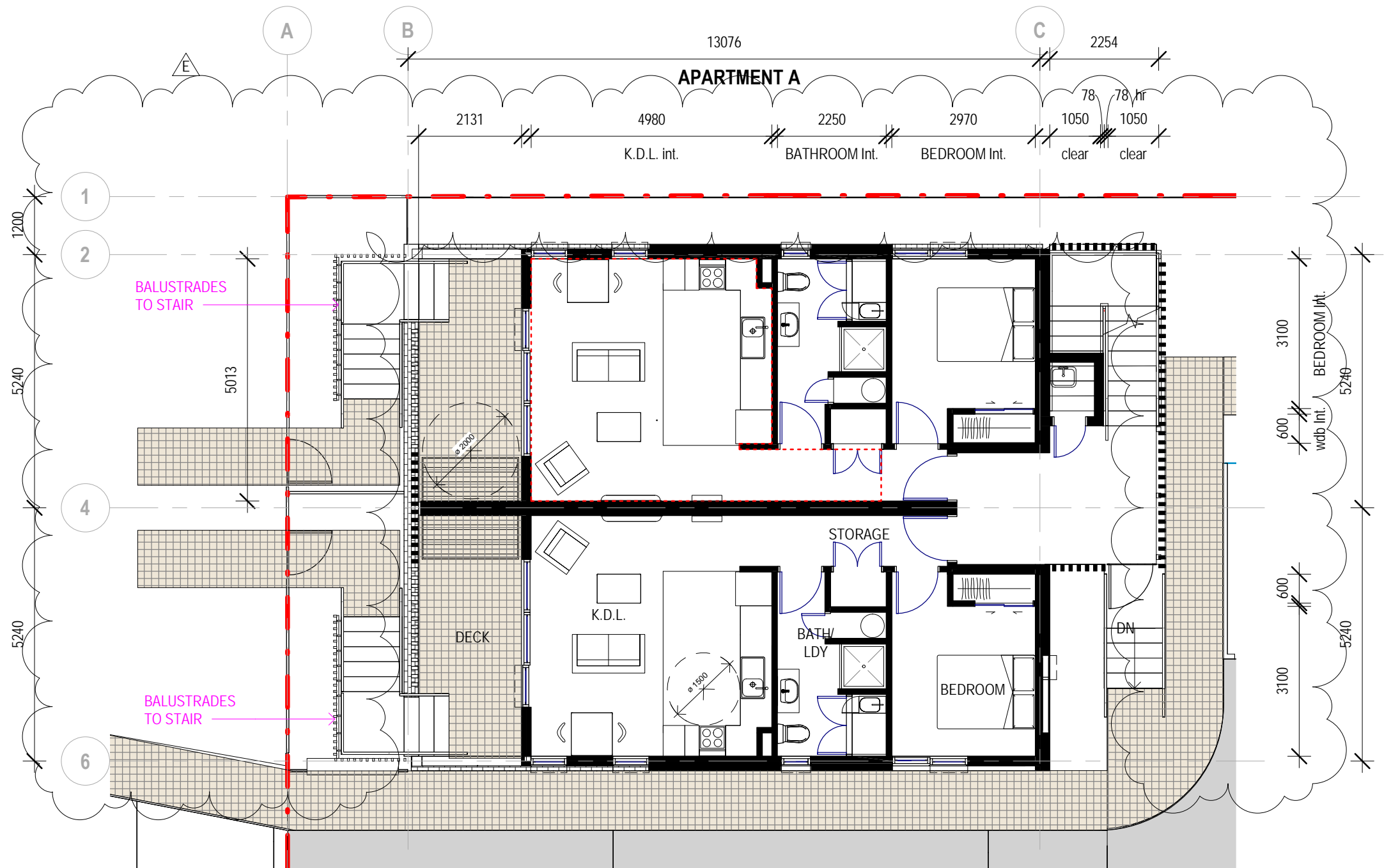
RISK FACTOR	RISK SEVERITY	SCORE
<b>NORTHEAST</b>		
WIND ZONE:	MEDIUM	0
NO. STOREYS:	3 STOREYS	4
ROOF/WALL INTERSECTION:	LOW	0
EAVES WIDTH:	HIGH	2
ENVELOPE COMPLEXITY:	MEDIUM	1
DECK DESIGN:	LOW	0
<b>TOTAL RISK SCORE:</b>		<b>7</b>

RISK FACTOR	RISK SEVERITY	SCORE
<b>NORTH</b>		
WIND ZONE:	MEDIUM	0
NO. STOREYS:	3 STOREYS	4
ROOF/WALL INTERSECTION:	LOW	0
EAVES WIDTH:	LOW	0
ENVELOPE COMPLEXITY:	LOW	0
DECK DESIGN:	MEDIUM	2
<b>TOTAL RISK SCORE:</b>		<b>6</b>

RISK FACTOR	RISK SEVERITY	SCORE
<b>NORTHWEST</b>		
WIND ZONE:	MEDIUM	0
NO. STOREYS:	3 STOREYS	4
ROOF/WALL INTERSECTION:	LOW	0
EAVES WIDTH:	HIGH	2
ENVELOPE COMPLEXITY:	MEDIUM	1
DECK DESIGN:	LOW	0
<b>TOTAL RISK SCORE:</b>		<b>7</b>

RISK FACTOR	RISK SEVERITY	SCORE
<b>SOUTH</b>		
WIND ZONE:	MEDIUM	0
NO. STOREYS:	3 STOREYS	4
ROOF/WALL INTERSECTION:	LOW	0
EAVES WIDTH:	HIGH	2
ENVELOPE COMPLEXITY:	MEDIUM	1
DECK DESIGN:	MEDIUM	2
<b>TOTAL RISK SCORE:</b>		<b>9</b>

\* WIND ZONE INFO TAKEN FROM BRANZ MAPS, STRUCTURAL ENGINEER TO CONFIRM SITE SPECIFIC WIND ZONE IN DEVELOPED DESIGN.



1 RC TYPICAL FLOOR PLAN- APARTMENT A

RC-19 1 : 100

## RC S127 APPLICATION

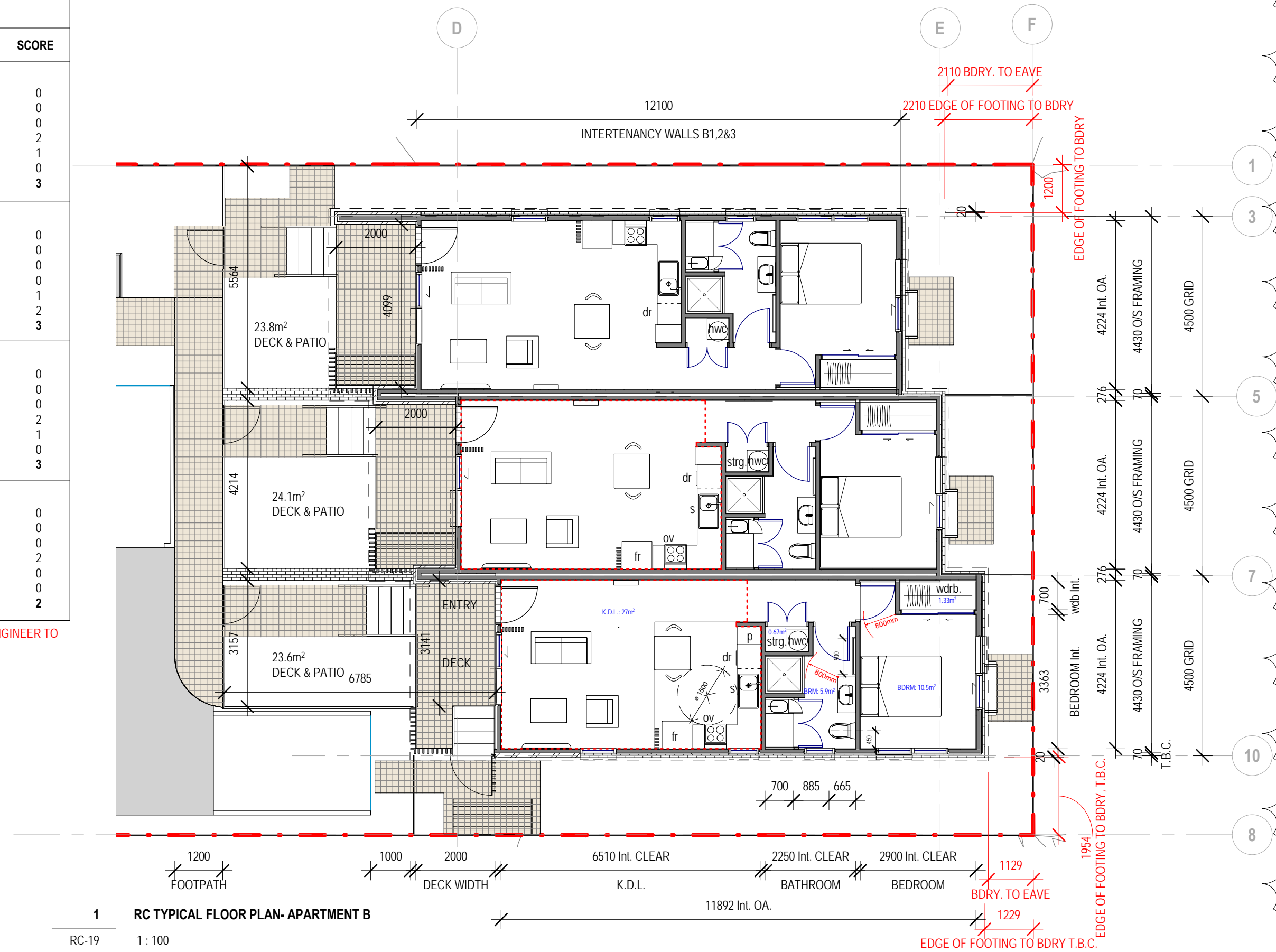
### RISK MATRIX- APARTMENT B

RISK FACTOR	RISK SEVERITY	SCORE
<b>NORTHEAST</b>		
WIND ZONE:	MEDIUM	0
NO. STOREYS:	1 STOREY	0
ROOF/WALL INTERSECTION:	LOW	0
EAVES WIDTH:	HIGH	2
ENVELOPE COMPLEXITY:	MEDIUM	1
DECK DESIGN:	LOW	0
<b>TOTAL RISK SCORE:</b>		<b>3</b>
<b>NORTH</b>		
WIND ZONE:	MEDIUM	0
NO. STOREYS:	1 STOREY	0
ROOF/WALL INTERSECTION:	LOW	0
EAVES WIDTH:	LOW	0
ENVELOPE COMPLEXITY:	MEDIUM	1
DECK DESIGN:	MEDIUM	2
<b>TOTAL RISK SCORE:</b>		<b>3</b>
<b>NORTHWEST</b>		
WIND ZONE:	MEDIUM	0
NO. STOREYS:	1 STOREY	0
ROOF/WALL INTERSECTION:	LOW	0
EAVES WIDTH:	HIGH	2
ENVELOPE COMPLEXITY:	MEDIUM	1
DECK DESIGN:	LOW	0
<b>TOTAL RISK SCORE:</b>		<b>3</b>
<b>SOUTH</b>		
WIND ZONE:	MEDIUM	0
NO. STOREYS:	1 STOREY	0
ROOF/WALL INTERSECTION:	LOW	0
EAVES WIDTH:	HIGH	2
ENVELOPE COMPLEXITY:	LOW	0
DECK DESIGN:	LOW	0
<b>TOTAL RISK SCORE:</b>		<b>2</b>

\* WIND ZONE INFO TAKEN FROM BRANZ MAPS, STRUCTURAL ENGINEER TO CONFIRM SITE SPECIFIC WIND ZONE IN DEVELOPED DESIGN.

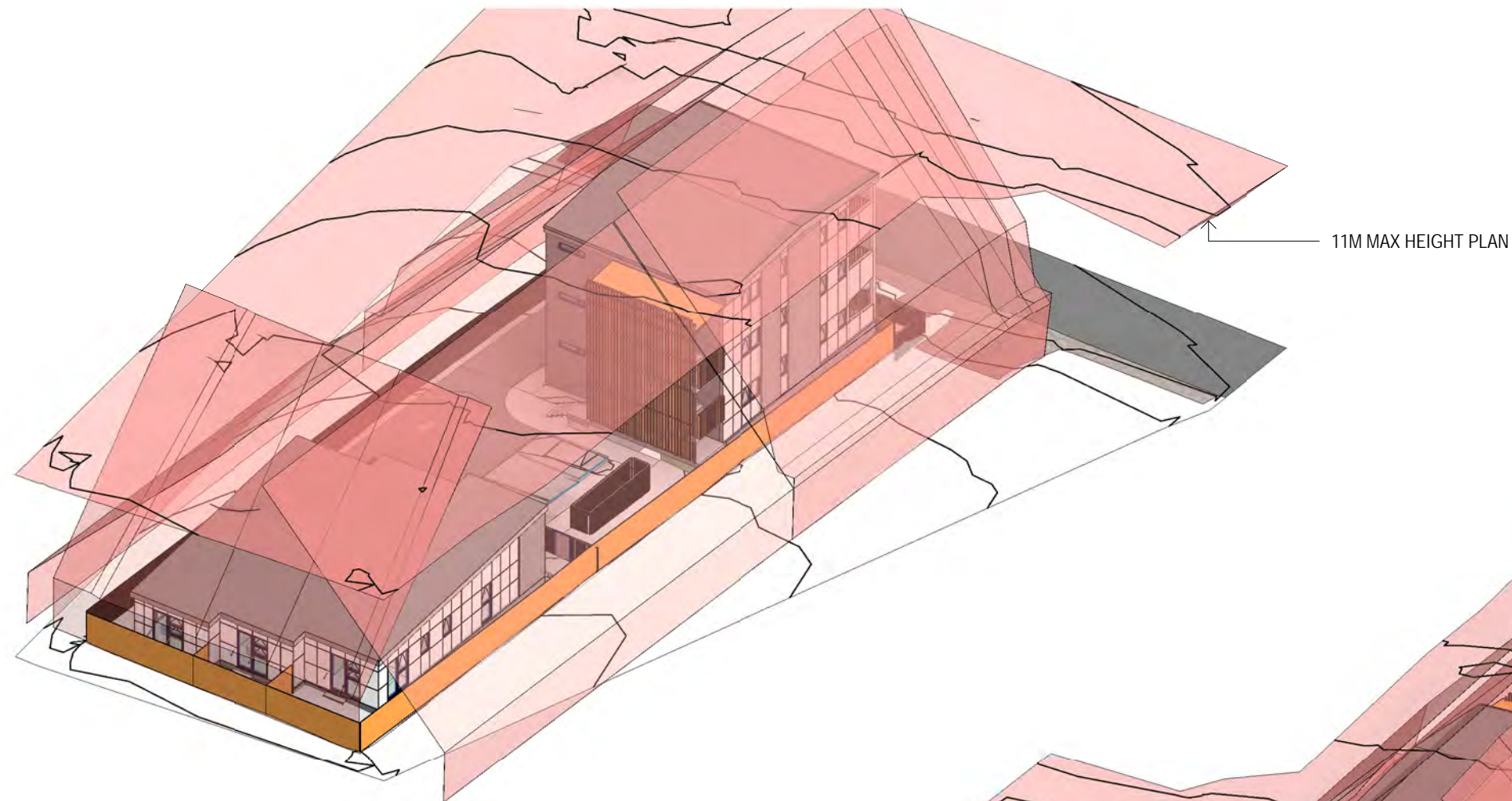
#### UNIT DATASHEET:

GFA:	53.6 m <sup>2</sup>
NFA:	50.2m <sup>2</sup>
NET K.D.L.:	27m <sup>2</sup>
NET BEDROOM:	10.5m <sup>2</sup>
HALL WAY:	1.05m <sup>2</sup>
STORAGE:	2m <sup>2</sup>
COVERED DECK:	8.1m <sup>2</sup> (APT B1 & B2)
	7.1m <sup>2</sup> (APT B3)

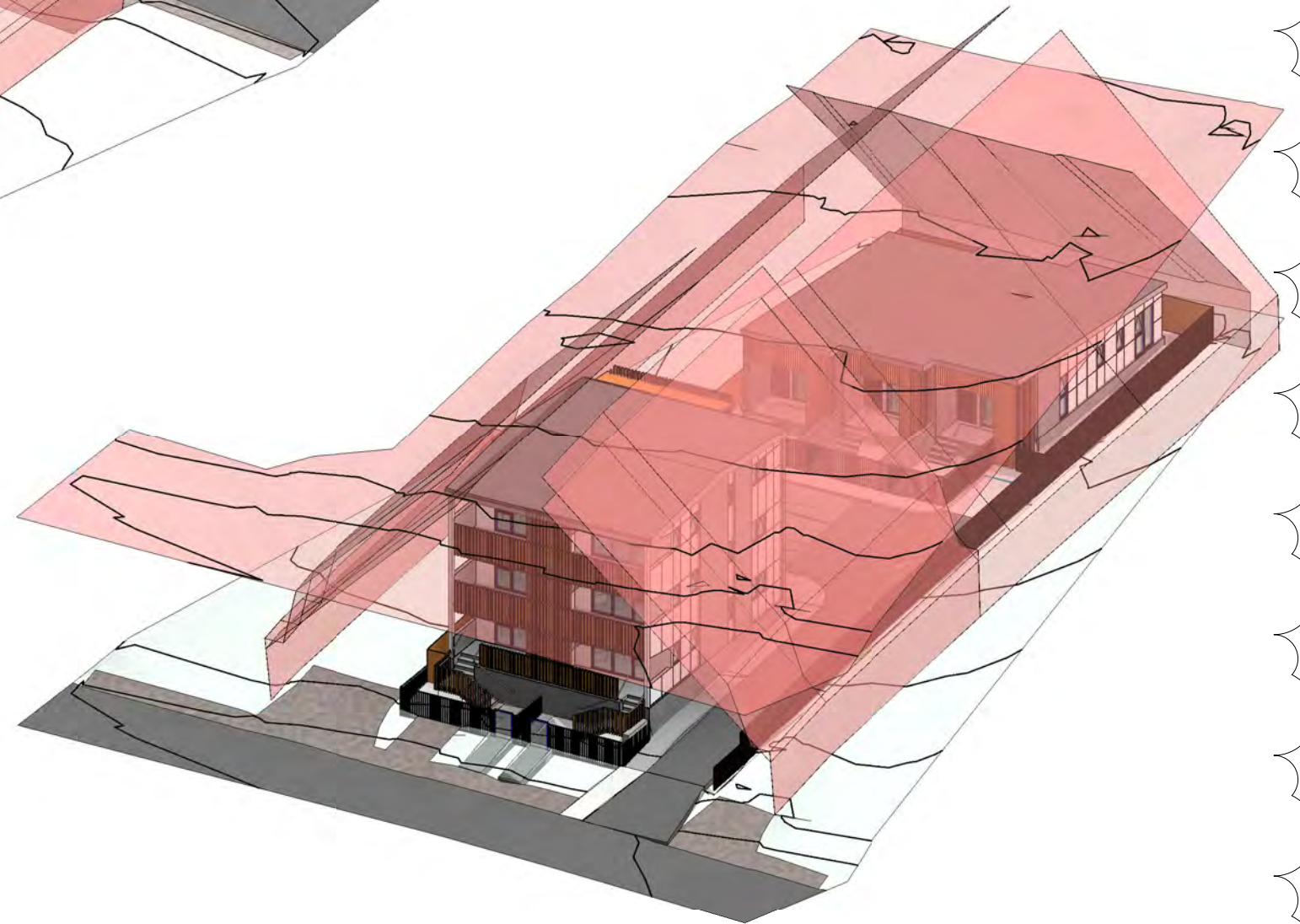


## RC S127 APPLICATION



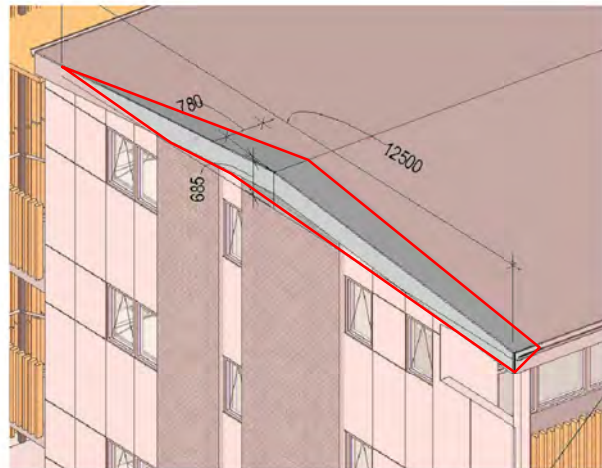


1 RC- SITE ISOMETRIC SE - HRTB1



2 RC- SITE ISOMETRIC NW- HRTB 2

NOTES



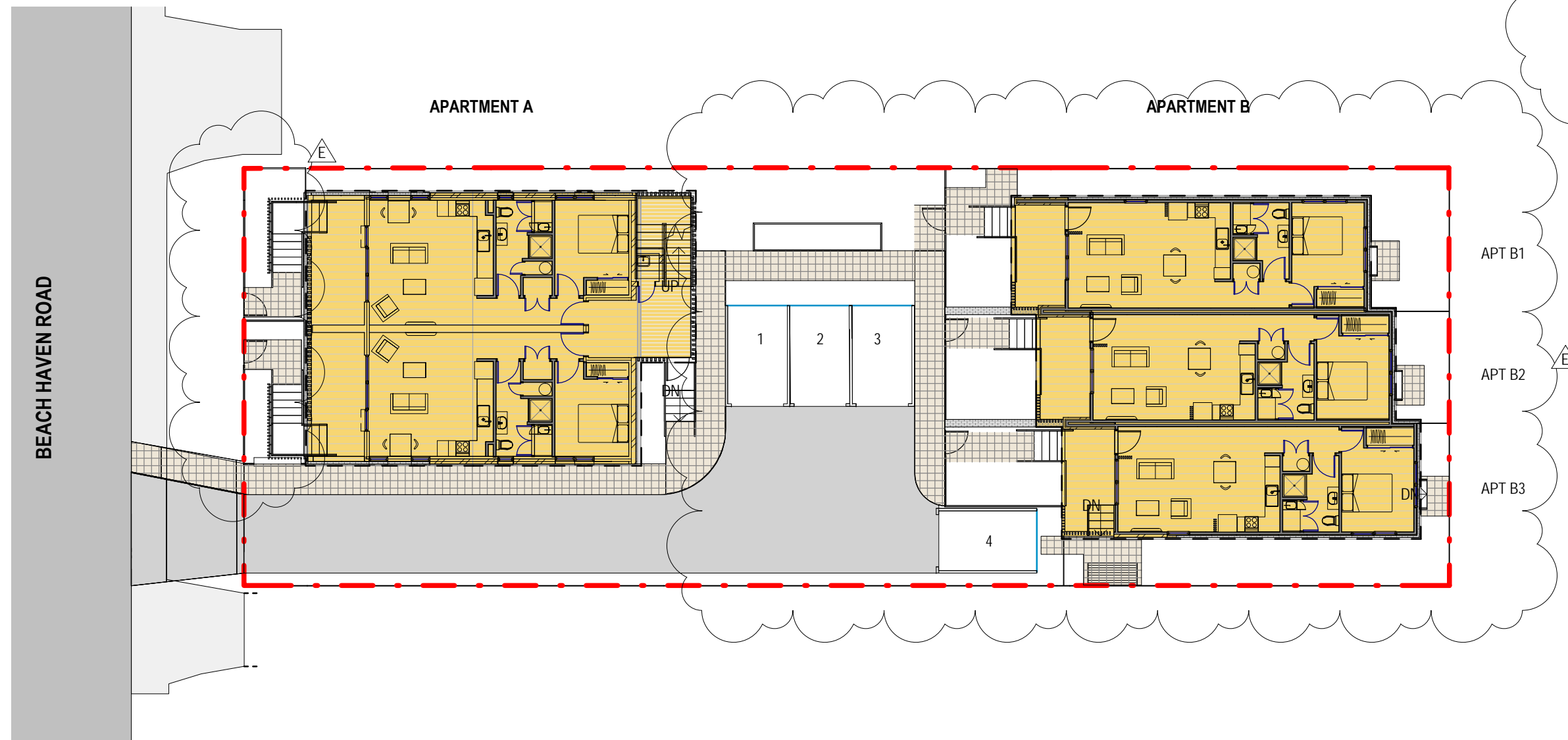
EAST FACADE & ROOF- INFRINGEMENT



WEST BOUNDARY- COMPLY

EXTENT OF INFRINGEMENTS OF APARTMENT A EAST BOUNDARY TO **TYPICAL HIRTB CONTROL**.  
 FULL COMPLIANCE TO ALTERNATIVE CONTROL.  
 NO INFRINGEMENT TO 11m MAX HEIGHT CONTROL

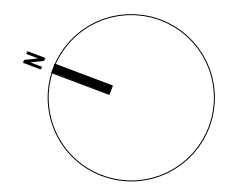
**RC S127 APPLICATION**



**NOTES:**

- EXTENT OF BUILDING COVERAGE
- TOTAL AREA: 351.2 PREV. 314.1m<sup>2</sup>
- PERMITTED: 365.6m<sup>2</sup> MAX.  
45% OF NET SITE AREA (812.5m<sup>2</sup>)

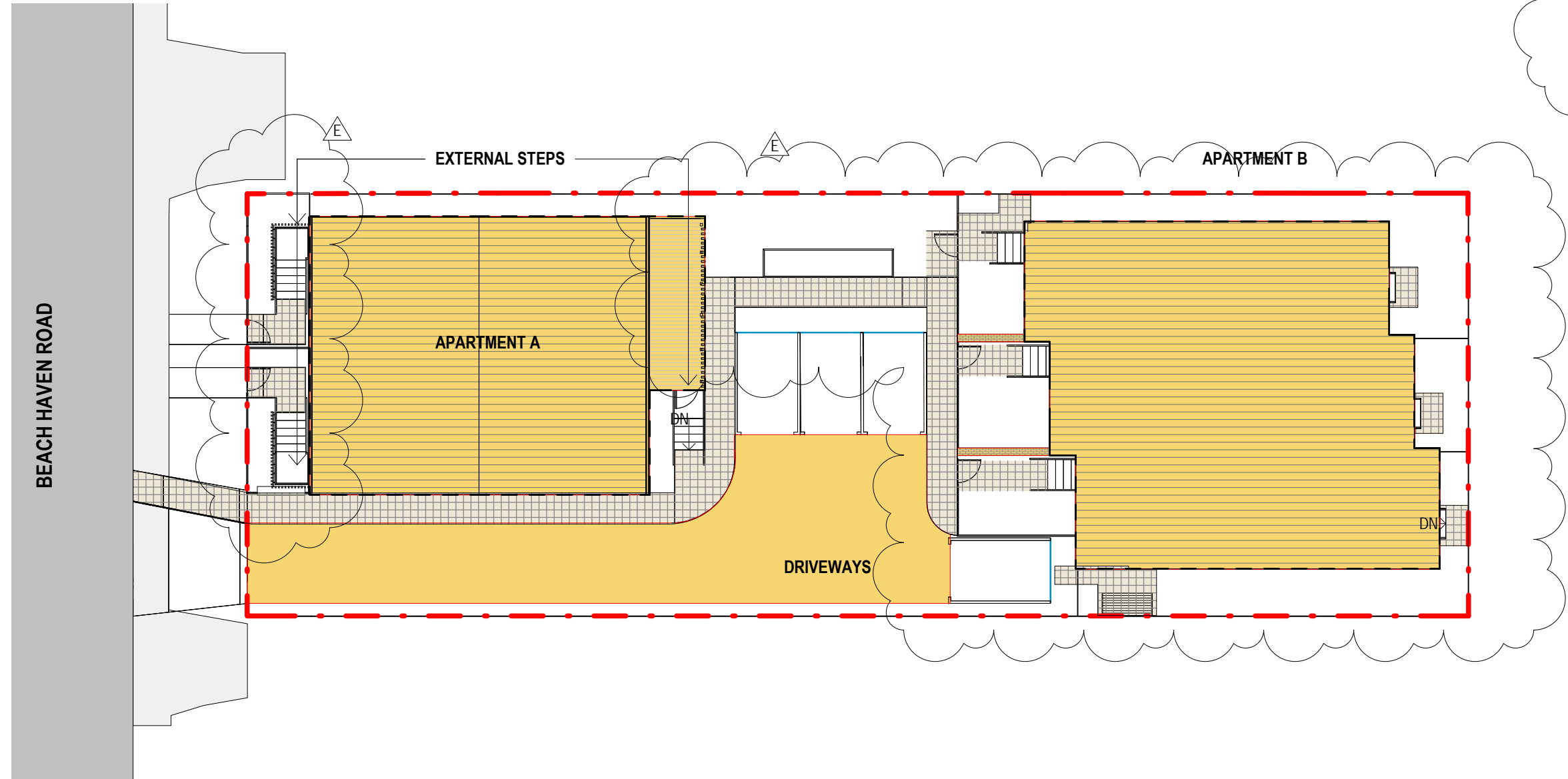
**1 SITE - BUILDING COVERAGE**  
RC-19 1 : 200



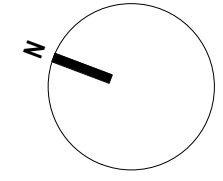
**RC S127 APPLICATION**

**NOTES:**

EXTENT OF IMPERMEABLE AREA  
 TOTAL AREA: 484.4 m<sup>2</sup> PREV. 476.6  
 PERMITTED: 487 m<sup>2</sup> MAX.  
 (60% OF NET SITE AREA (812.5m<sup>2</sup>))



**1 SITE- IMPREMEABLE AREA**  
RC-19 1 : 200



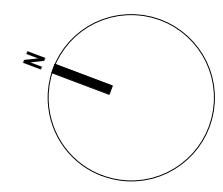
**RC S127 APPLICATION**



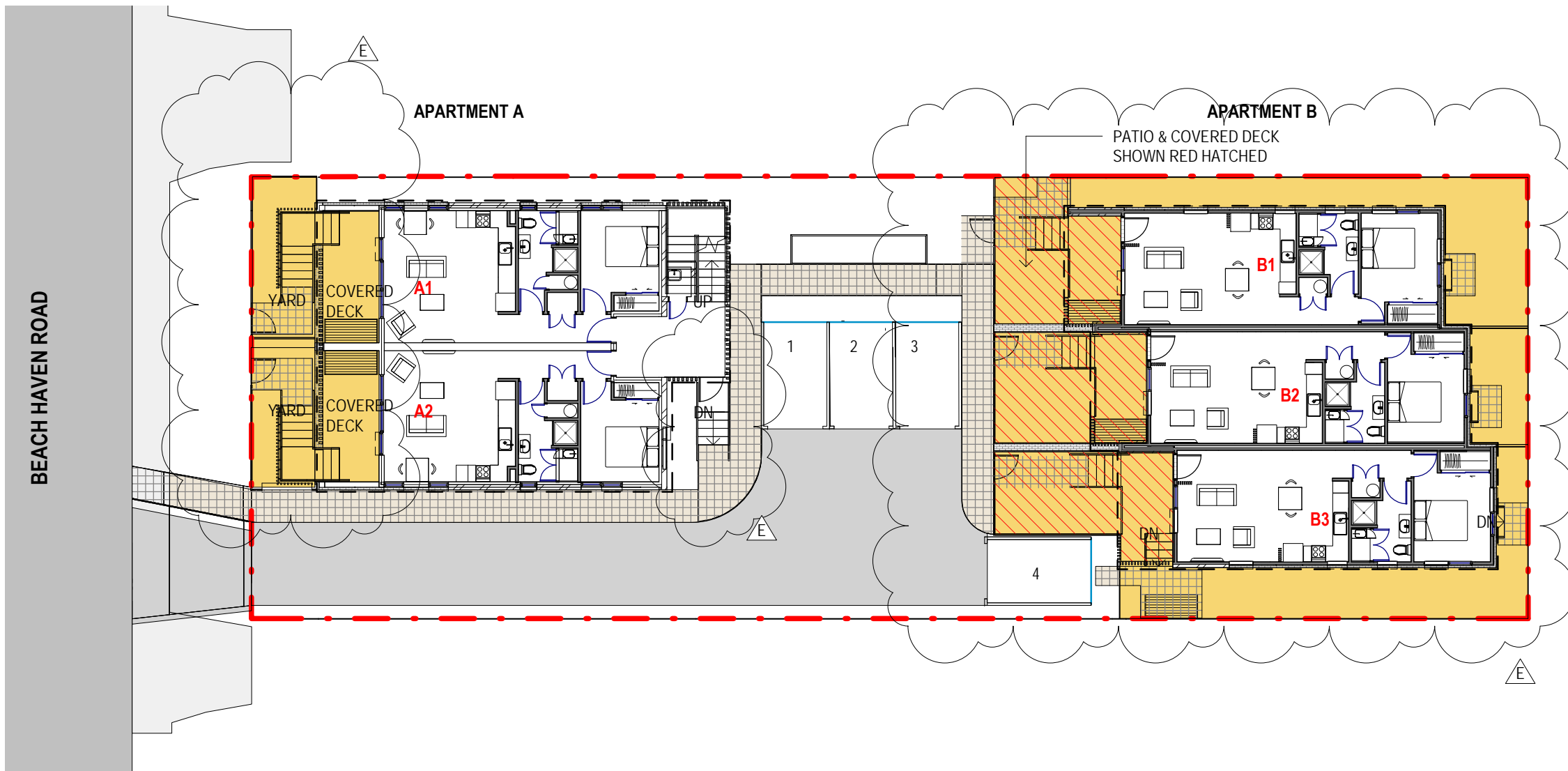
**NOTES:**

- PLANTED AREA: 186.9m<sup>2</sup> CONSENTED 195.1
- TOTAL PAVING STONES AND PATIOS CAN BE CONSIDERED AS LANDSCAPE AREA: 103.5 m<sup>2</sup>  
62.3m<sup>2</sup> OF AREA ABOVE HAS BEEN CONSIDERED AS LANDSCAPE AREA (UP TP 25%)
- TOTAL AREA: 249.2m<sup>2</sup> CONSENTED 260.1**
- REQUIREMENT: 284.4m<sup>2</sup> MIN.  
(35% OF NET SITE AREA (812.5m<sup>2</sup>), 30.7% ACHIEVED CONSENTED 32%)
- EXTENT OF LANDSCAPE AREA IN FRONT YARD
- PLANTED AREA: 15.9m<sup>2</sup>
- PAVING: 10.4m<sup>2</sup>  
(WHICH 5.3m<sup>2</sup> IS CONSIDERED AS LANDSCAPE AREA)
- TOTAL LANDSCAPE AREA IN FRONT YARD: 21.2m<sup>2</sup>
- REQUIREMENT: 20.9m<sup>2</sup> MIN.  
(50% OF FRONT YARD AREA (41.8m<sup>2</sup>))

**1 SITE - LANDSCAPE AREA**  
RC-19 1:200



**RC S127 APPLICATION**



**NOTES:**

EXTENT OF GROUND FLOOR OUTDOOR LIVING AREA

**APARTMENT A1:**

COVERED DECK: 10m<sup>2</sup>  
YARD: 17.6m<sup>2</sup>  
TOTAL AREA: 27.6m<sup>2</sup>

**APARTMENT A2:**

COVERED DECK: 10m<sup>2</sup>  
YARD: 15m<sup>2</sup>  
TOTAL AREA: 25m<sup>2</sup>

**APARTMENT A3-6:**

COVERED DECK: 10.7m<sup>2</sup>

**APARTMENT B1:**

PATIO & COVERED DECK: 23.8m<sup>2</sup> 13.5m<sup>2</sup>  
 YARD: 34.1m<sup>2</sup> 47m<sup>2</sup>  
TOTAL AREA: 57.9m<sup>2</sup> 60.5m<sup>2</sup>

**APARTMENT B2:**

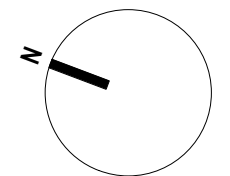
PATIO & COVERED DECK: 24.1m<sup>2</sup> 9.1m<sup>2</sup>  
 YARD: 9.9m<sup>2</sup> 62.8m<sup>2</sup>  
TOTAL AREA: 34m<sup>2</sup> 76.3m<sup>2</sup>

**APARTMENT B3**

PATIO & COVERED DECK: 23.6m<sup>2</sup> N/A  
 YARD: 35.8m<sup>2</sup> N/A  
TOTAL AREA: 59.4m<sup>2</sup> N/A

**1 SITE - OUTDOOR LIVING SPACE**

RC-19 1 : 200

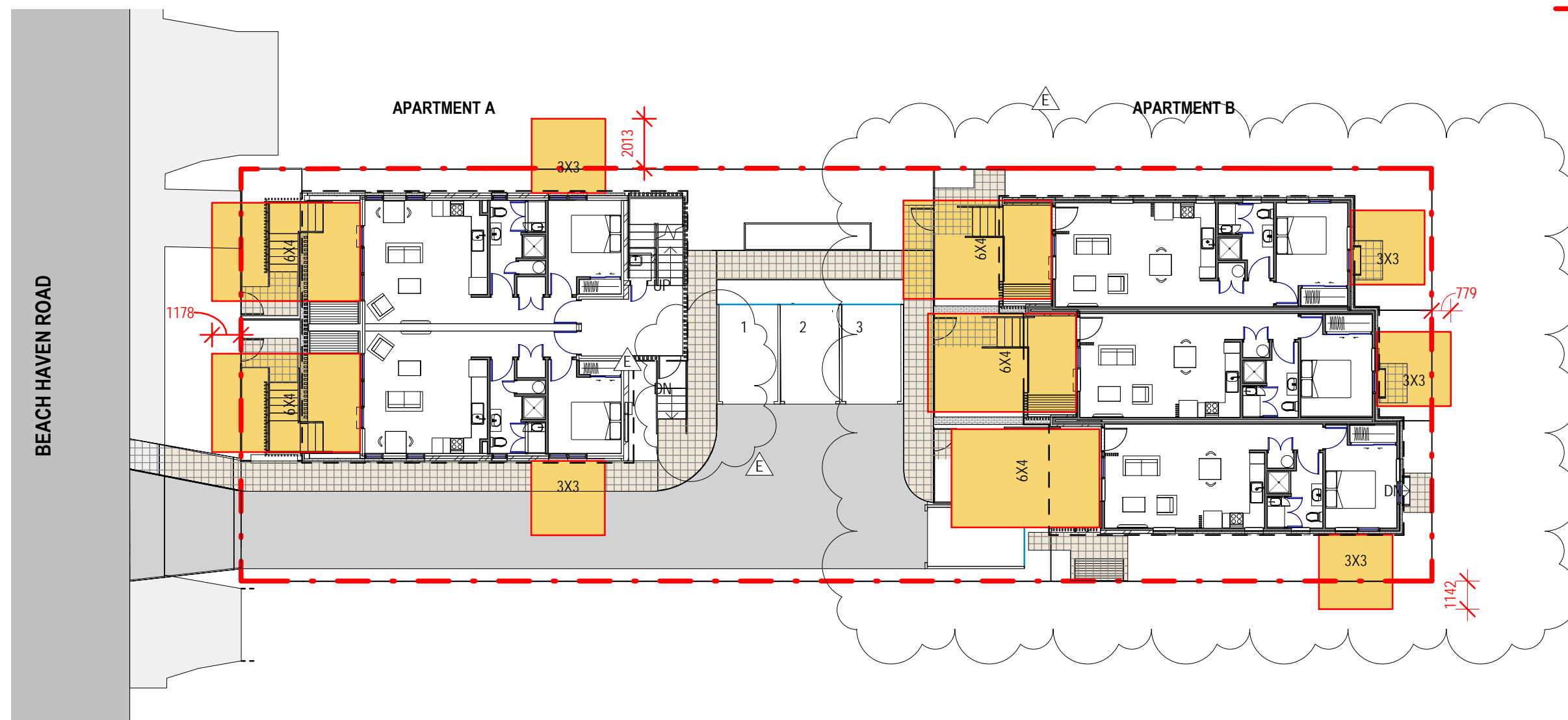


**RC S127 APPLICATION**

NOTES:

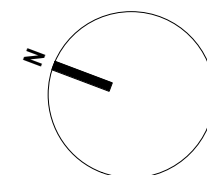
 OUTLOOK SPACE

 PROPERTY BOUNDARIES



1 SITE - GROUND FLOOR ROOM OUTLOOK

RC-19 1:200



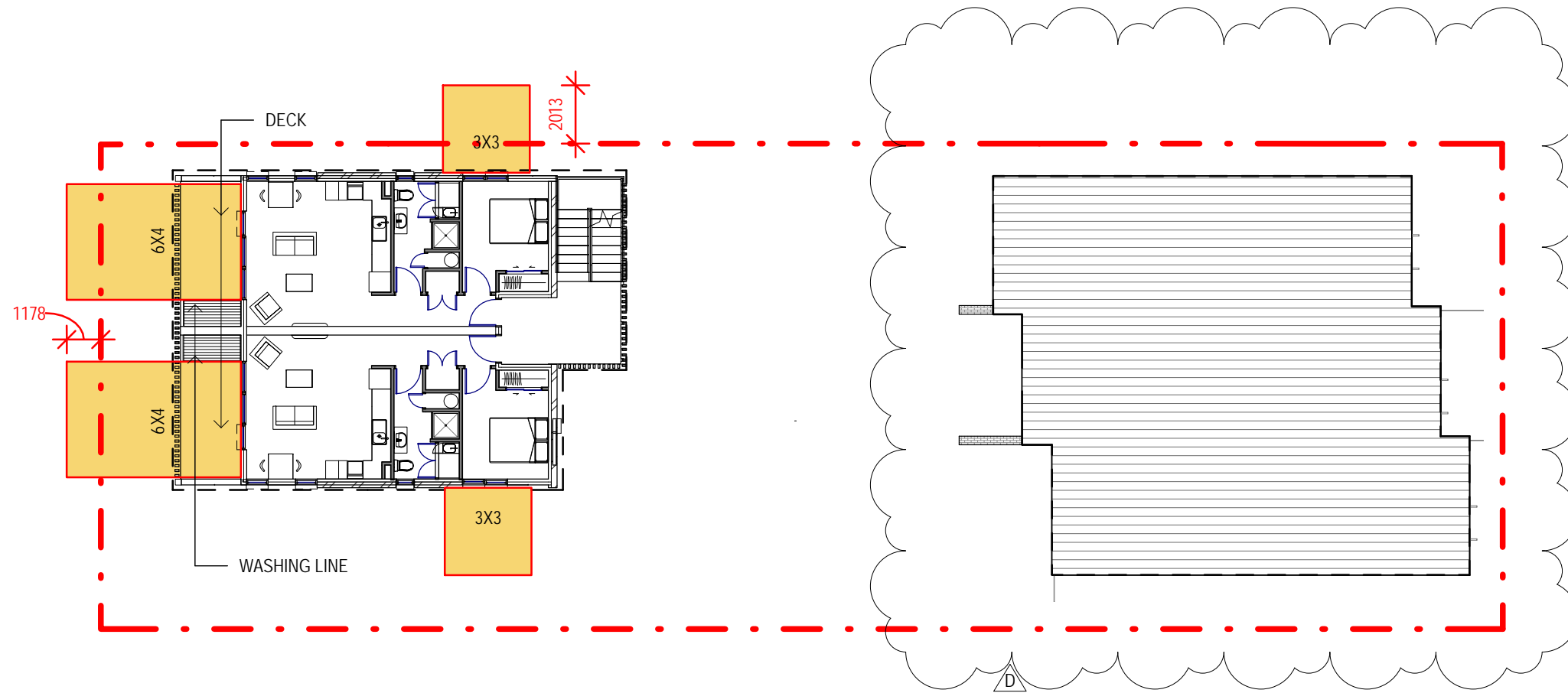
**RC S127 APPLICATION**

NOTES:

 OUTLOOK SPACE

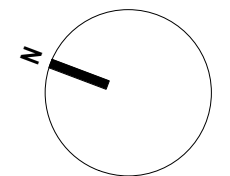
 PROPERTY BOUNDARIES

BEACH HAVEN ROAD



1 SITE - LEVEL 1 PLAN OUTLOOK SPACE

RC-19 1 : 200

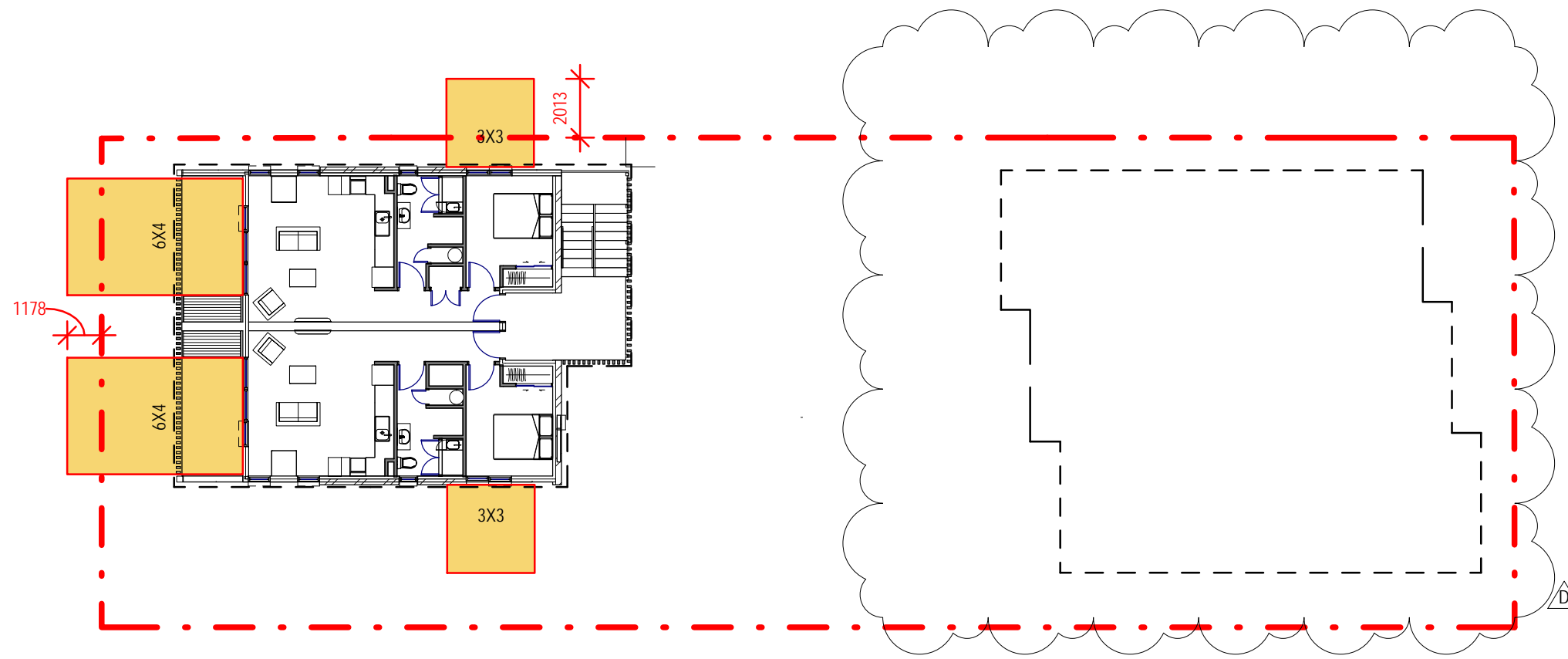


**RC S127 APPLICATION**

NOTES:

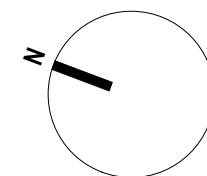
- OUTLOOK SPACE
- PROPERTY BOUNDARIES

BEACH HAVEN ROAD



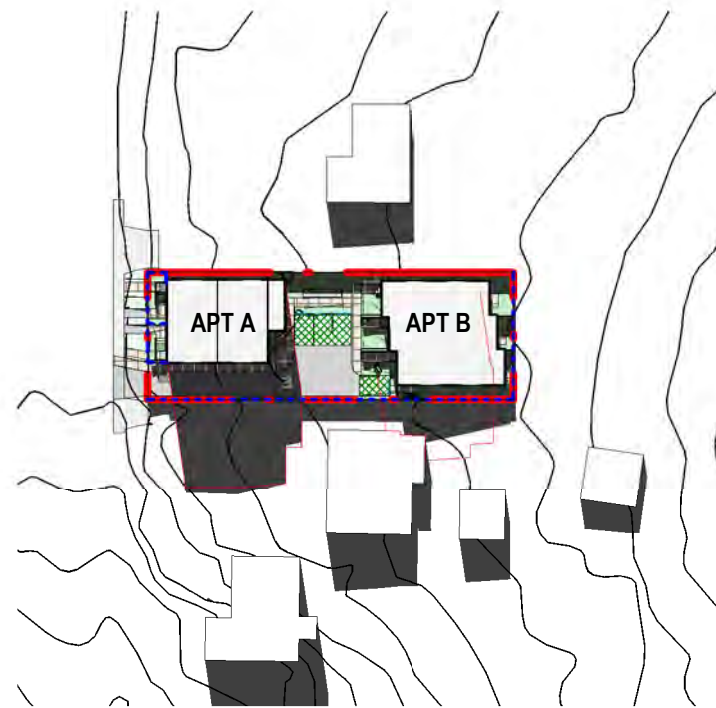
**1 SITE - LEVEL 2 PLAN OUTLOOK SPACE**

RC-19 1 : 200

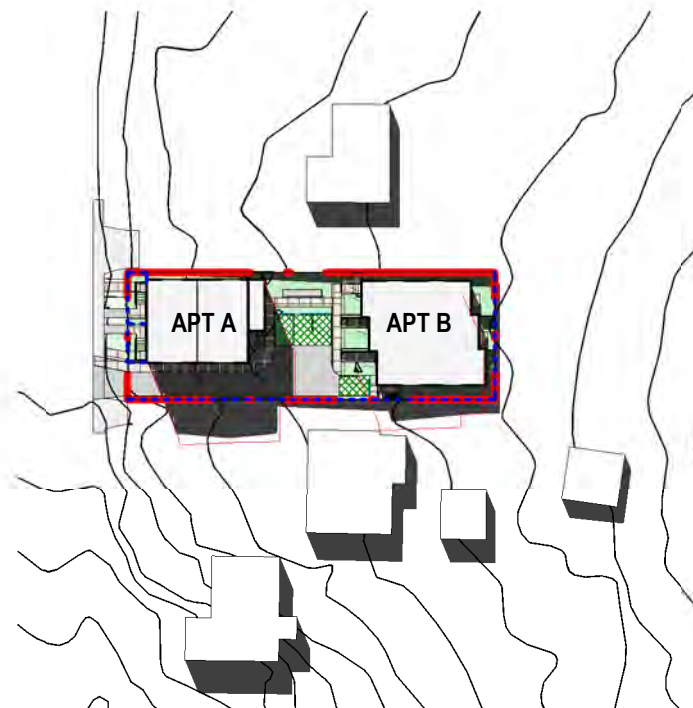


**RC S127 APPLICATION**

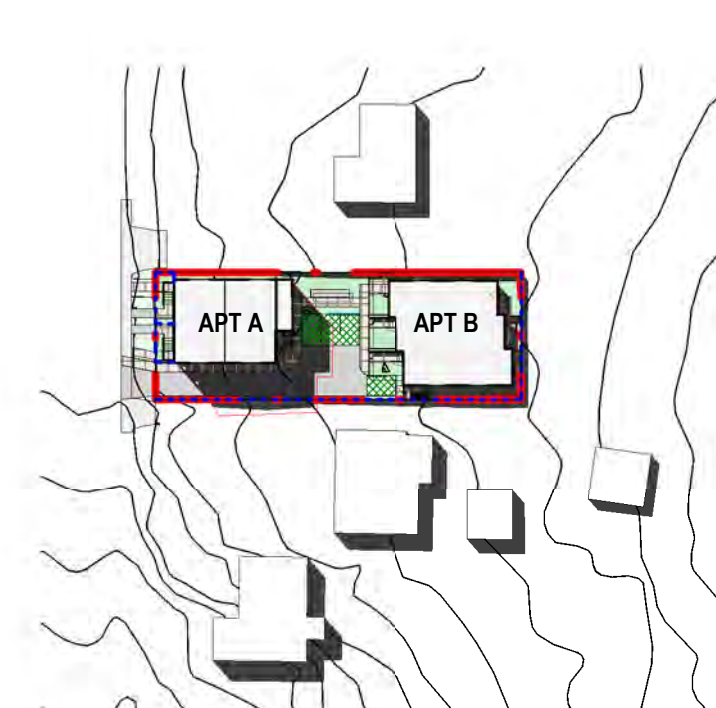




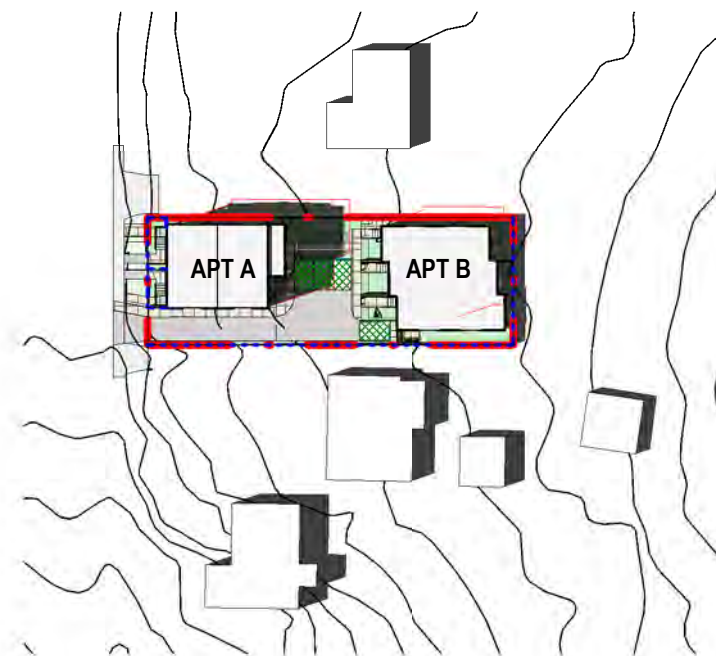
**1 SITE - SOLAR STUDY- 22ND SEPT 9AM**  
RC-19 1 : 1000



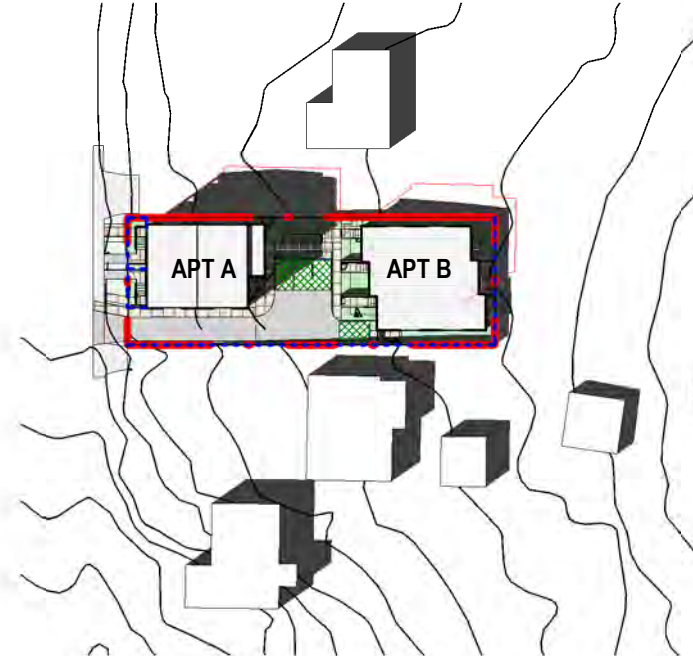
**2 SITE - SOLAR STUDY- 22ND SEPT 10AM**  
RC-19 1 : 1000



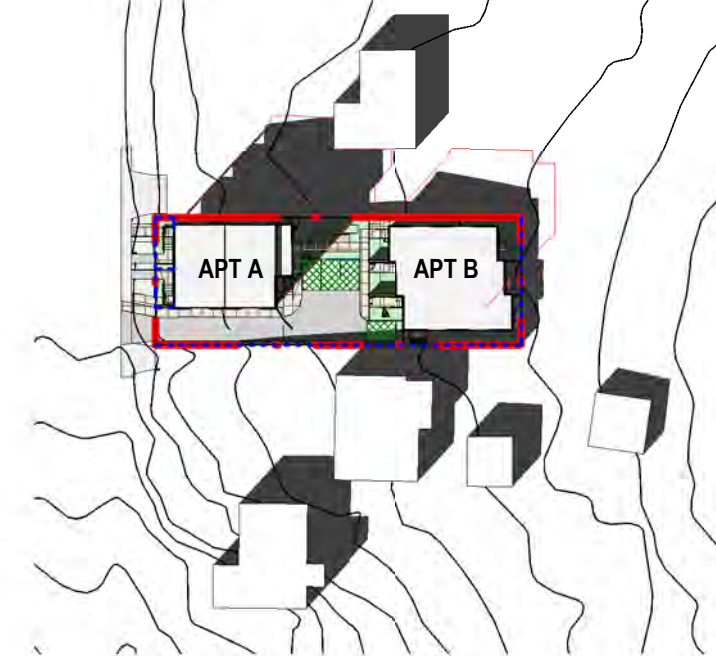
**3 SITE - SOLAR STUDY- 22ND SEPT 11AM**  
RC-19 1 : 1000



**4 SITE - SOLAR STUDY-22ND SEPT 2PM**  
RC-19 1 : 1000



**5 SITE - SOLAR STUDY- 22ND SEPT 3PM**  
RC-19 1 : 1000



**6 SITE - SOLAR STUDY- 22ND SEPT 4PM**  
RC-19 1 : 1000

— CONSENTED EXTENT OF SHADOW

NOTE: NEIGHBOUR SITES INFORMATION OF BUILDING FOOTPRINTS, CONTOURS AND AERIAL PHOTO USED IN THIS SOLAR STUDY IS BASED ON AUCKLAND COUNCIL GEOMAPS DATA

**RC S127 APPLICATION**

**CLADDING LEGENDS:**

BRICK:  
1- MIDLAND BRICK EURO MODUS  
RANGE- TORO (GREY)

PREFINISHED PANELS:  
5- SWISSPEARL CARAT - ONYX 7099 (WHITE)  
NOTE: ALL PANELS EXPOSED TO FOOT  
TRAFFIC AND WEAR TO BE NR-COATED.

**OTHER:**

ROOFING:  
10- LONG RUN TRAPEZOIDAL COLOURSTEEL  
ROOFING COLOUR PALETTE CLOUD WHITE

VERTICAL LOUVRES:  
11- DULUX POWDERCOAT RANGE-  
MATT LIGNITE

**HIRTB CONTROLS:**

--- STANDARD HIRTB RESSION  
PLANE  
— ALTERNATIVE HIRTB  
CONTROL

**APT A GLAZING REQUIREMENTS:**

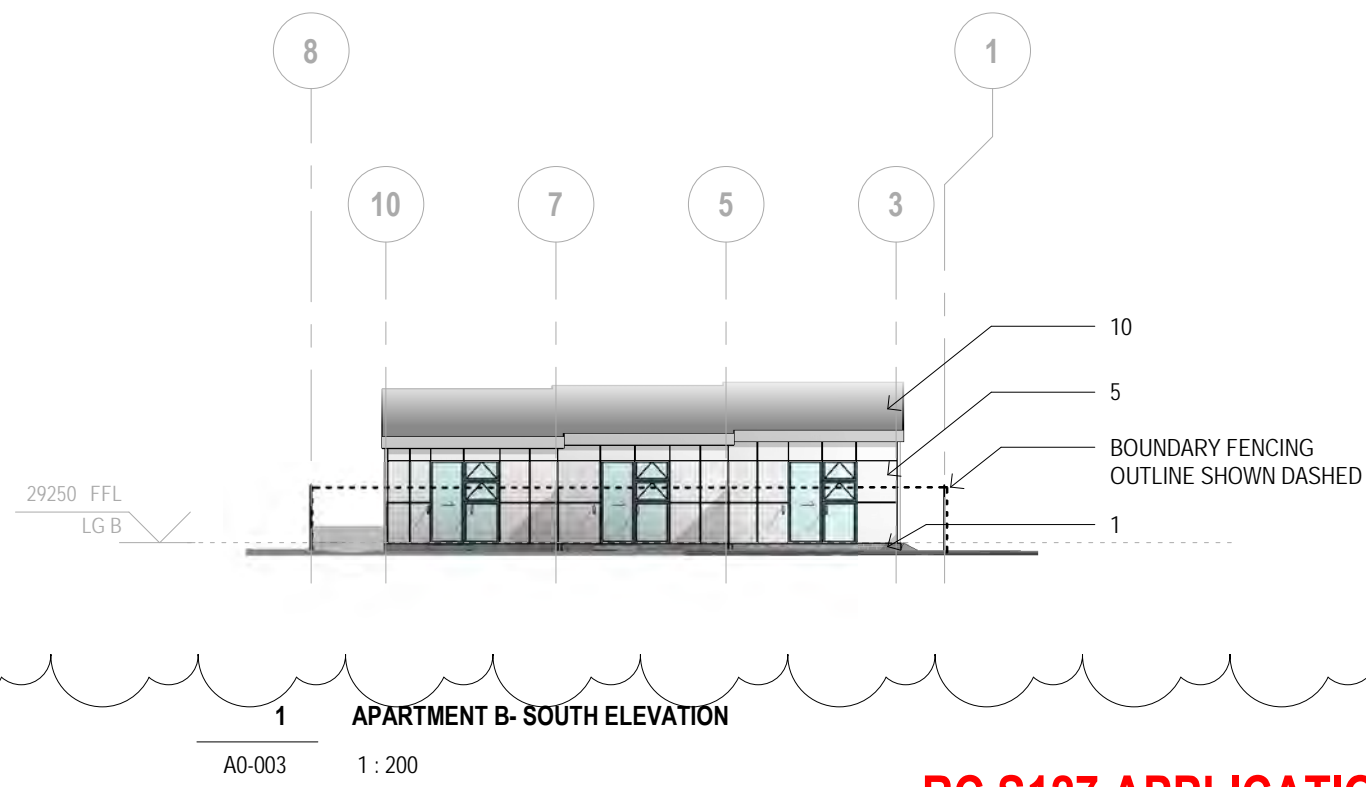
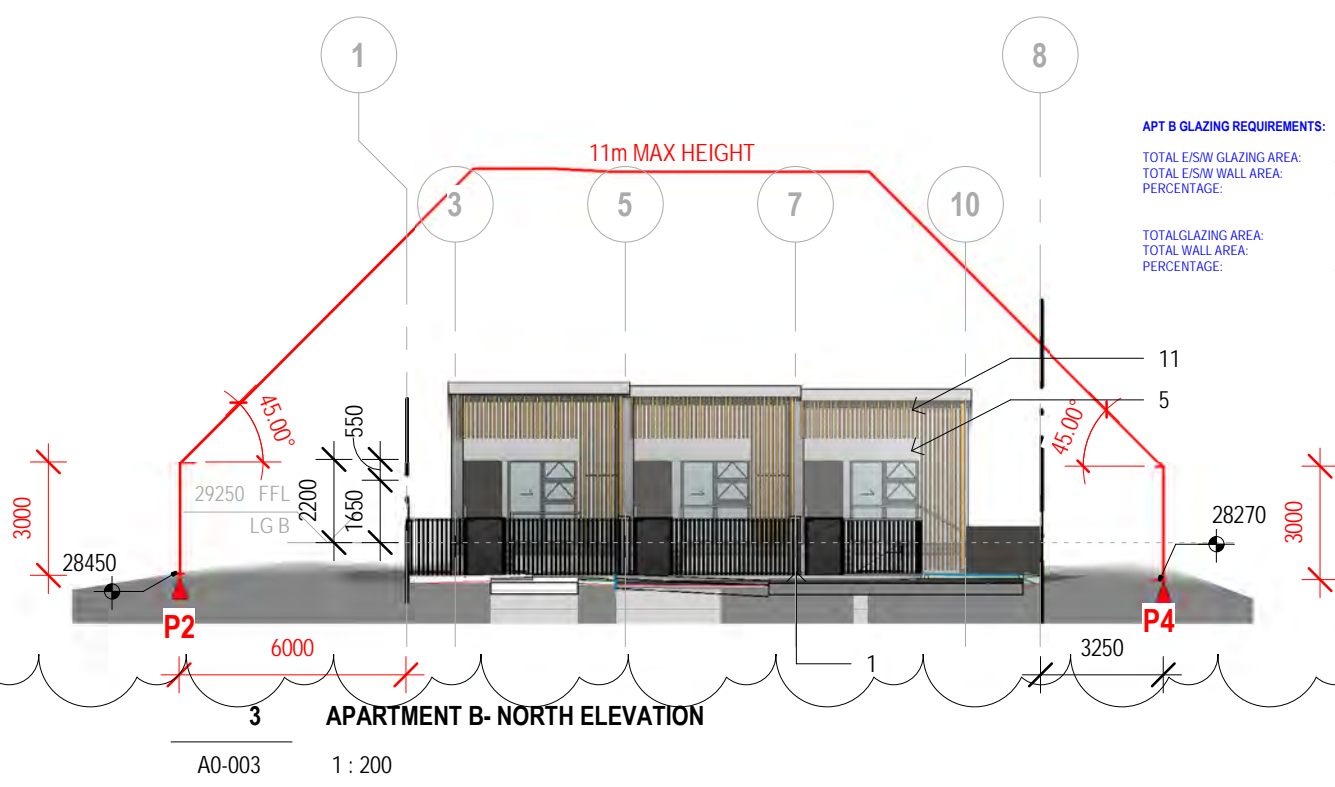
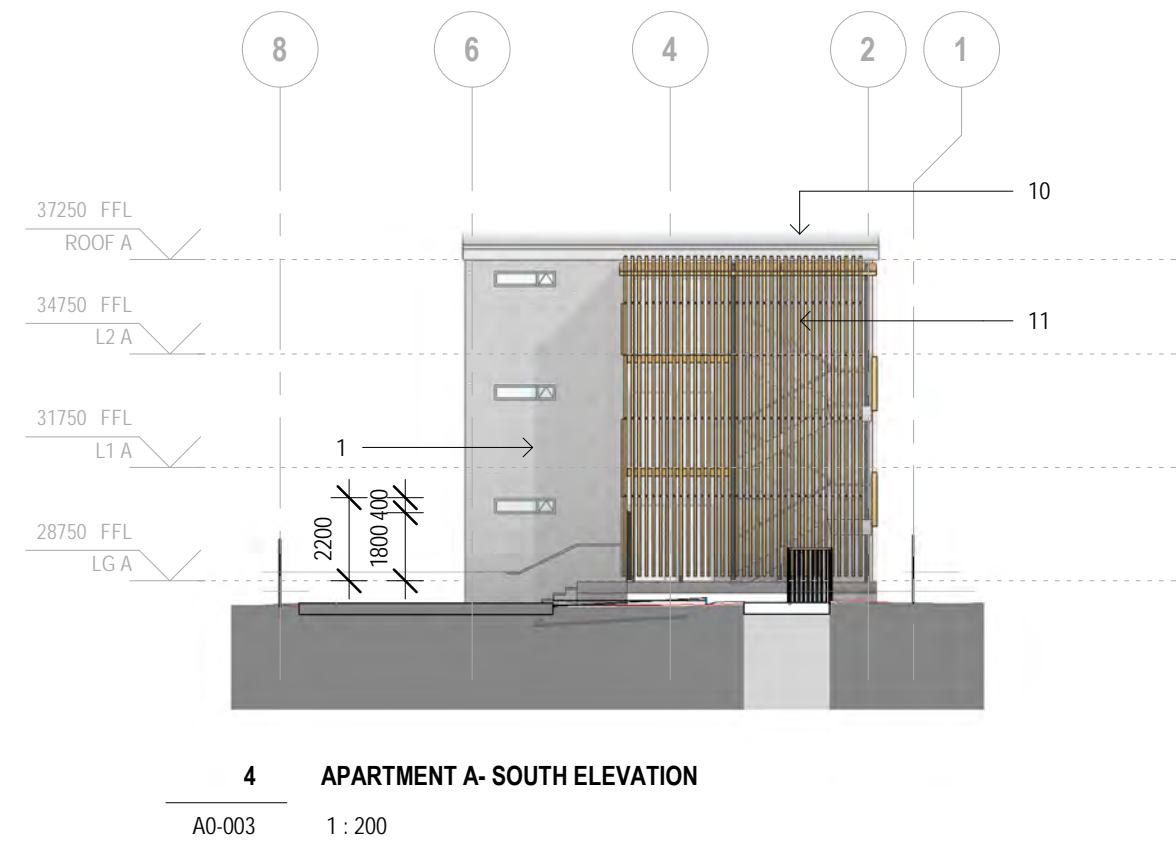
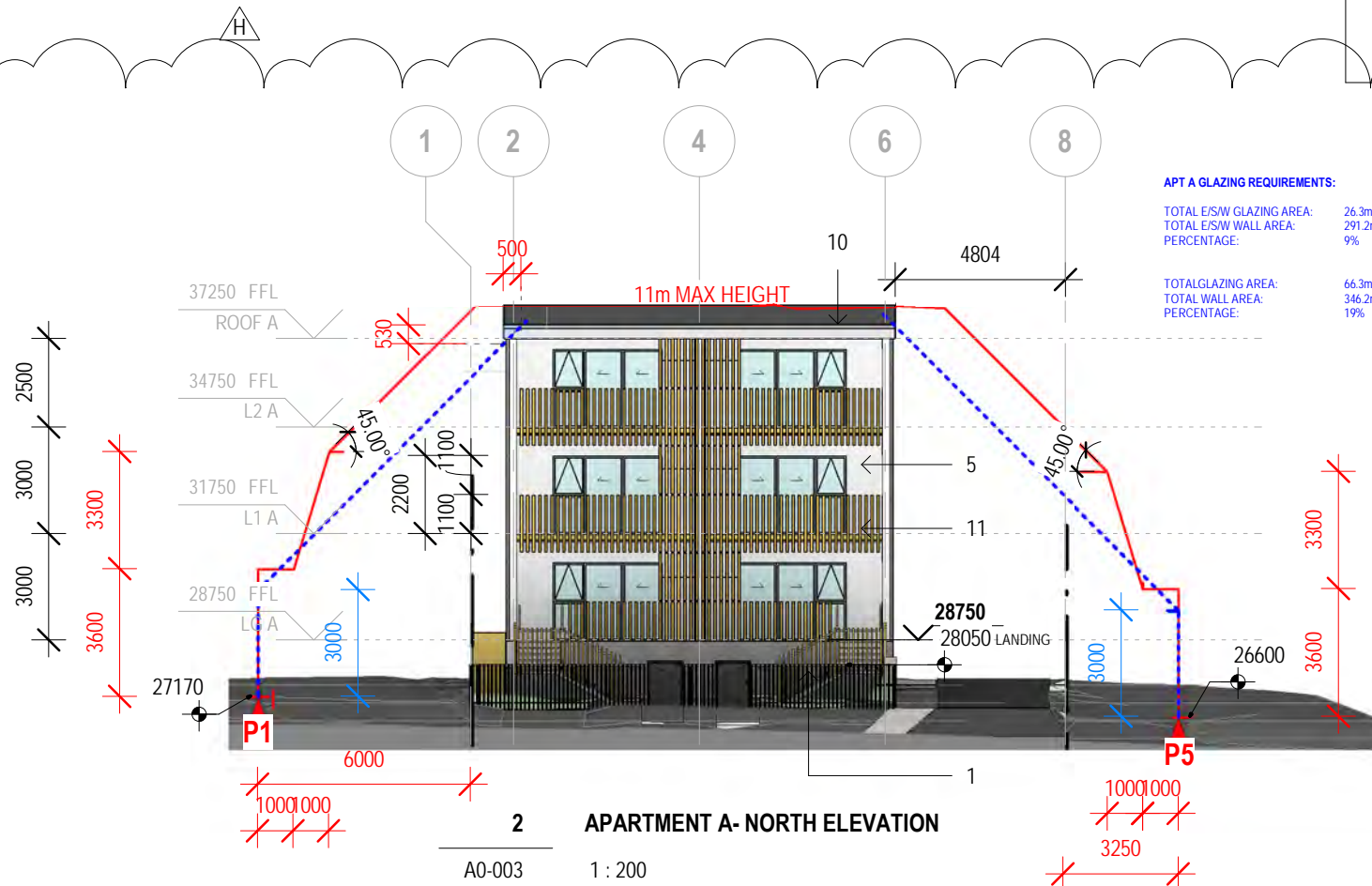
TOTAL E/S/W GLAZING AREA: 26.3m  
TOTAL E/S/W WALL AREA: 291.2m  
PERCENTAGE: 9%

TOTAL GLAZING AREA: 66.3m  
TOTAL WALL AREA: 346.2m  
PERCENTAGE: 19%

**APT B GLAZING REQUIREMENTS:**

TOTAL E/S/W GLAZING AREA: 25.5m  
TOTAL E/S/W WALL AREA: 115.1m  
PERCENTAGE: 22%

TOTAL GLAZING AREA: 37.4m  
TOTAL WALL AREA: 153.2m  
PERCENTAGE: 24.4%



**RC S127 APPLICATION**

**CLADDING LEGENDS:**

BRICK:  
1- MIDLAND BRICK EURO MODUS  
RANGE- TORO (GREY)

PREFINISHED PANELS:  
5- SWISSPEARL CARAT - ONYX 7099 (WHITE)  
NOTE: ALL PANELS EXPOSED TO FOOT  
TRAFFIC AND WEAR TO BE HR COATED.

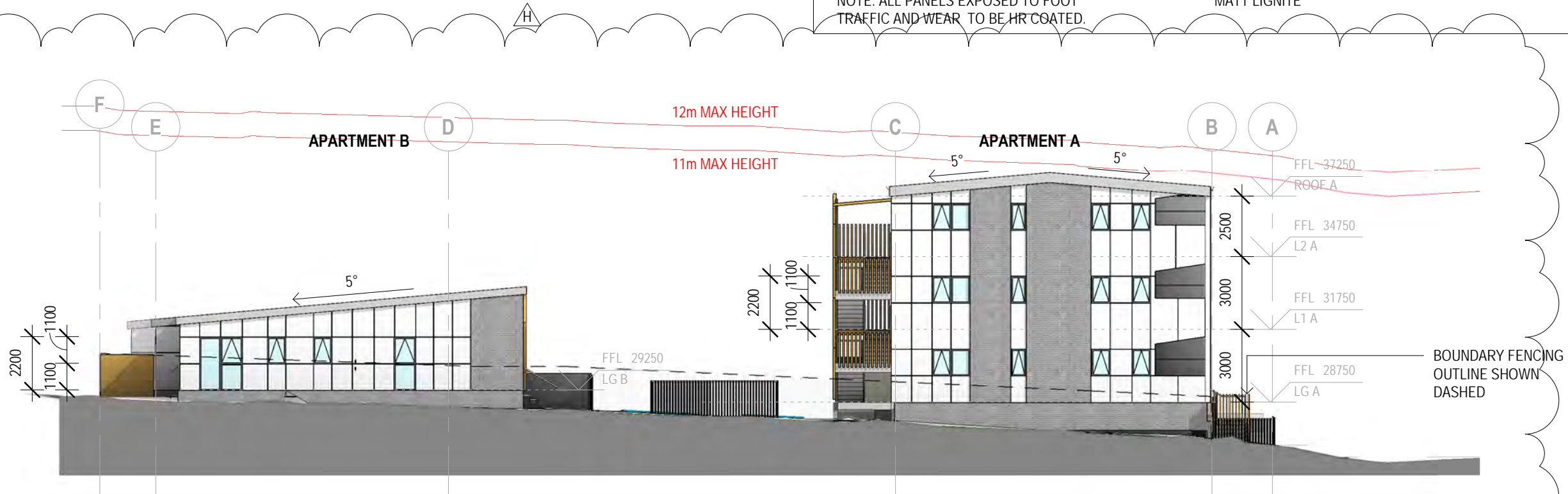
**OTHER:**

ROOFING:  
10- LONG RUN TRAPEZOIDAL COLOURSTEEL  
ROOFING COLOUR PALETTE CLOUD WHITE

VERTICAL LOUVRES:  
11- DULUX POWDERCOAT RANGE-  
MATT LIGNITE

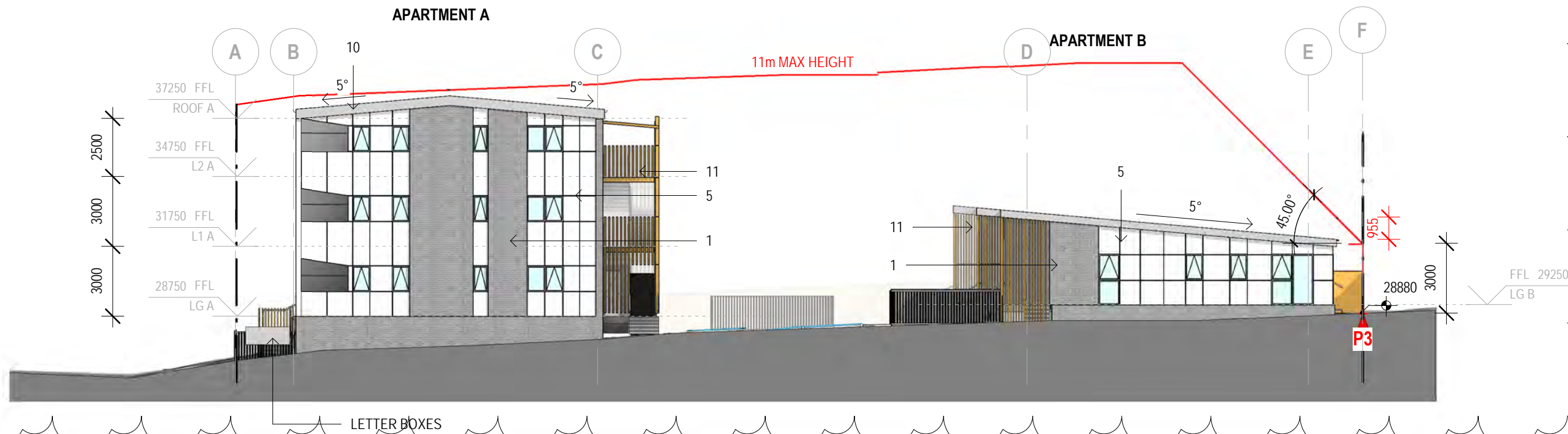
**HIRTB CONTROLS:**

- STANDARD HIRB RECESSON PLANE
- ALTERNATIVE HIRB CONTROL



**1 OVERALL EAST ELEVATION**

A0-003 1:200



**2 OVERALL WEST ELEVATION**

A0-003 1:200

**RC S127 APPLICATION**



RC CONSENTED



S127 PROPOSED

**RC S127 APPLICATION**

KEY

COMPLIES
WITHIN 10%
DOES NOT COMPLY

	KO REQUIREMENT	BUILDING A		BUILDING B	
		PRVSLY APPROVED	PROPOSED	PRVSLY APPROVED	PROPOSED
<b>GFA SINGLE STOREY</b>	50m2 max	53.2m2	53.2m2	51.5m2	53.6m2
Gross floor areas to the exterior of the building framing and centreline of tenancy walls. They do not include decks or patios or garaging.					
<b>KITCHEN, DINING, LIVING</b>	27m2 min	27m2	27m2	27m2	27m2
Minimum combined area (including hall and circulation)					
<b>KITCHEN, DINING, LIVING MINUS 10%</b>	24.3m2				
Achievable dispensation if required					
<b>BEDROOM</b>					
AREA (excluding wardrobes)	10m2	10m2	10m2	10.7m2	10.5m2
DIMENSION	2.9m min any direction	3.1 x 2.9m	3.1 x 2.9m	3.5 x 2.9m	3.36 x 2.9m
<b>STORAGE</b>					
AREA (includes wardrobe, linen and HWC)	2m2	1.5m2	2.4m2	2.4m2	2m2
WARDROBE WIDTH	1.2m	1.4m	1.7m	1.6m	1.9m
CUPBOARD DEPTH	600 - 800mm	600mm	600mm	600mm	700mm
<b>LAUNDRY</b>					
LOCATED	Bathroom OR Cupboard	Bathroom	Bathroom	Bathroom	Bathroom
TUB WIDTH	350mm	Yes	Yes	Yes	Yes
WASHING MACHINE SPACE	850mm w x 700mm deep	Yes	Yes	Yes	Yes
<b>BATHROOM</b>					
STANDARD DIMS	2100 x 1900mm	2320 x 2200mm	2321 x 2250mm	2134 x 1900mm	2321 x 2250mm
ACCESSIBLE DIMS	2100 x 2100mm	N/A	N/A	N/A	N/A
DOOR DOES NOT OPEN INTO KDL SPACE	No	No	No	No	No
TOILET	Included in bathroom	Yes	Yes	Yes	Yes
VANITY	900mm wide	Yes	Yes	Yes	Yes
SHOWER STANDARD	925 x 925mm	Yes 1.1.2	Yes	Yes	Yes
SHOWER ACCESSIBLE	1200 x 1200mm	N/A	N/A	N/A	N/A
<b>HALL/CIRCULATION</b>					
STANDARD CLEAR WIDTH	1050mm	1050mm	1050mm	1050mm	1050mm
<b>KITCHEN</b>					
Heat proof setdown adjacent to the stove	Yes	Yes	Yes	Yes	Yes
Clearance between oven/cooktop and side wall	300mm	Yes	Yes	Yes	Yes
WET BENCH LENGTH	1.25m	Yes	Yes	Yes	Yes
DRY BENCH LENGTH	1.4m	Yes	Yes	Yes	Yes
PANTRY WIDTH	450mm	Yes	Yes	Yes	Yes
DRAWERS	1 bank	Yes	Yes	Yes	Yes
FRIDGE WIDTH	750mm	Yes	Yes	Yes	Yes
FRIDGE DEPTH	700mm	Yes	Yes	Yes	Yes
FRIDGE LOCATED AT END OF JOINERY UNITS	Yes	Yes	Yes	Yes	Yes
Clear height 2m min.	Yes	Yes	Yes	Yes	Yes
<b>DOOR LEAF</b>					
ENTRY DOOR	910mm	Yes	Yes	Yes	Yes
INTERNAL DOORS	860mm	Yes	Yes	Yes	Yes
<b>DECK</b>					
AREA	8m2	9.5m2	10.3m2	9.1m2	8.2m2
WIDTH	2.0m	2.0m	2.0m	2.0m	2.0m
<b>WINDOW AREA</b>					
TOTAL WINDOW AREA IN K.D.L.	10% OF FLOOR AREA (20% IF WINDOW IS SHADED)	Yes	Yes	Yes	Apt B1 & 3- Yes; Apt B2 - No (shaded window 14.7% achieved)
TOTAL WINDOW AREA IN BED ROOM	10% OF FLOOR AREA (20% IF WINDOW IS SHADED)	Yes	Yes	Yes	Yes
<b>WASHING LINE</b>					
SCREENED FROM STREET AND COMMON AREA	Yes	Partial	Partial	Partial	Partial
LINE LENGTH	28m	Yes	Yes	Yes	Yes
<b>ACCESSIBLE REQUIREMENTS</b>					
UNIT ON GROUND FLOOR	Yes	N/A	N/A	N/A	N/A
ENTRY DOOR OPENS IN 910mm WIDE	Yes	N/A	N/A	N/A	N/A
1.2M PROTECTED LANDING	Yes	N/A	N/A	N/A	N/A
KITCHEN, BATHROOM, BEDROOM 1.5 TURN	Yes	N/A	N/A	N/A	N/A
CEILING HEIGHT 2.4-3.0	Yes	N/A	N/A	N/A	N/A

KEY

COMPLIES
WITHIN 10%
DOES NOT COMPLY

	REQUIREMENT	CONSENTED	STATUS- s127
<b>HNZC BRIEF</b>			
1 BEDROOM APARTMENTS	10	10	9 ACHIEVED
PARKING SPACE		5	4 ACHIEVED
FRONT ENTRY SHELTERED (1.2m2)	Yes	YES	YES
BUILDING ENTRIES VISIBLE FROM STREET OR INTERNAL LANE	Yes	Yes, internal lane	YES
RUBBISH ENCLOSURE (Public collection, t.b.c.)	10 bins, 4m2	10 bins	8 bins (t.b.c.)
<b>PLANNING</b>			
MAX HEIGHT	11.0	MINOR INFRINGEMENT	YES
H.I.R.B	3m + 45 side and rear	MINOR INFRINGEMENT	INFRINGEMENT REDUCED
ALT HIRB	20m from road		
<b>YARDS</b>			
FRONT	2.5m	YES	YES
SIDE + REAR	1.0m	YES	YES
<b>SITE AREA</b>			
	812.5m2		
<b>MAX IMPERVIOUS</b>			
60% Gross site (inc. eaves + hard paving)	487.5	476.6	YES, 484.4m2
<b>BUILDING COVERAGE</b>			
45% Net site (inc. eaves over 750)	365.6	314.1	YES, 351.2m2 = 43.2%
<b>LANDSCAPED AREA</b>			
35% of Net area	284.4m2	No (260.1m2, 32%)	No (249.2m2, 30.7%)
50% of Front yard	20.9m2		YES (21.2m2)
<b>OUTLOOK SPACE</b>			
LIVING ROOMS	6m deep x 4m width	YES	YES
MAIN BEDROOM	3m deep x 3m width	YES	SOUTH BDRY (1&2)
OTHER HABITABLE ROOMS	1m x 1m	YES	YES
<b>OUTDOOR LIVING SPACE</b>			
	20m2	YES	YES, Apt B1(57.9m2) B2(34m2) B3(59.4m2)

**RC S127 APPLICATION**

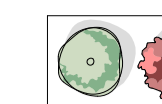
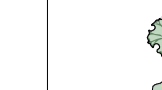
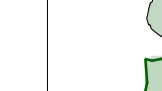
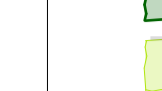
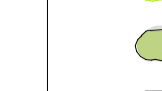
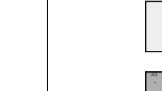
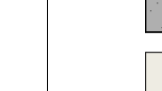
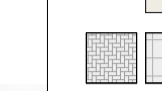
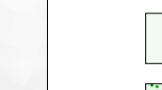



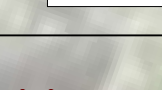

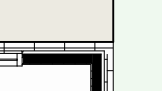
# Landscape Design Statement

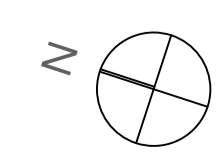
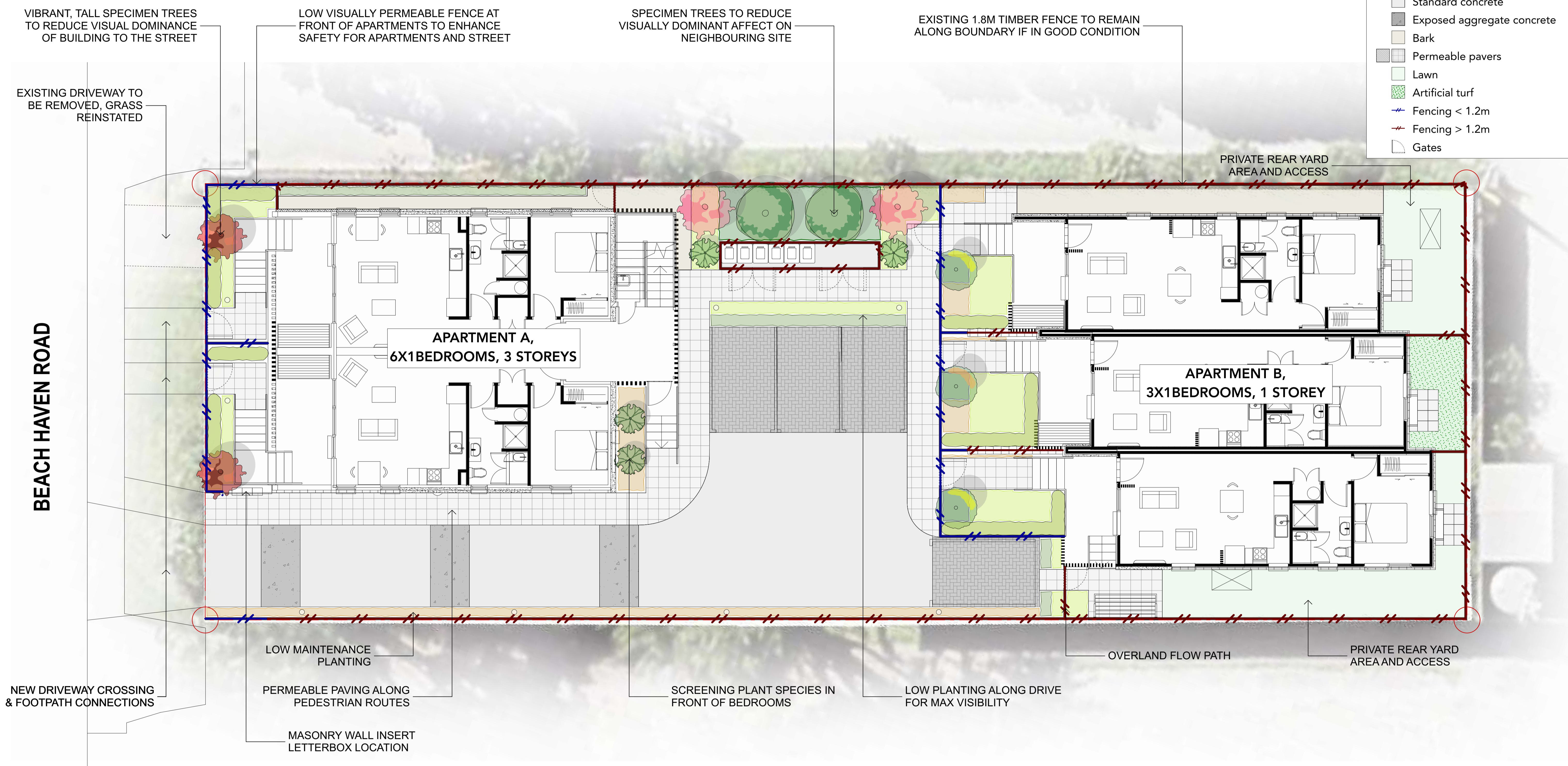
161 Beach Haven Road which is located approximately 15 minutes north of Auckland City by car and is currently made up of 1 single story dwelling. The proposed development is for 2 apartment blocks. Apartment A is a 3-story high building located adjacent to Beach Haven Road, the block consists of 6 single bedroom units with two of the ground floor units having private walk up access directly off Beach Haven Road. Apartment B is a single-story apartment block at the rear of the site consisting of 3 single bedroom units, each unit has their own access and private garden areas. The site is very well connected to the wider city. A bus stop is 80 meters walking distance from the development and it is a 16-minute walk to the Beach Haven ferry terminal where there is a direct link to the city. This makes the development ideal for school children, tertiary students and working professionals. Within a 400-meter walking distance there are many public amenities such as shops, sports fields, parks, schools and community centres.

The landscape character of the site and wider area has a strong, evergreen framework with lots of coastal flowering species. The specimen trees proposed along the frontage of the development are *Metrosideros excelsa* 'Mistral'. These trees will help reduce any adverse affects the buildings may cause visually to the neighbourhood. The height of these specimens will allow foliage to reach the second story of Apartment A and create a softened facade to the development from the street. Underplanted in the building frontages are colourful, hardy native shrubs which require little to no maintenance. This native plant palette will compliment the specimen trees, aiding in visual softening of the building's foundations and lower walls.

Screening species such as *Pseudopanax lessonii* 'Cyril Watson' have been used to provide privacy where bedroom windows on the ground floor of Apartment A can be seen easily from the drive way. *Alectryon excelsa* specimen trees have been used along the eastern boundary to help with visual softening of the rear apartment on neighbouring sites and provides amenity to the communal areas. The site requires tall specimen trees to help integrate successfully into the neighbourhood as much of the area consists on singular story dwellings. Low planting continues down the driveway and provides maximum visibility for vehicles and pedestrians. Using smaller shrub species also helps break up the hardscape of the driveway and provides a more aesthetically pleasing journey for residents. Permeable paving and standard concrete have been used to define pedestrian and vehicle routes, this will help with safe movement throughout the development. The use of low-level permeable fencing has been used where possible to improve passive surveillance to the street frontage and across the communal carpark area at the rear.

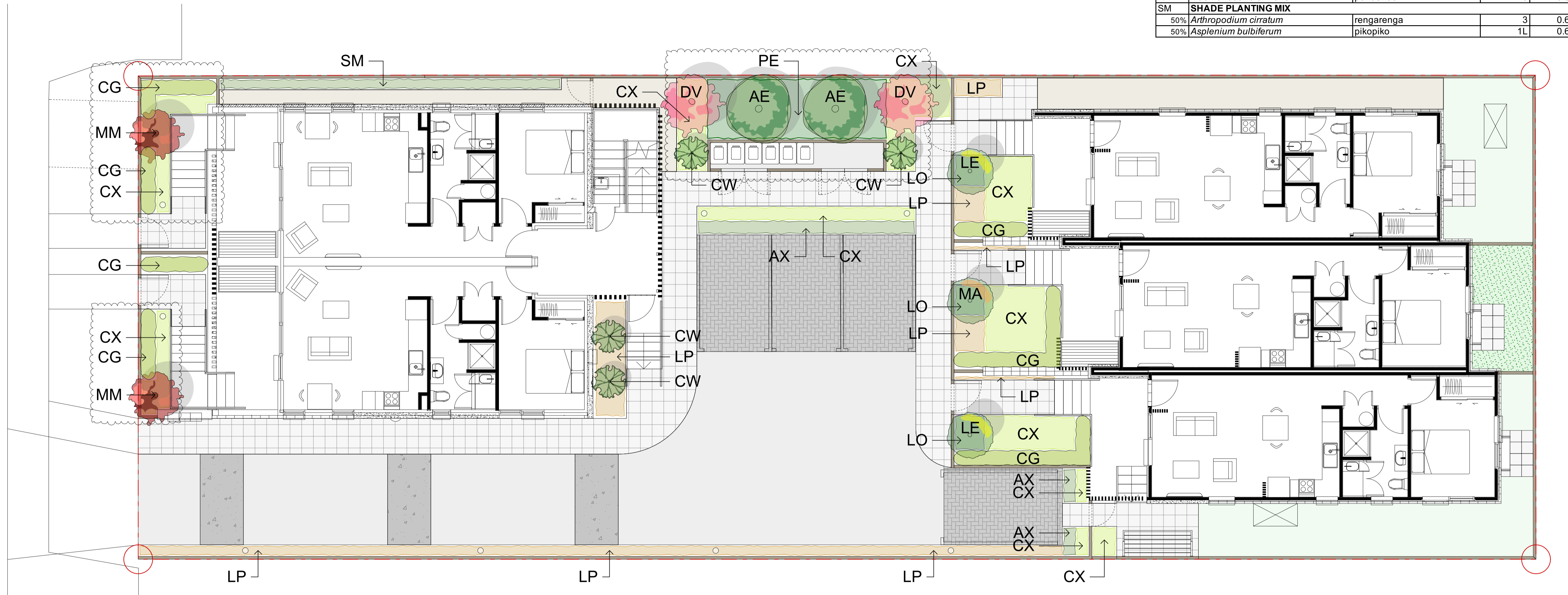


-  Specimen trees
-  Screening trees
-  Fruiting trees
-  Large fill shrub/grass planting
-  Small shrub/grass planting
-  Hedging
-  Standard concrete
-  Exposed aggregate concrete
-  Bark
-  Permeable pavers
-  Lawn
-  Artificial turf
-  Fencing < 1.2m
-  Fencing > 1.2m
-  Gates



Code	Name	Common Name	PB	Spacing	Quantity
MM	<i>Metrosideros excelsa</i> 'Mistral'	pōhutukawa		95	Marked
AE	<i>Alectryon excelsus</i>	tītoki		95	Marked
CW	<i>Pseudopanax lessonii</i> 'Cyril Watson'	houpara		28	Marked
DV	<i>Dodonaea viscosa</i> 'Purpurea'	purple ake ake		18	Marked
LE	<i>Citrus × limon</i>	lemon		18	Marked
MA	<i>Citrus × reticulata</i>	mandarin		18	Marked
CG	<i>Corokia</i> 'Geenty's Green'	corokia		18	0.6m
PE	<i>Phormium cookianum</i> 'Emerald Gem'	dwarf mountain flax		3	0.5m
LP	<i>Libertia peregrinans</i>	tūkauki		3	0.4m
LO	<i>Lobelia angulata</i>	panakenake		3	0.4m
CX	<i>Carex comans</i> 'Frosted Curls'	carex frosted curls		3	0.5m
AX	<i>Muehlenbeckia axillaris</i>	pohuehue		3	0.5m
SM	<b>SHADE PLANTING MIX</b>				
	50% <i>Arthropodium cirratum</i>	rengarenga		3	0.6m
	50% <i>Asplenium bulbiferum</i>	pikopiko		1L	0.6m

BEACH HAVEN ROAD



MM  
*Metrosideros excelsa* 'Mistral'



AE  
*Alectryon excelsus*



DV  
*Dodonaea viscosa* 'Purpurea'



CW  
*Pseudopanax lessonii* 'Cyril Watson'



LE  
*Citrus × limon*



MA  
*Citrus × reticulata*



CG  
*Corokia* 'Geenty's Green'



PE  
*Phormium cookianum* 'Emerald Gem'



LP  
*Libertia peregrinans*



LO  
*Lobelia angulata*



CX  
*Carex comans* 'Frosted Curls'



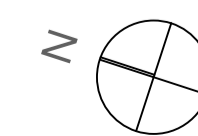
AX  
*Muehlenbeckia axillaris*



SM  
*Arthropodium cirratum*

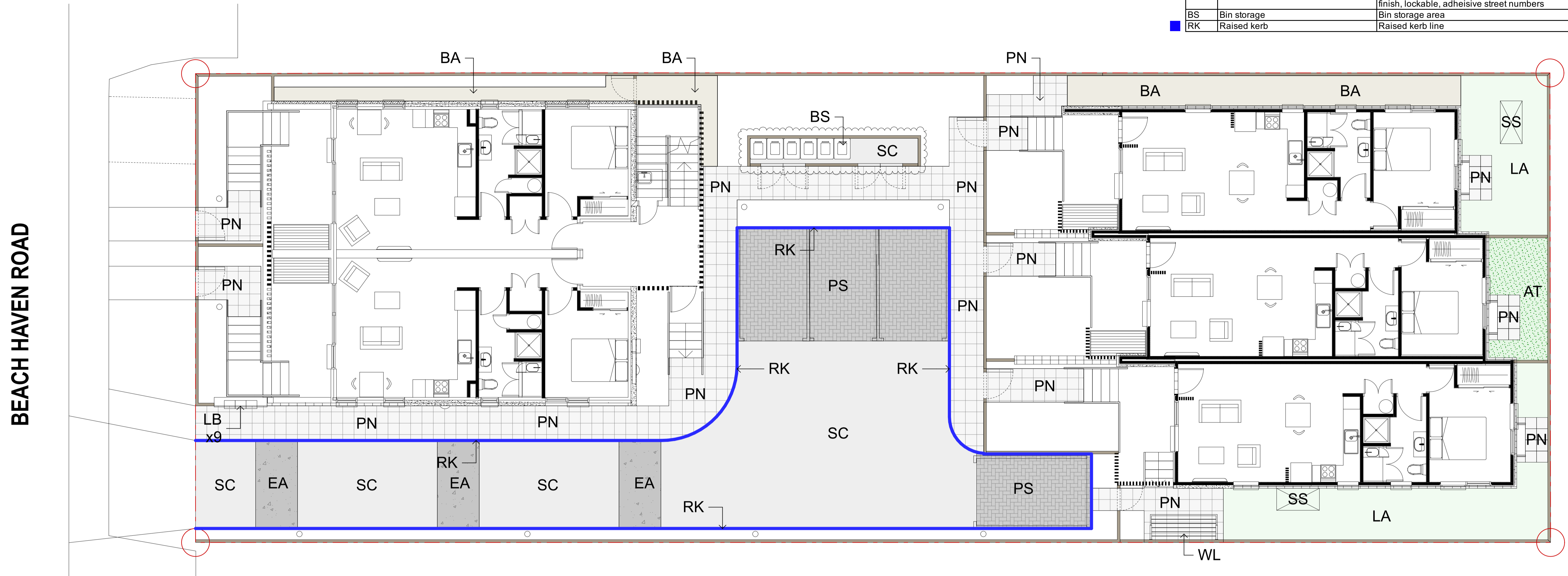


SM  
*Asplenium bulbiferum*

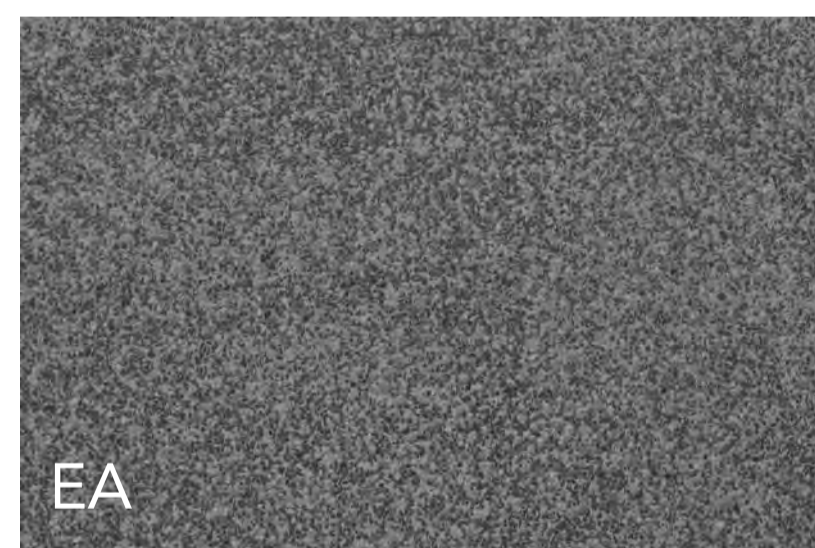




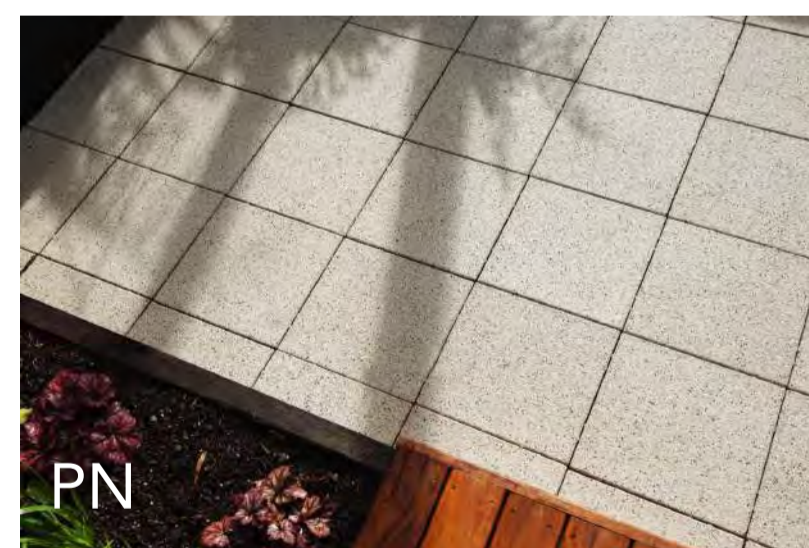
Code	Name	Specification
SC	Standard concrete	Standard aggregate, broom finish
EA	Exposed aggregate concrete	Standard aggregate, 4kg black oxide per m <sup>3</sup> , exposed
PN	Permeable pavers	Horizon WaiPave 400x400mm, grey colour, to be haunched with a 100mm wide flush concrete strip
PS	Permeable pavers	Firth PorousPave, black sands colour, to be haunched with a 100mm wide flush concrete strip
BA	Bark chip	High grade bark chip, No4 20-25mm, with timber edging
LA	Lawn	PGG Wrightson Duraturf Kerbside, sow 40g/m <sup>2</sup> (3.5kg/100m <sup>2</sup> )
AT	Artificial turf	Tiger Turf Envy
WL	Folding clothes line	Austral Compact Fold Down (2.49mX0.935m) (28m line)
SS	Storage shed	Garden Master sheds GM1508 (1.53mX.785m)
LB	Letterbox	Boxdesign Metro Front Opening Letterbox, black powdercoat finish, lockable, adhesive street numbers
BS	Bin storage	Bin storage area
RK	Raised kerb	Raised kerb line



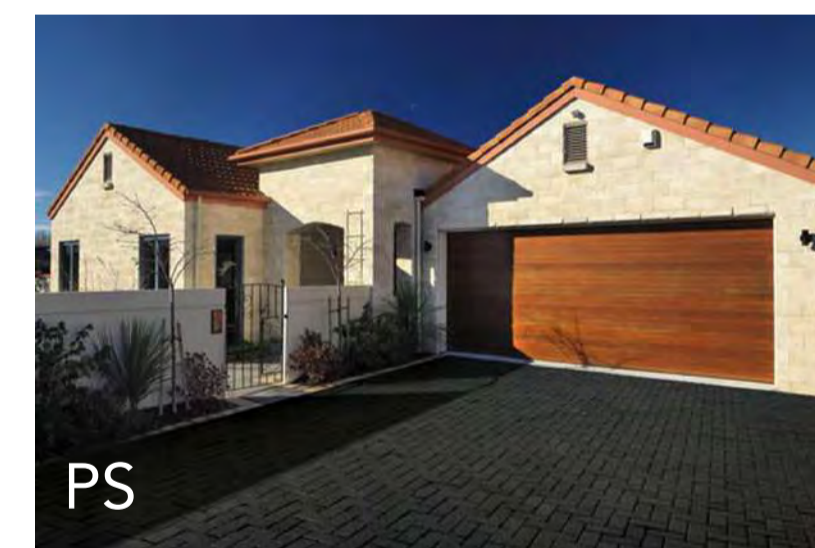
SC  
Standard concrete, broom finish



EA  
Exposed aggregate concrete, 4kg black oxide per m<sup>3</sup>



PN  
Permeable pavers, grey colour



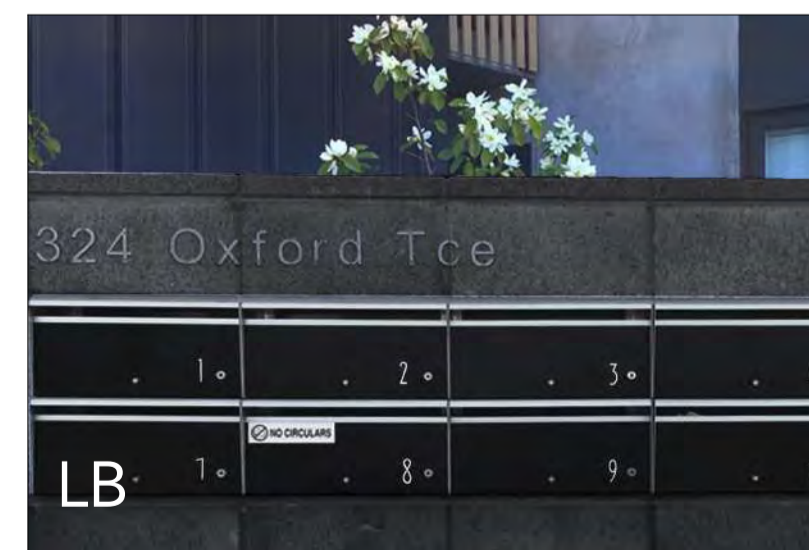
PS  
Permeable pavers, black sands colour



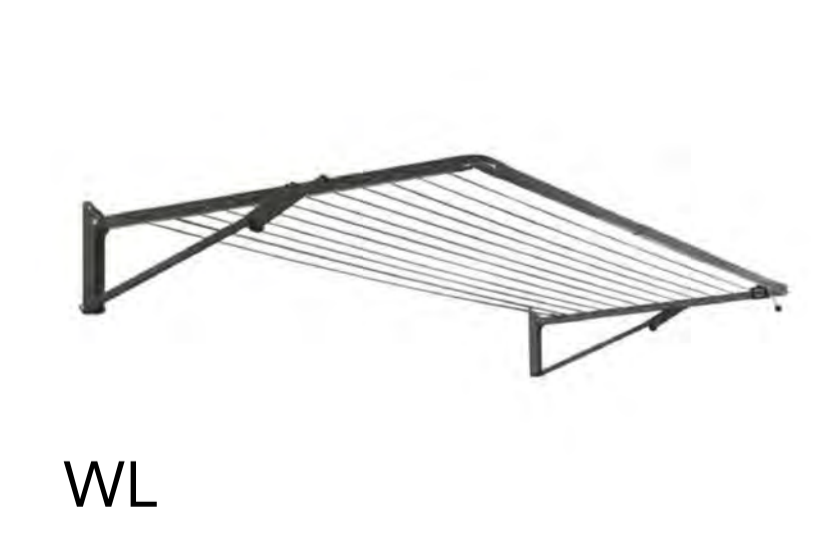
BA  
Bark chip



LA  
Lawn



AT  
Artificial Turf



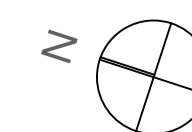
LB  
Letterboxes



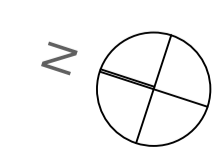
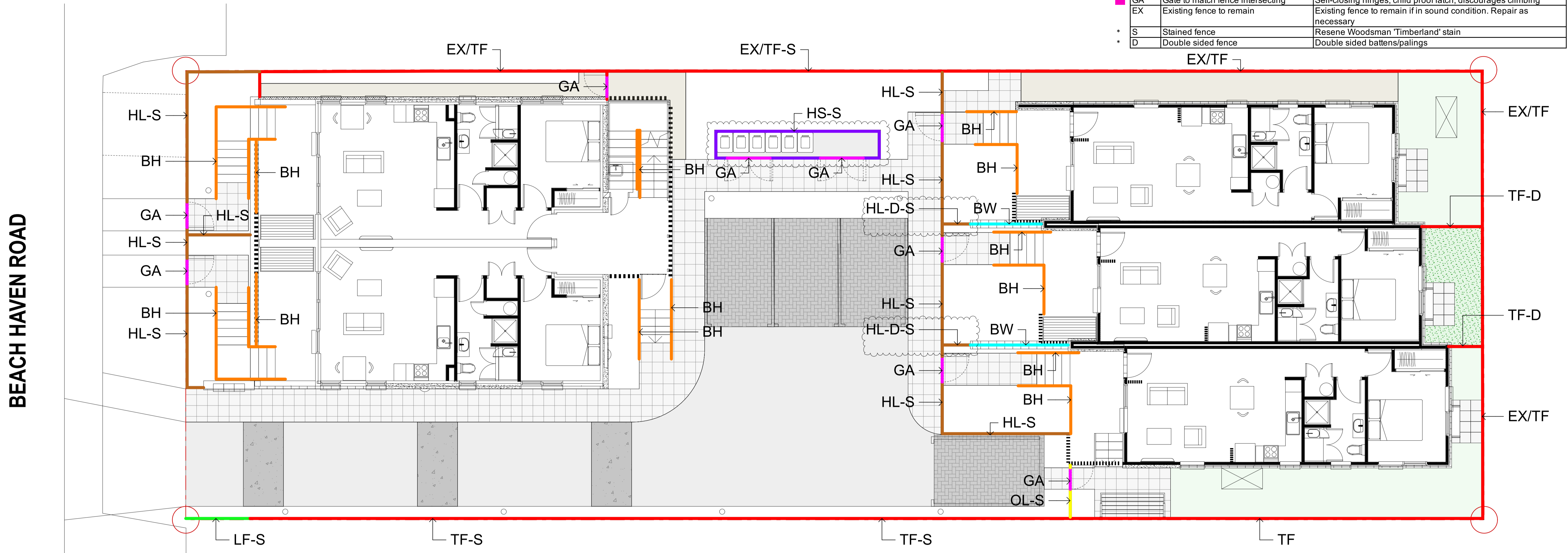
WL  
Folding clothesline



SS  
Storage sheds

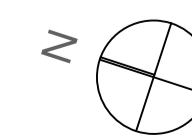
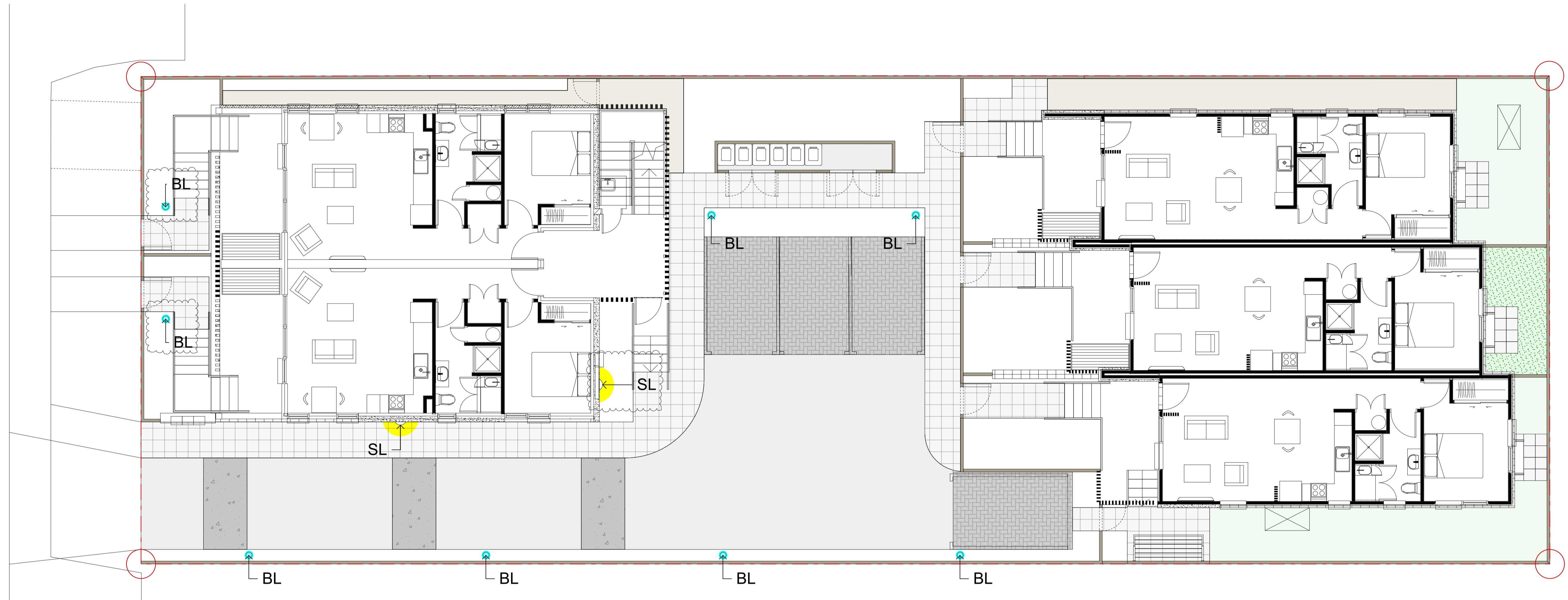


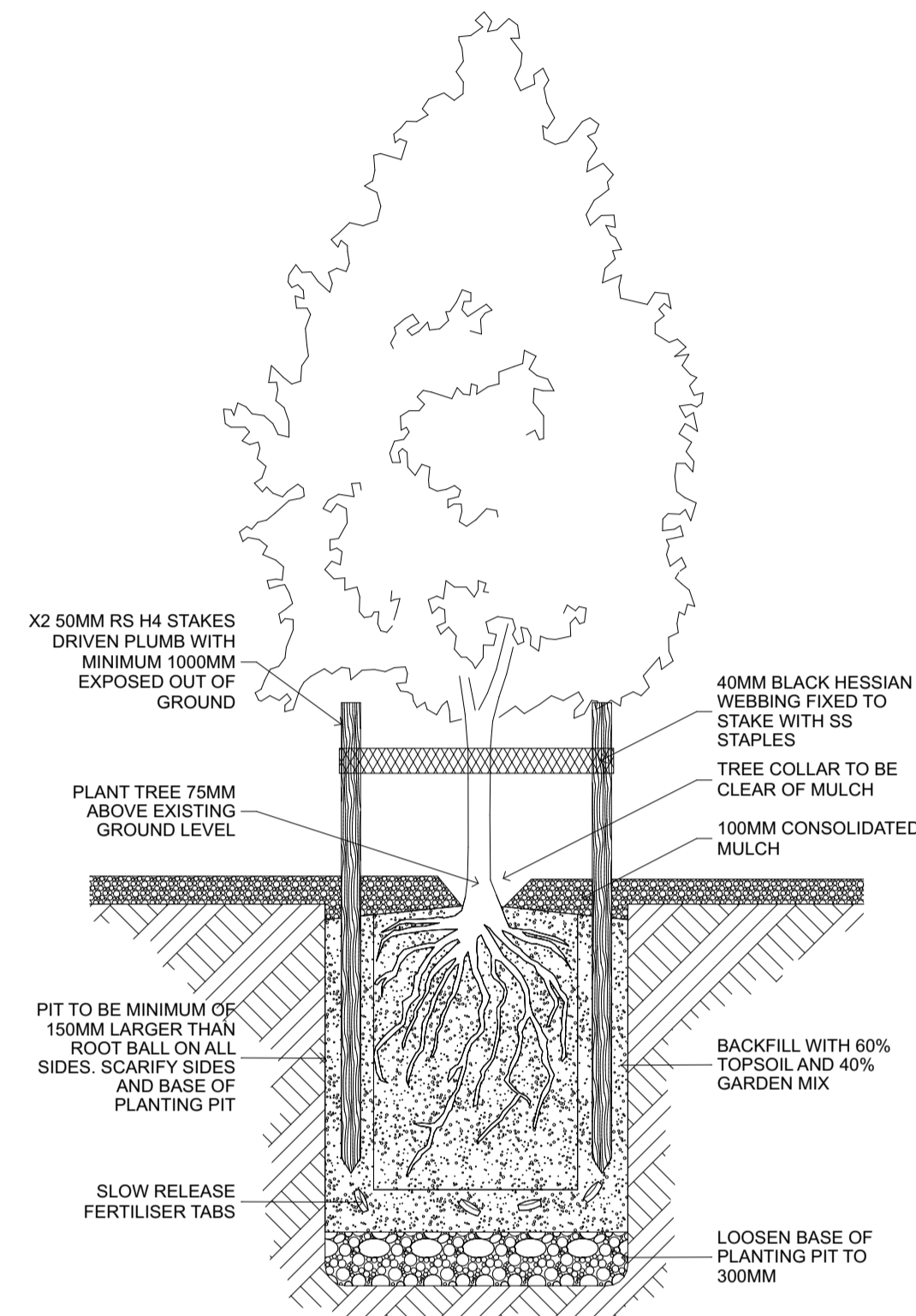
Code	Name	Specification
TF	Timber paling fence	1.8m high, 150mm H3.2 vertical palings, no spacing
LF	Low timber paling fence	1.2m high, 150mm H3.2 vertical palings, no spacing
OL	Overland flow path fence	1.8m high, 150mm H3.2 vertical palings, 5mm spacing, fence raised 200mm from ground
HS	Timber batten fence	1.5m high, 50X50mm H3.2 D4S vertical battens, 25mm spacing
HL	Low timber batten fence	1.2m high, 50X50mm H3.2 D4S vertical battens, 25mm spacing
BH	Balustrades and Handrails	Balustrades & handrails to be detailed at building consent stage ensuring all stairs and handrails are compliant as per NZBC D1 Access routes
BW	Brickwall	1.6m high, brickwall extension. Refer architecture drawings for specification
GA	Gate to match fence intersecting	Self-closing hinges, child proof latch, discourages climbing
EX	Existing fence to remain	Existing fence to remain if in sound condition. Repair as necessary
* S	Stained fence	Resene Woodsman 'Timberland' stain
* D	Double sided fence	Double sided battens/palings



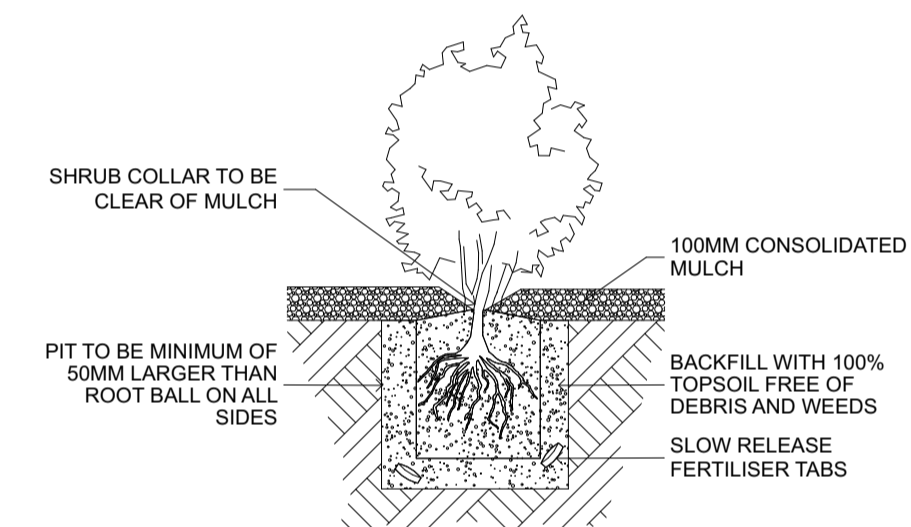
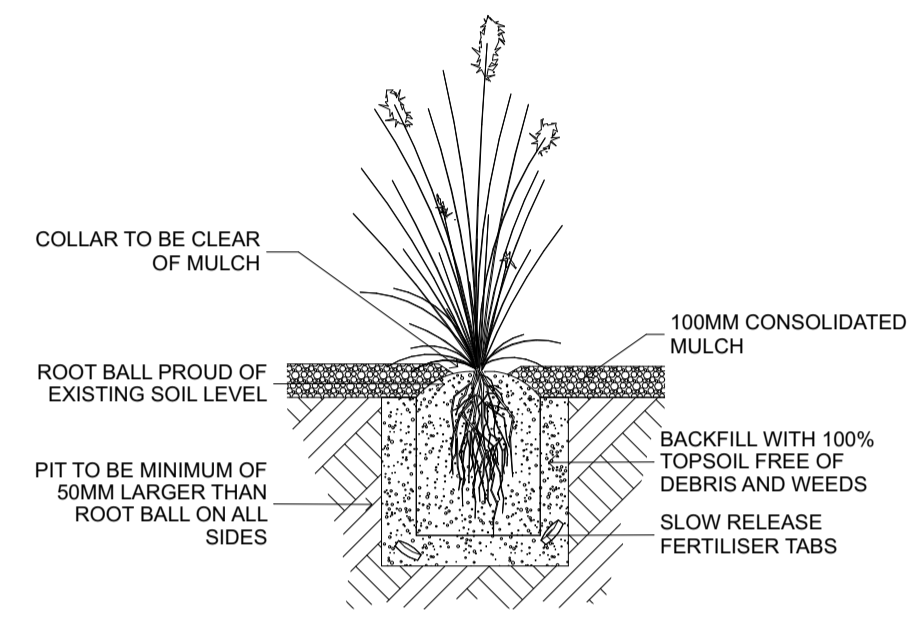
Code	Name	Specification
BL	Bollard light	Bollard light
SL	Sensor light	Sensor light attached to building

BEACH HAVEN ROAD

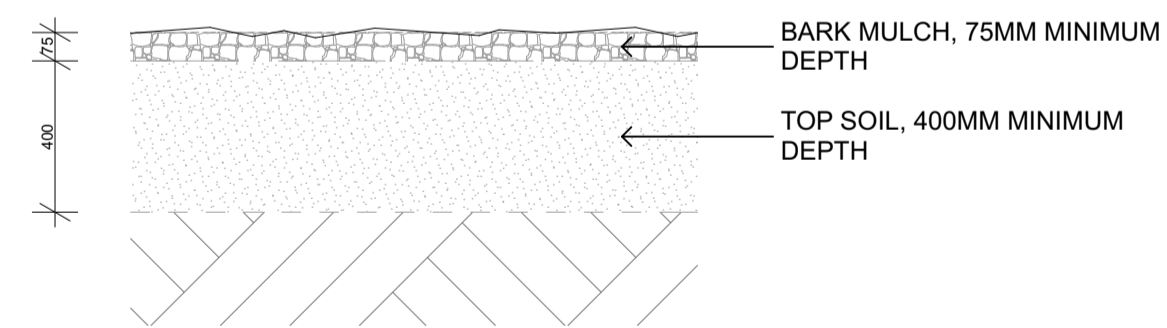




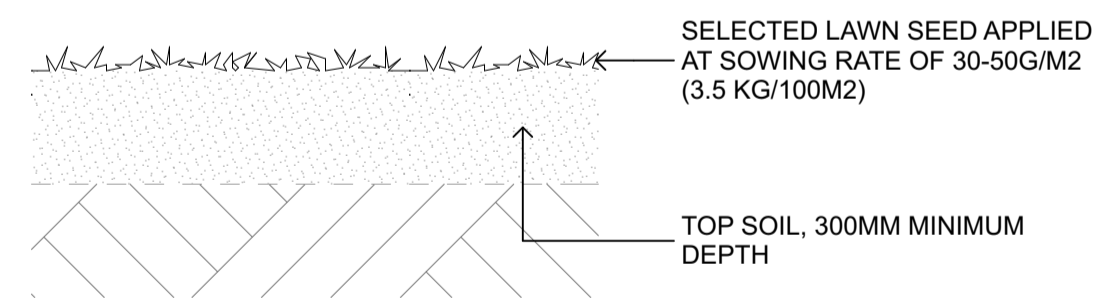
PD-01: TREE IN GARDEN NTS



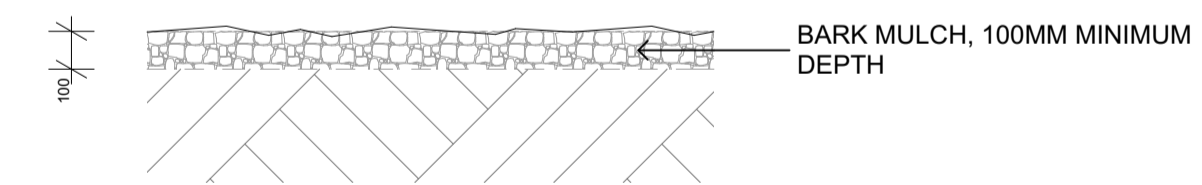
PD-02: SHRUB PLANTING NTS



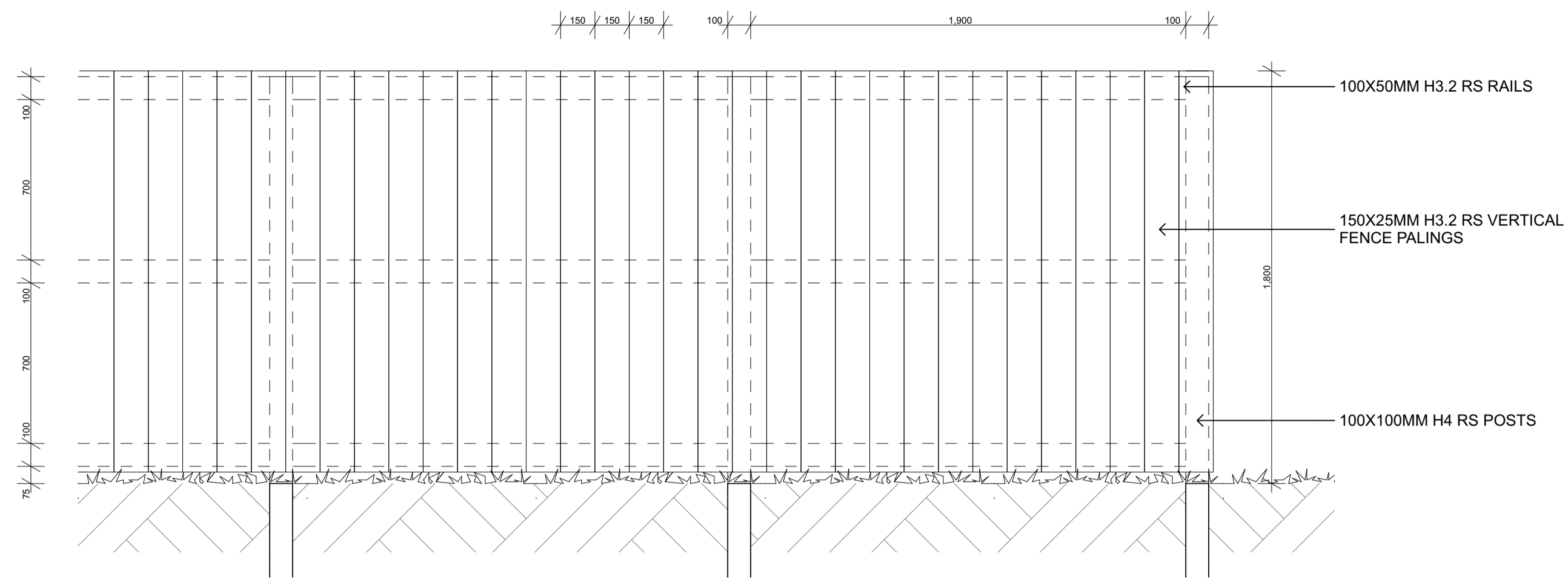
PD-03: GARDEN BEDS 1:20@A1 / 1:40@A3



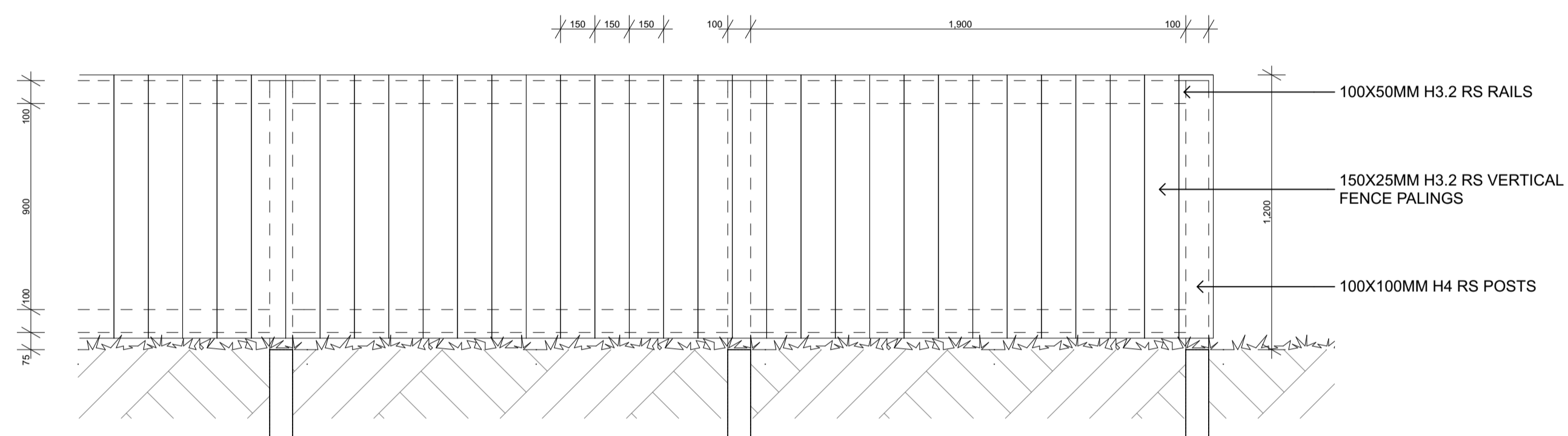
PD-04: LAWN 1:20@A1 / 1:40@A3



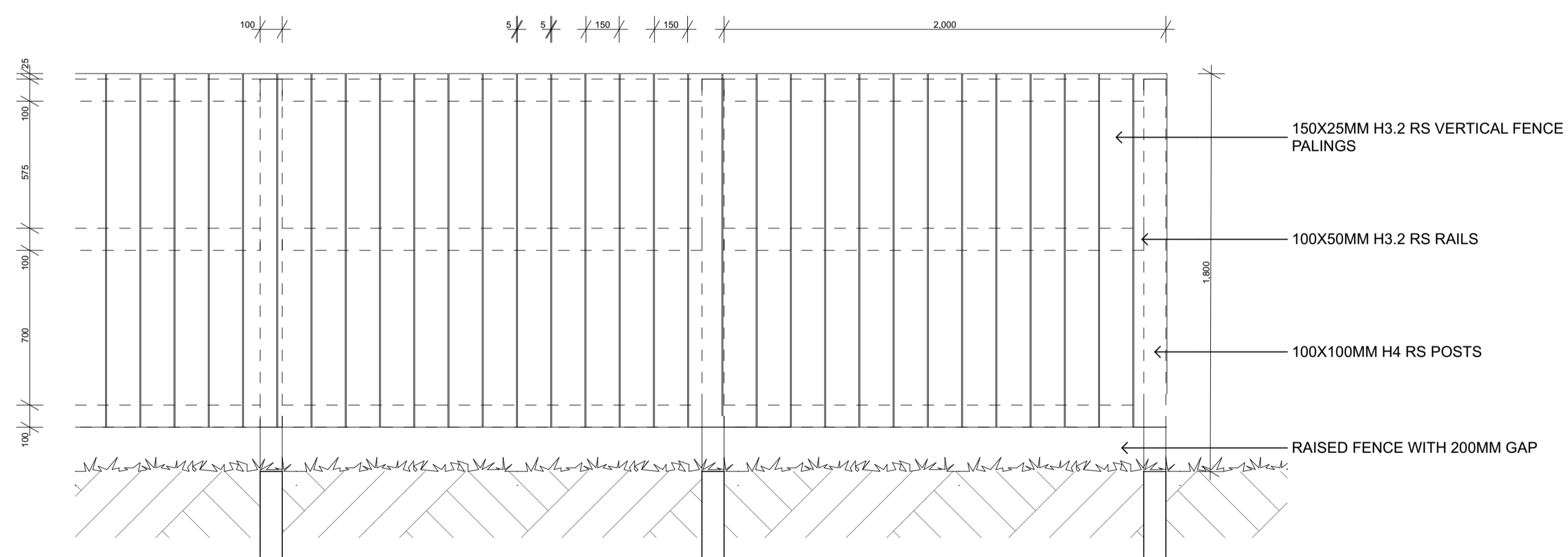
PD-05: BARK 1:20@A1 / 1:40@A3



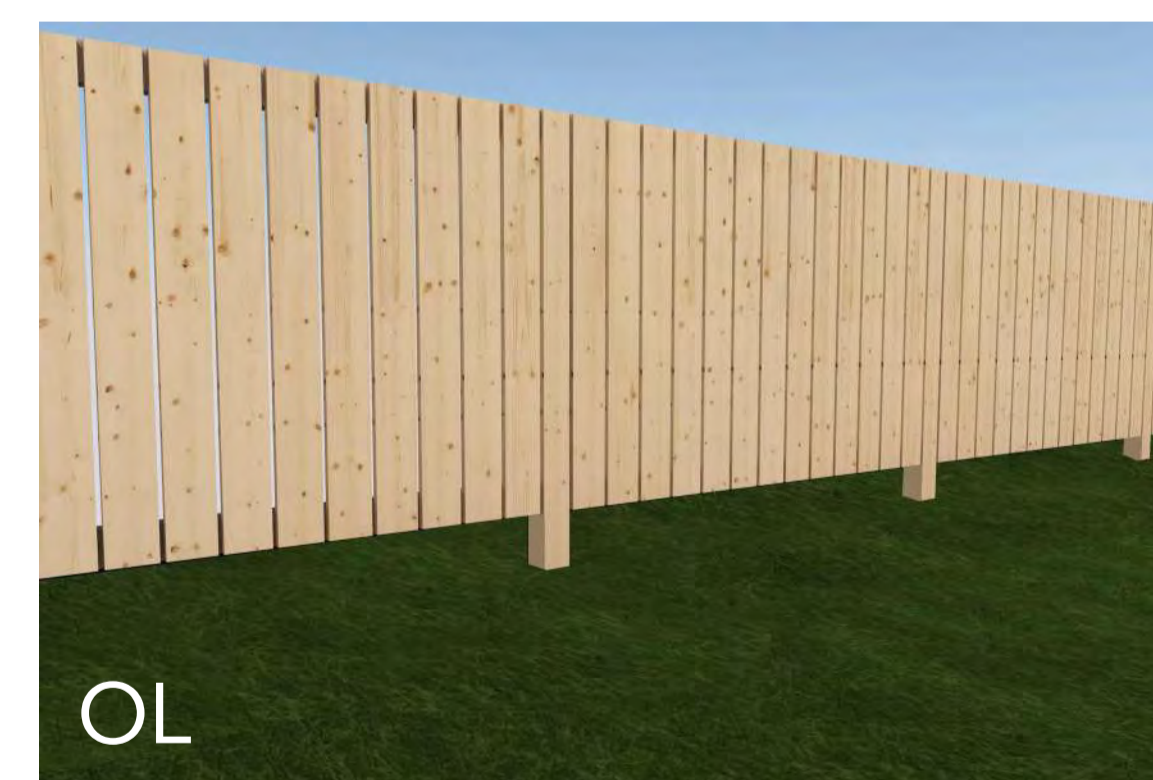
FD-TF: 1.8M TIMBER PALING FENCE 1:20@A1 / 1:40@A3



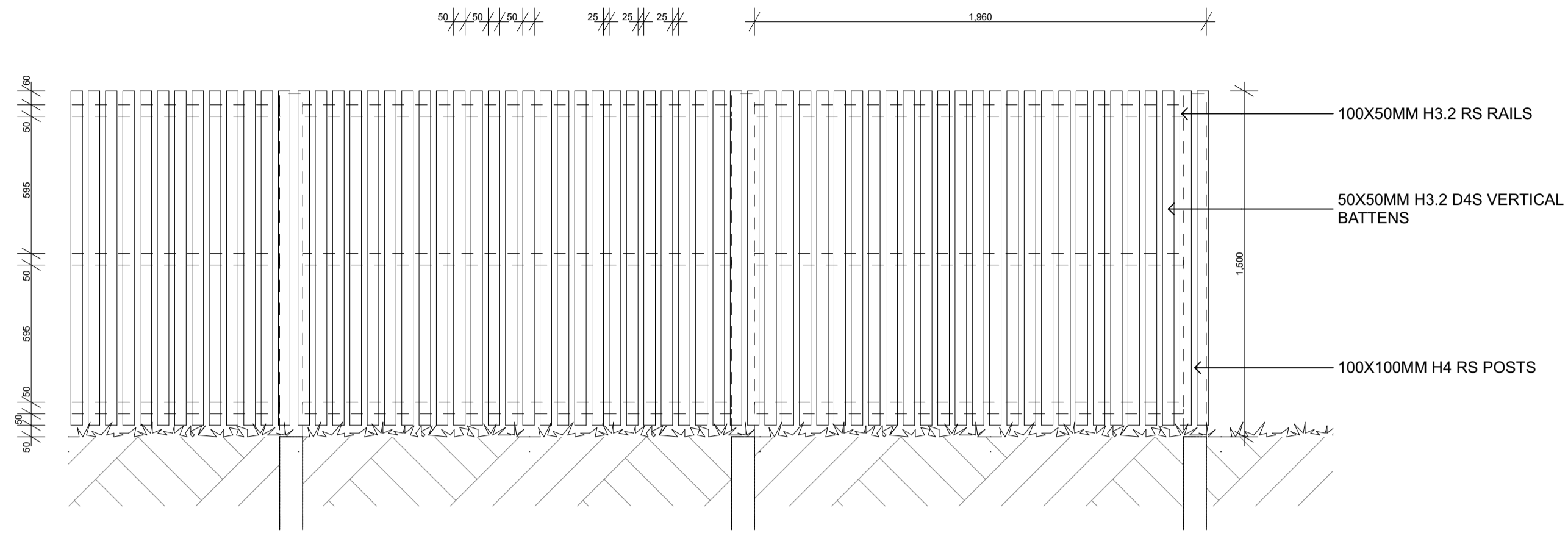
FD-LF: 1.2M LOW TIMBER PALING FENCE 1:20@A1 / 1:40@A3



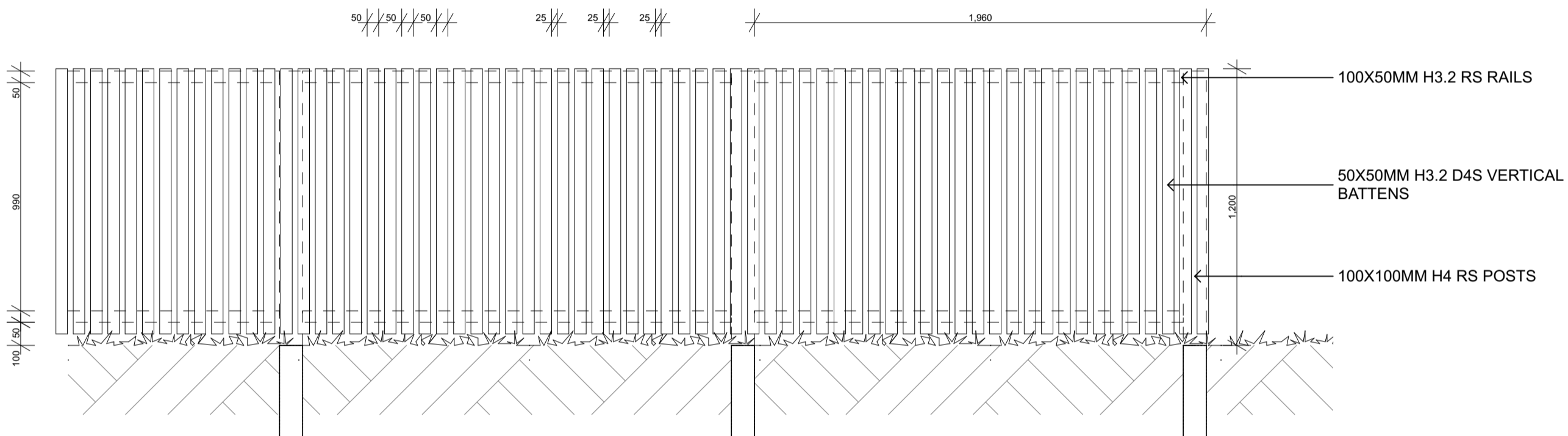
FD-OL: 1.8M OVERLAND FLOW PATH FENCE 1:20@A1 / 1:40@A3



**NOTE: ALL FENCE POSTS TO BE IN 300MM DIAMETER CONCRETE ENCASEMENT TO A MINIMUM DEPTH THAT IS 1/3 OF THE TOTAL FENCE HEIGHT UNLESS OTHERWISE SPECIFIED**



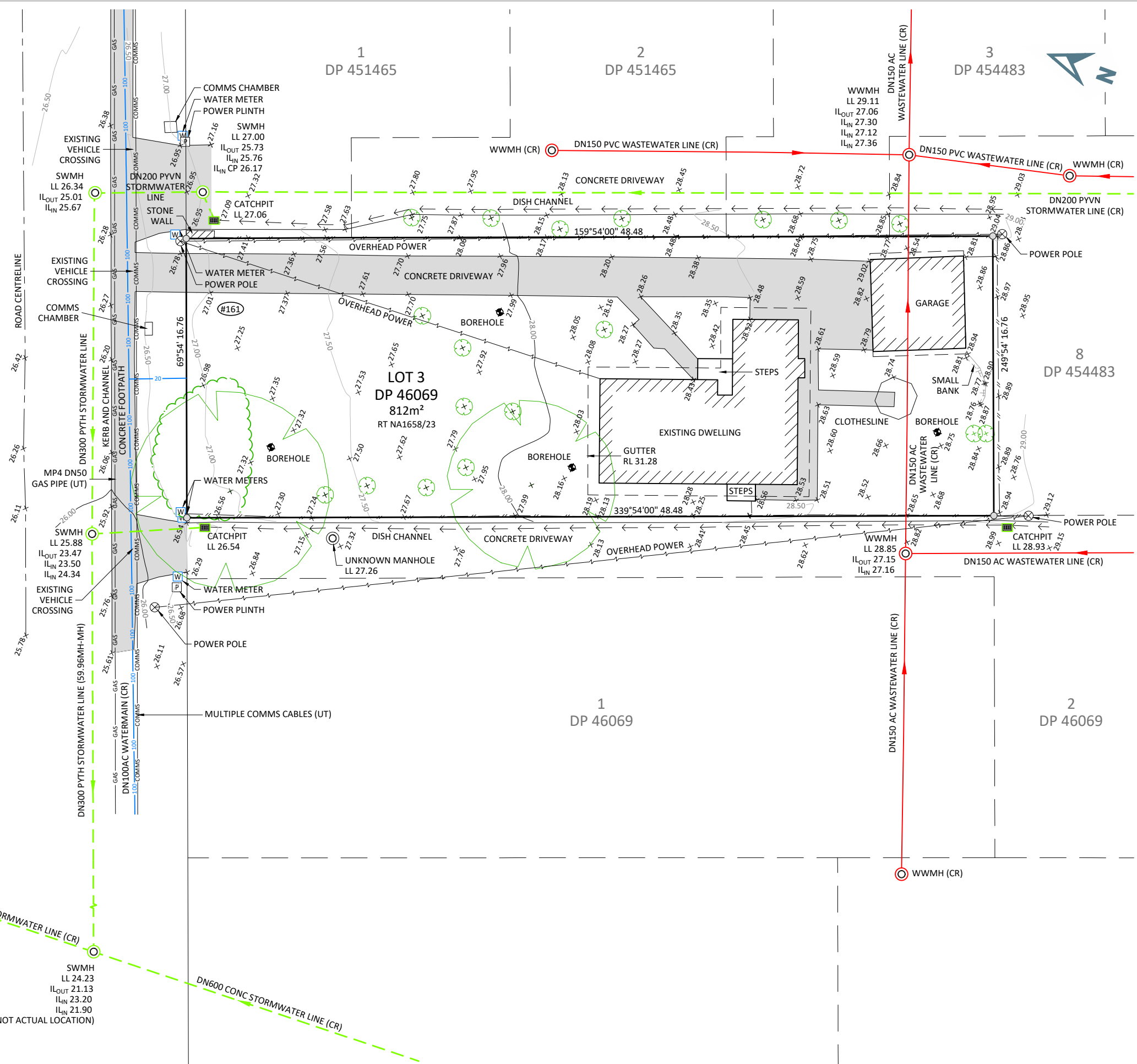
FD-HS: 1.5M TIMBER BATTEN FENCE 1:20@A1 / 1:40@A3



FD-HL: 1.2M LOW TIMBER BATTEN FENCE 1:20@A1 / 1:40@A3



**BEACH HAVEN ROAD**  
LEGAL AND SEALED (20.12m WIDE)



**LEGEND**

- (CR) PLOTTED FROM COUNCIL RECORDS
- (UT) PLOTTED FROM UTILITY COMPANY RECORDS
- FENCE
- TOP OF BANK
- BOTTOM OF BANK
- DISH CHANNEL
- EDGE OF SEAL
- HEDGE/DRIPLINE/VEGETATION
- BUILDING EAVE
- WASTEWATER LINE
- STORMWATER LINE
- WATERMAIN
- OVERHEAD POWER
- UNDERGROUND COMMS
- ROAD CENTRELINE
- CONTOUR
- CONCRETE PATHS & DRIVEWAYS
- BUILDING
- BOUNDARY PEG
- STORMWATER MANHOLE
- WASTEWATER MANHOLE
- CATCHPIT
- WATER METER
- POWER PLINTH
- POWER POLE
- BOREHOLE
- CLOTHESLINE
- TREE

- NOTES:**
- LEVELS ARE IN TERMS OF AUCKLAND VERTICAL DATUM 1946. ORIGIN OF LEVELS SM 5023 SO 53438 (CDDA) RL 26.49
  - COORDINATES ARE IN TERMS Mt. EDEN CIRCUIT 2000 ORIGIN OF COORDINATES SM 5023 SO 53438 (CDDA) 809924.80 393570.30
  - CONTOURS ARE AT 0.50 INTERVALS.
  - THIS PLAN HAS BEEN CARRIED OUT TO TOPOGRAPHICAL STANDARDS. ALL LEVELS SHOWN ARE CORRECT AT TIME OF SURVEY. CRITICAL DIMENSIONS AND LEVELS SHOULD BE VERIFIED.
  - BOUNDARIES SHOWN ON THIS PLAN ARE FROM LAND INFORMATION NZ DCDB AND HAVE NOT BEEN SURVEYED. A BOUNDARY DEFINITION SURVEY SHOULD BE CARRIED OUT TO ESTABLISH EXACT BOUNDARY POSITIONS ON SITE.
  - ALL EASEMENTS, COVENANTS AND OTHER LEGAL INSTRUMENTS ASSOCIATED WITH THIS SITE MAY NOT BE SHOWN ON THIS PLAN. AN INVESTIGATION OF THE MOST CURRENT LEGAL RECORDS SHOULD BE UNDERTAKEN PRIOR TO DESIGN AND CONSTRUCTION COMMENCING.
  - THESE NOTES ARE AN INTEGRAL PART OF THIS PLAN.
  - THIS PLAN IS ISSUED FOR A SPECIFIC PROJECT AND MAY NOT BE ALTERED OR USED FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF HARVEY SURVEYING.
  - PIPE SIZES, DEPTHS AND CONNECTIVITY TO BE CONFIRMED PRIOR TO CONSTRUCTION.
  - INVERT LEVELS SHOWN ARE FROM I<sub>OUT</sub> IN A CLOCKWISE DIRECTION.
  - MANHOLES ARE NOT CENTERED OVER PIPES. HYDRO LOCATION OF UNDERGROUND PIPES SHOULD BE UNDERTAKEN FOR CRITICAL DESIGN ELEMENTS.

SCHEDULE OF AREAS		
LEGAL DESCRIPTION	RT	AREA
LOT 3 DP 46069	NA1658/23	812m <sup>2</sup>
	TOTAL	812m <sup>2</sup>

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CL	ISSUED FOR CONSENT	DEH	15.10.2021
REV	REVISION DETAILS	BY	DATE

DRAWN:	DATE:
DKP	05.2019
CHECKED:	DATE:
CLH	13.05.19
APPROVED:	DATE:
CLH	13.05.19

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**CIVILPLAN CONSULTANTS**  
Level 9, Laidlaw House, 20 Amersham Way, Manukau, Auckland. Phone: 09 222 2445

PROJECT TITLE:  
**KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN**

SHEET TITLE:  
**TOPOGRAPHICAL PLAN OF  
LOT 3 DP 46069**

ISSUE STATUS: **CONSENT ISSUE**

SCALE: (A1/A3) **1:125 / 1:250**

SCALE BAR: 0 2.5 5 7.5 10 12.5m

DRAWING NUMBER: **2108-02-150** REV: **C1**

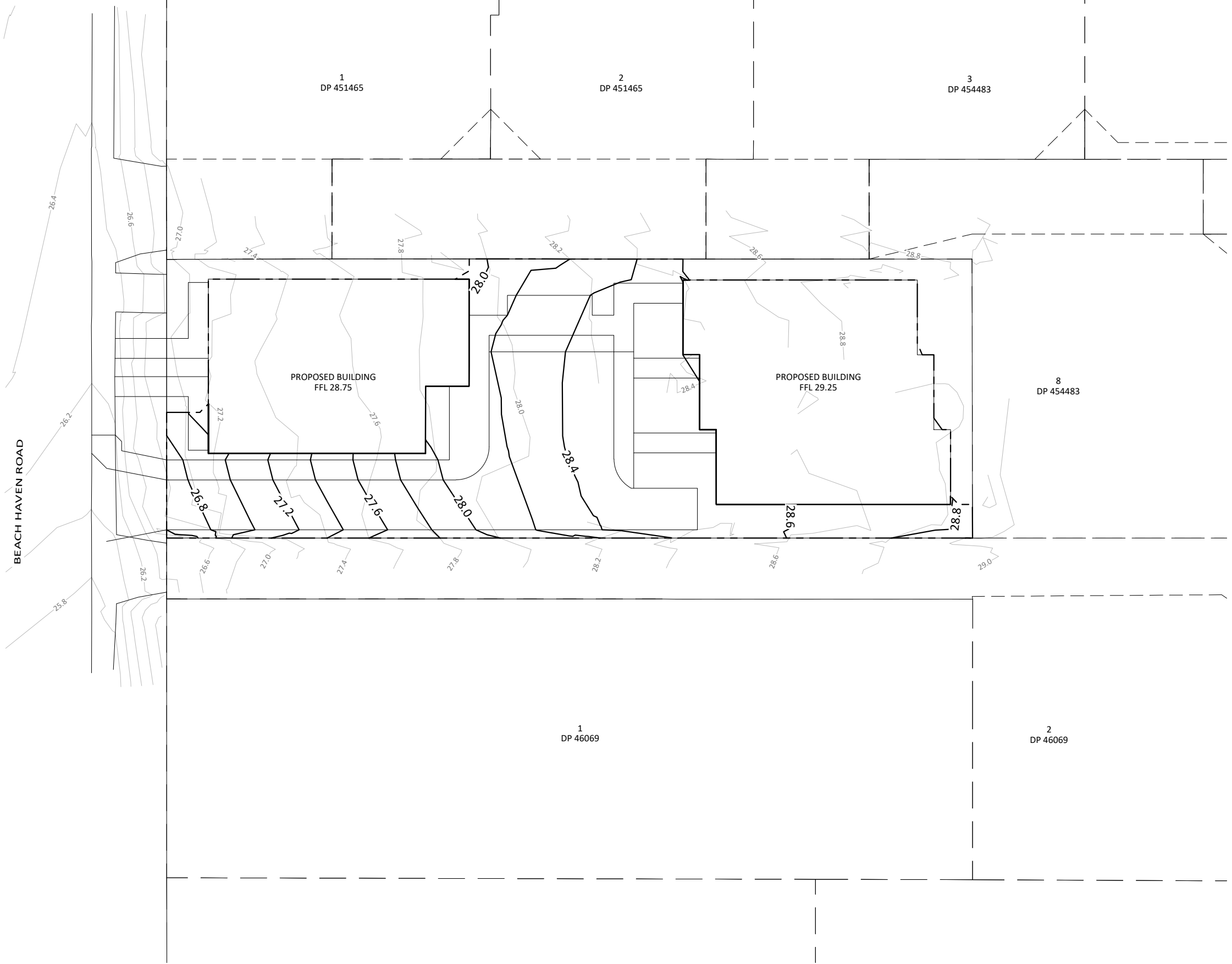


**LEGEND**

- 10.0 EXISTING CONTOUR
- 10.0 PROPOSED CONTOUR
- EARTHWORK EXTENT

**NOTES:**

1. LEVELS ARE IN TERMS OF AUCKLAND VERTICAL DATUM 1946.
2. EXISTING CONTOURS ARE SHOWN AT 0.2m INTERVALS.
3. DESIGN CONTOURS ARE SHOWN AT 0.2m INTERVALS.
4. CONTOURS SHOWN ARE FINISHED SURFACE LEVELS.
5. SILT AND STORMWATER CONTROL IS TO BE IMPLEMENTED DAILY AND COMPLY WITH THE GENERAL SPECIFICATION.
6. THE CONTRACTOR MUST BE AWARE OF AND COMPLY WITH AUCKLAND COUNCIL REQUIREMENTS FOR EARTHWORKS, AT ALL TIMES.
7. IT IS INTENDED THAT THE CONTRACTOR SHALL GRADE THE EARTHWORKS TO THE FINISHED CONTOURS SHOWN. HOWEVER, THE FINAL MARRYING AND SHAPING OF THE EARTHWORKS AREAS ARE SUBJECT TO THE ENGINEERS APPROVAL.
8. ROAD LONGSECTION SUBGRADE LEVELS, TYPICAL CROSS-SECTION LEVELS AND BOUNDARY LEVELS TAKE PRECEDENCE OVER PLAN CONTOUR LEVELS.



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DEH	08.2021	DATE
WJR	15.10.2021	DATE
WJR	15.10.2021	DATE

C1	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021
REV	REVISION DETAILS	BY	DATE

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PROJECT TITLE:  
**KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN**

SHEET TITLE:  
**PROPOSED EARTHWORKS  
FINISHED CONTOUR PLAN**

ISSUE STATUS: **CONSENT ISSUE**

SCALE: (A1/A3) **1:125 / 1:250**

SCALE BAR: 0 2.5 5 7.5 10 12.5m

DRAWING NUMBER: **2108-02-200** REV: **C1**



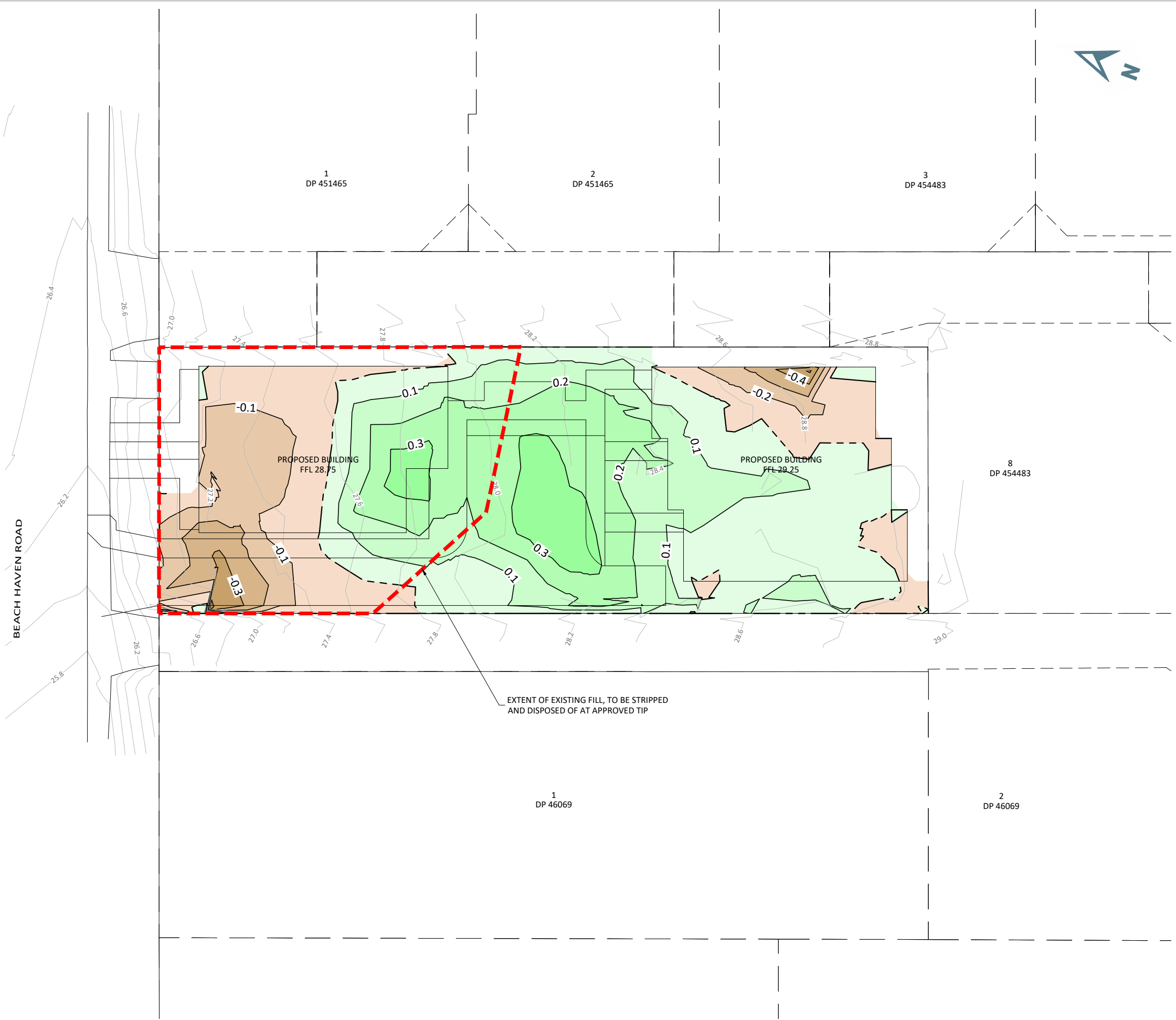


**LEGEND**

- 1.0 PROPOSED CUT ISOPACH
- 1.0 PROPOSED FILL ISOPACH
- EARTHWORKS ZERO CUT/FILL LINE
- PROPOSED CUT
- PROPOSED FILL

**NOTES:**

1. PROPOSED ISOPACHS ARE SHOWN AT 0.1m INTERVALS.
2. ALL WORKS AND MATERIALS ARE TO COMPLY WITH RELEVANT COUNCIL ENGINEERING STANDARDS.
3. ALL TOPSOIL TO BE STRIPPED AND STOCKPILED CLEAR OF THE PROPOSED EARTHWORKS IN A LOCATION AGREED WITH THE ENGINEER.
4. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE INSTALLED, AS-BUILT AND INSPECTED BY THE ENGINEER / COUNCIL REPRESENTATIVE PRIOR TO COMMENCING THE EARTHWORKS ON THE SITE.
5. AREA OF EARTHWORKS (INCLUDING TOPSOIL STRIP WITHIN AREAS NOT INCLUDED ON THIS PLAN) = 0.08ha.
6. EARTHWORK VOLUMES ARE FROM EXISTING STRIPPED SURFACE TO FINISHED SUBGRADE SURFACE AND ARE:
  - 6.1. TOPSOIL STRIP AND DISPOSAL - 240m<sup>3</sup>
  - 6.2. UNSUITABLES STRIP AND DISPOSAL - 140m<sup>3</sup>
  - 6.3. CUT TO FILL - 0m<sup>3</sup>
  - 6.4. IMPORTED FILL - 260m<sup>3</sup>
  - 6.5. IMPORTED TOPSOIL - 20m<sup>3</sup>



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DEH	08.2021	DRAWN	DATE
WJR	15.10.2021	CHECKED	DATE
WJR	15.10.2021	APPROVED	DATE
DEH	15.10.2021	BY	DATE

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PROJECT TITLE:  
**KĀINGA ORA  
 161 BEACH HAVEN ROAD  
 BEACH HAVEN**

SHEET TITLE:  
**PROPOSED EARTHWORKS  
 FINISHED ISOPACH PLAN**

ISSUE STATUS: **CONSENT ISSUE**

SCALE: (A1/A3) **1:125 / 1:250**

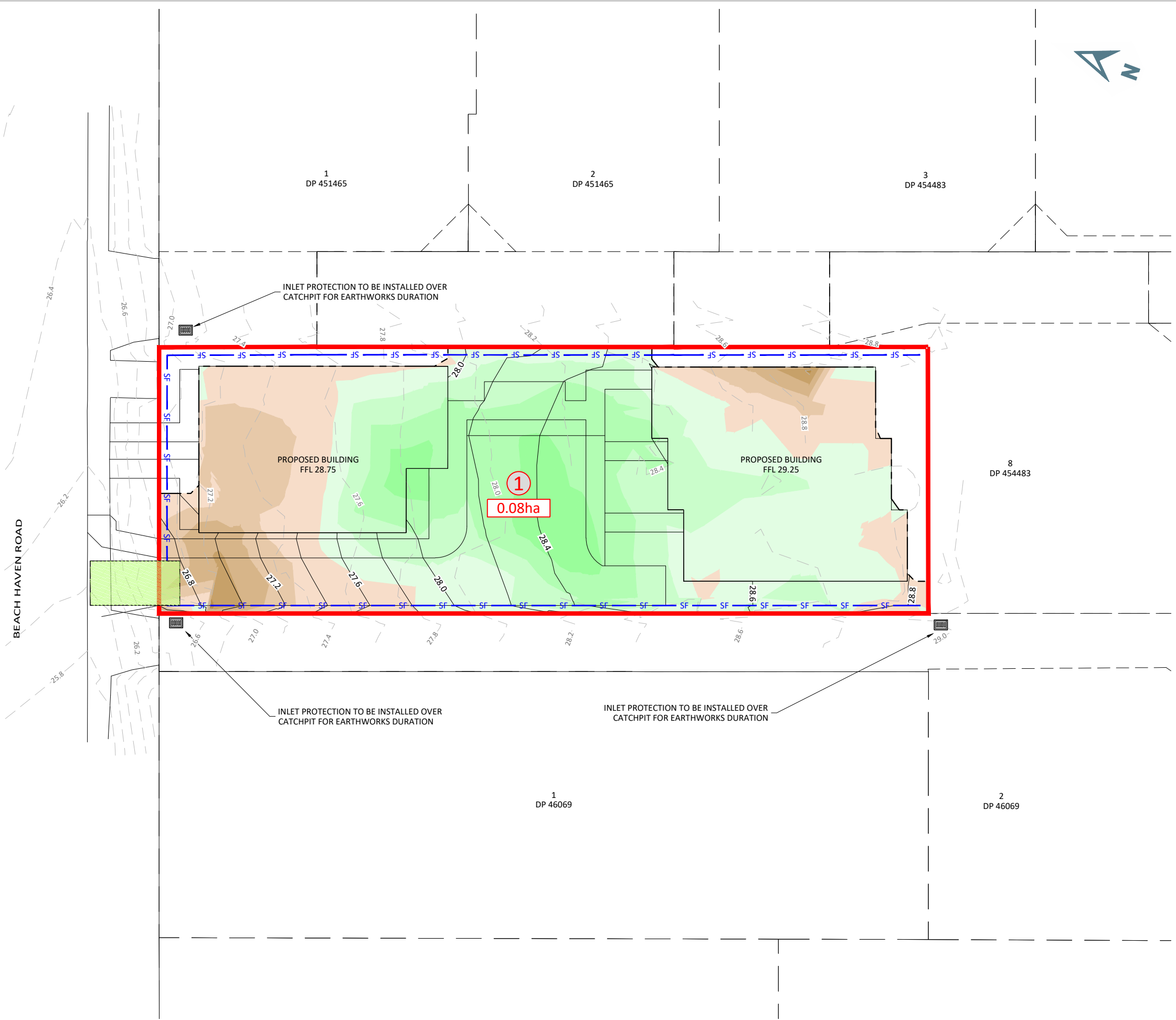
SCALE BAR: 0 2.5 5 7.5 10 12.5m

DRAWING NUMBER: **2108-02-220** REV: **C1**



**LEGEND**

- 10.0- EXISTING CONTOURS
- 10.0- PROPOSED CONTOURS
- STABILISED CONSTRUCTION ACCESS
- SF SILT FENCE
- CATCHMENT BOUNDARY
- PROPOSED CUT
- PROPOSED FILL
- CATCHMENT NUMBER
- CATCHMENT AREA



**NOTES:**

1. EXISTING CONTOURS ARE SHOWN AT 0.2m INTERVALS.
2. FINISHED CONTOURS ARE SHOWN AT 0.2m INTERVALS.
3. AREA OF EARTHWORKS (INCLUDING TOPSOIL STRIP WITHIN AREAS NOT INCLUDED ON THIS PLAN) = 0.08ha.
4. ALL WORKS TO COMPLY WITH COUNCIL ENGINEERING QUALITY STANDARDS AND ALL MATERIALS TO COMPLY WITH COUNCIL REQUIREMENTS.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE OPERATIONAL PRIOR TO ANY WORKS COMMENCING.
6. SEE SHEET 2108-01-(235-236) FOR STANDARD DETAILS
7. A COPY OF THE SEDIMENT CONTROL PLAN SHALL BE AVAILABLE ON THE SITE DURING WORK HOURS AND ALL PERSONNEL INVOLVED IN EARTHWORK ACTIVITIES ON THE SITE (INCLUDING OF SUB-CONTRACTORS) SHALL BE FAMILIAR WITH THE PLAN REQUIREMENTS AS THEY RELATE TO EROSION AND SEDIMENT CONTROL.
8. ALL "CLEANWATER" RUNOFF FROM STABILISED SURFACES INCLUDING CATCHMENT AREAS ABOVE THE SITE SHALL BE DIVERTED AWAY FROM EARTHWORK AREA VIA STABILISED SYSTEM, SO AS TO PREVENT SURFACE EROSION.
9. CUTOFF DRAINS TO BE INSTALLED AT THE MAXIMUM INTERVAL OF 50m AT THE END OF EACH DAY UNTIL SLOPES ARE STABILISED.
10. FURTHER SEDIMENT CONTROL WORKS MAY BE REQUIRED BY THE ENGINEER AS THE PROJECT ADVANCES. THESE WILL BE INSTALLED AS AND WHERE DIRECTED BY THE ENGINEER. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT THE SITE HAS EFFECTIVE SILT DETENTION FACILITIES OPERATING AT ALL TIMES.
11. EITHER DECANTING EARTH BUND (DEB), POND, OR SILT FENCE TO BE UTILISED AS DIRECTED BY THE ENGINEER IN CONSULTATION WITH AUCKLAND COUNCIL.
12. ALL EROSION AND SEDIMENT CONTROL MEASURES TO COMPLY WITH AUCKLAND COUNCIL'S GD05.
13. SEDIMENT AND EROSION CONTROL MEASURES SHOWN ON THIS DRAWING ARE WORST CASE AND ASSUME A FULLY OPEN SITE WITH UNSTABILISED CLAY. CONTRACTOR METHODOLOGY AND MATERIALS USED WILL HAVE A BEARING ON REQUIRED SEDIMENT AND EROSION CONTROL. FOR EXAMPLE, AS FINAL LAYERS OF FILL START TO SLOPE TOWARDS BOUNDARIES, IF METAL IS USED IN TO COVER THESE AREAS, THE AREA IS DEEMED STABILISED AND REQUIRED SEDIMENT AND EROSION CONTROL MEASURES WILL BE REDUCED UPON APPROVAL BY COUNCIL.
14. DEVICES SHALL NOT BE DE-COMMISSIONED WITHOUT THE EXPRESS APPROVAL OF COUNCILS MONITORING OFFICER.

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C1	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021
REV	REVISION DETAILS	BY	DATE

DRAWN:	DATE:	CHECKED:	DATE:	APPROVED:	DATE:
DEH	08.2021	WJR	15.10.2021	WJR	15.10.2021

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CIVILPLAN

CONSULTANTS

Level 9, Laidlaw House, 20 Amersham Way, Manukau, Auckland. Phone: 09 222 2445

PROJECT TITLE:

KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN

SHEET TITLE:

PROPOSED EARTHWORKS  
SEDIMENT AND EROSION CONTROL  
PLAN

ISSUE STATUS: CONSENT ISSUE

SCALE: (A1/A3) 1:125 / 1:250

SCALE BAR: 0 2.5 5 7.5 10 12.5m

DRAWING NUMBER: 2108-02-230 REV: C1

## SILT FENCE:

### APPLICATION

- ON LOW GRADIENT SITES OR FOR CONFINED AREAS WHERE THE CONTRIBUTING CATCHMENT IS SMALL, SUCH AS SHORT STEEP BATTER FILLS AND AROUND WATERCOURSES.
- TO DELINEATE THE LIMIT OF DISTURBANCE ON AN EARTHWORKS SITE SUCH AS RIPARIAN AREAS OR BUSH RESERVES.
- TO STORE RUNOFF BEHIND THE SILT FENCE WITHOUT DAMAGING THE FENCE OR THE SUBMERGED AREA BEHIND THE FENCE.
- DO NOT INSTALL SILT FENCES ACROSS WATERCOURSES OR IN AREAS OF CONCENTRATED FLOWS.

### DESIGN

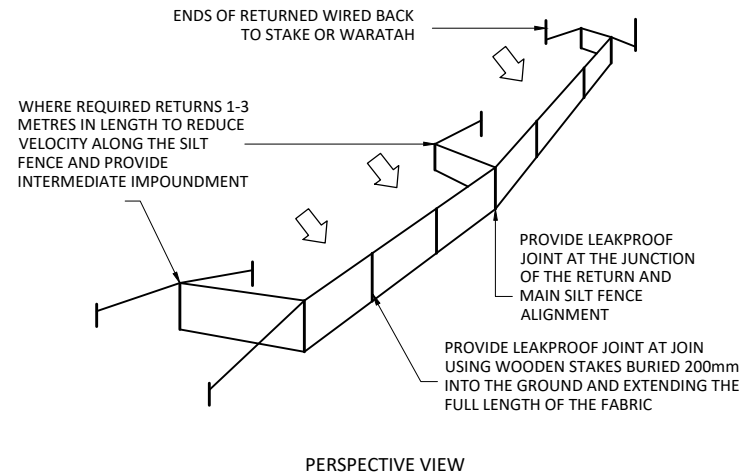
- ENSURE THE SILT FENCE HEIGHT IS A MINIMUM OF 600mm ABOVE AND 200mm BELOW GROUND LEVEL.
- PLACE SUPPORTING POSTS/WARATAHS FOR SILT FENCES 2m-4m WITH SUPPORT PROVIDED BY TENSIONED WIRE (2.5mm HT) ALONG THE TOP OF THE SILT FENCE. WHERE A STRONG WOVEN FABRIC IS USED IN CONJUNCTION WITH A WIRE SUPPORT, THE DISTANCE BETWEEN POSTS CAN BE EXTENDED UP TO 4m. DOUBLE THE SILT FENCE FABRIC OVER AND FASTEN TO THE WIRE AND POSTS WITH SILT FENCE CLIPS AT 500mm SPACINGS. ENSURE SUPPORTING POSTS ARE EMBEDDED A MINIMUM OF 400mm INTO THE GROUND.
- ALWAYS INSTALL SILT FENCES ALONG THE CONTOUR (AT A BREAK IN SLOPE). WHERE THIS IS NOT POSSIBLE OR WHERE THERE ARE LONG SECTIONS OF SILT FENCE, INSTALL SHORT SILT FENCE RETURNS PROJECTING UP SLOPE TO MINIMISE CONCENTRATION OF FLOWS. SILT FENCE RETURNS ARE A MINIMUM 2m IN LENGTH, CAN INCORPORATE A TIE BACK AND ARE GENERALLY CONSTRUCTED BY CONTINUING THE SILT FENCE AROUND THE RETURN AND DOUBLING BACK, ELIMINATING JOINS.
- JOIN LENGTHS OF SILT FENCE BY DOUBLING OVER FABRIC ENDS AROUND A WARRATAH, WOODEN POST OR BATTEN OR BY STAPLING THE FABRIC ENDS TO A BATTEN AND BUTTING THE TWO BATTENS TOGETHER OR BY OVERLAPPING AT LEAST 2m.
- MAXIMUM SLOPE LENGTHS, SPACING OF RETURNS AND ANGLES FOR SILT FENCES ARE SHOWN IN THE TABLE BELOW.
- INSTALL SILT FENCE RETURNS AT EITHER END OF THE SILT FENCE PROJECTING UPSLOPE TO A SUFFICIENT HEIGHT TO PREVENT OUTFLANKING.
- WHERE IMPOUNDED FLOW MAY OVERTOP THE SILT FENCE, CROSSING NATURAL DEPRESSIONS OR LOW POINTS, MAKE PROVISION FOR A RIPRAP SPLASH PAD OR OTHER OUTLET PROTECTION DEVICE.

### MAINTENANCE

- INSPECT SILT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY NECESSARY REPAIRS WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHES 50% OF THE FABRIC HEIGHT.
- ANY AREAS OF COLLAPSE, DECOMPOSITION OR INEFFECTIVENESS NEED TO BE IMMEDIATELY REPLACED.
- REMOVE SEDIMENT DEPOSITS AS NECESSARY TO CONTINUE TO ALLOW FOR ADEQUATE SEDIMENT STORAGE AND REDUCE PRESSURE ON THE SILT FENCE. ENSURE THAT THE SEDIMENT IS REMOVED TO A SECURE AREA.
- DO NOT REMOVE SILT FENCE MATERIALS AND SEDIMENT DEPOSITION UNTIL THE CATCHMENT AREA HAS BEEN APPROPRIATELY STABILISED. STABILISE THE AREA OF THE REMOVED SILT FENCE.

### SUPER SILT FENCE DESIGN CRITERIA:

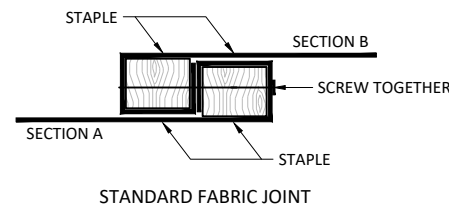
SLOPE STEEPNESS %	SLOPE LENGTH (m) (MAXIMUM)	SPACING OF RETURNS (m)	SUPER SILT FENCE LENGTH (m) (MAXIMUM)
0-10%	UNLIMITED	60	UNLIMITED
10-20%	60	50	450
20-33%	30	40	300
33-50%	30	30	150
>50%	15	20	75



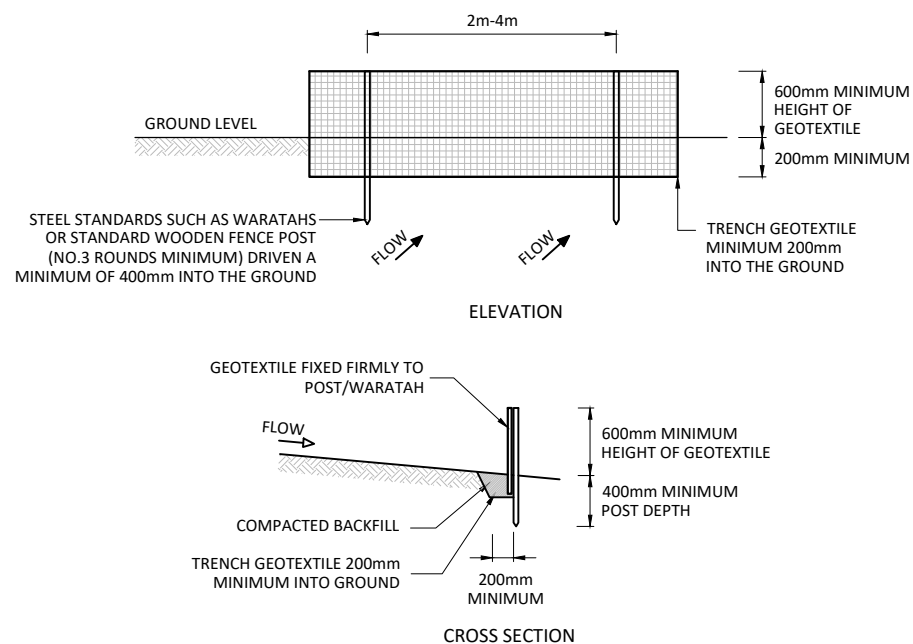
### SILT FENCE DESIGN CRITERIA:

SLOPE STEEPNESS %	SLOPE LENGTH (m) (MAXIMUM)	SPACING OF RETURNS (m)	SILT FENCE LENGTH (m) (MAXIMUM)
< 2%	UNLIMITED	N/A	UNLIMITED
2-10%	40	60	300
10-20%	30	50	230
20-33%	20	40	150
33-50%	15	30	75
>50%	6	20	40

GRAB TENSILE STRENGTH: >440N (ASTM D4632)  
 TENSILE MODULUS: 0.140 pa (MINIMUM)  
 APPARENT OPENING SIZE: 0.1-0.5mm (ASTM D4751)



### SILT FENCE CONSTRUCTION



## SUPER SILT FENCE:

### APPLICATION

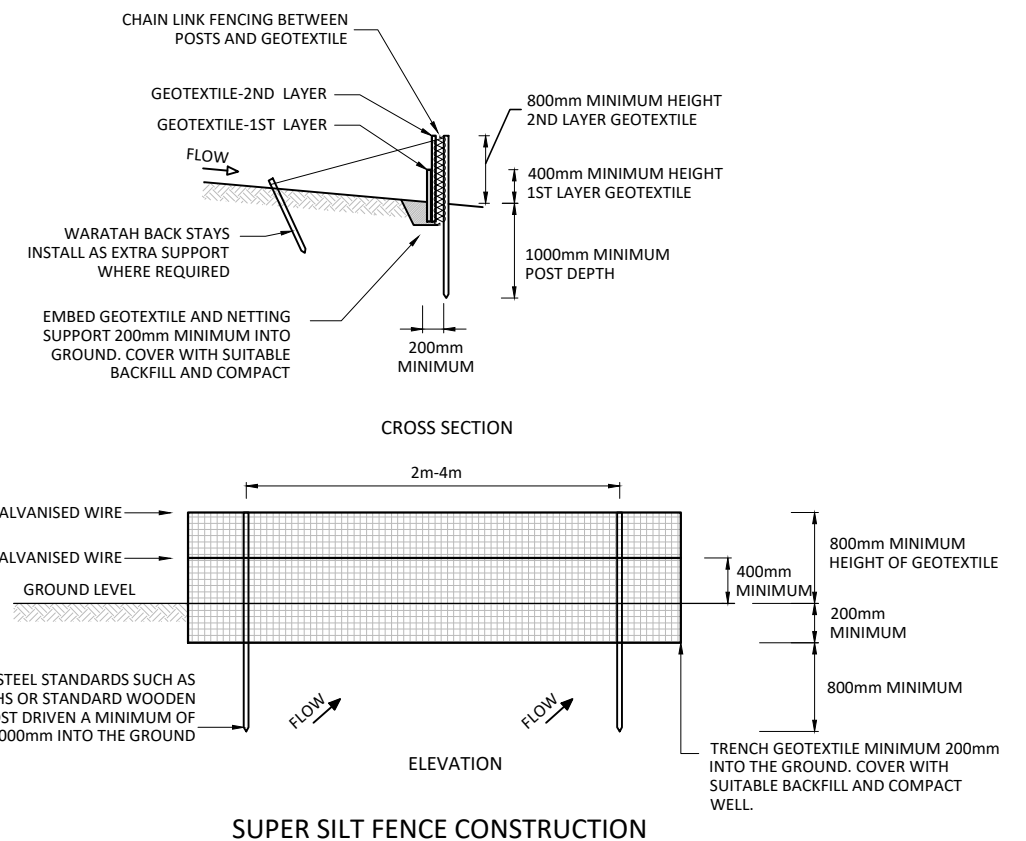
- PROVIDES A BARRIER THAT CAN COLLECT AND HOLD DEBRIS AND SOIL, PREVENTING THE MATERIAL FROM ENTERING CRITICAL AREAS, WATERCOURSES AND STREETS.
- CAN BE USED WHERE THE INSTALLATION OF AN EARTH OR TOPSOIL BUND WOULD DESTROY SENSITIVE AREAS SUCH AS BUSH AND WETLANDS.
- SHOULD BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE. NO SECTION OF THE FENCE SHOULD EXCEED A GRADE OF 5% FOR A DISTANCE OF MORE THAN 15m.

### DESIGN

- ENSURE THE SILT FENCE HEIGHT IS A MINIMUM OF 600mm ABOVE AND 200mm BELOW GROUND LEVEL.
- WHEN CONSIDERING SUPER SILT FENCE INSTALLATION FOR LARGER CATCHMENTS (GREATER THAN 0.5ha) AS IN THE TABLE BELOW, CAREFULLY CONSIDER THE SPECIFIC SITE CONDITIONS AND OTHER ALTERNATIVE CONTROL MEASURES AVAILABLE. BASE THE LENGTH OF THE SUPER SILT FENCE ON THE LIMITS SHOWN IN THE TABLE LEFT.
- ALWAYS INSTALL SILT FENCES ALONG THE CONTOUR (AT A BREAK IN SLOPE). WHERE THIS IS NOT POSSIBLE OR WHERE THERE ARE LONG SECTIONS OF SILT FENCE, INSTALL SHORT SILT FENCE RETURNS PROJECTING UP SLOPE TO MINIMISE CONCENTRATION OF FLOWS. SILT FENCE RETURNS ARE A MINIMUM 2m IN LENGTH, CAN INCORPORATE A TIE BACK AND ARE GENERALLY CONSTRUCTED BY CONTINUING THE SILT FENCE AROUND THE RETURN AND DOUBLING BACK, ELIMINATING JOINS.
- JOIN LENGTHS OF SILT FENCE BY DOUBLING OVER FABRIC ENDS AROUND A WARRATAH, WOODEN POST OR BATTEN OR BY STAPLING THE FABRIC ENDS TO A BATTEN AND BUTTING THE TWO BATTENS TOGETHER OR BY OVERLAPPING AT LEAST 2m.
- LIMITS IMPOSED BY ULTRA VIOLET LIGHT AFFECT THE STABILITY OF THE FABRIC AND WILL DICTATE THE MAXIMUM PERIOD THAT THE SUPER SILT FENCE MAY BE USED.
- WHERE ENDS OF THE GEOTEXTILE FABRIC COME TOGETHER, OVERLAP, FOLD AND STAPLE THE FABRIC ENDS TO PREVENT SEDIMENT BYPASS.

### MAINTENANCE

- INSPECT SILT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY NECESSARY REPAIRS WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHES 50% OF THE FABRIC HEIGHT.
- ANY AREAS OF COLLAPSE, DECOMPOSITION OR INEFFECTIVENESS NEED TO BE IMMEDIATELY REPLACED.
- REMOVE SEDIMENT DEPOSITS AS NECESSARY TO CONTINUE TO ALLOW FOR ADEQUATE SEDIMENT STORAGE AND REDUCE PRESSURE ON THE SILT FENCE. ENSURE THAT THE SEDIMENT IS REMOVED TO A SECURE AREA.
- DO NOT REMOVE SILT FENCE MATERIALS AND SEDIMENT DEPOSITION UNTIL THE CATCHMENT AREA HAS BEEN APPROPRIATELY STABILISED. STABILISE THE AREA OF THE REMOVED SILT FENCE.



### SUPER SILT FENCE CONSTRUCTION

REV	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021

DRAWN	DATE
DEH	08.2021
CHECKED	DATE
WJR	15.10.2021
APPROVED	DATE
WJR	15.10.2021

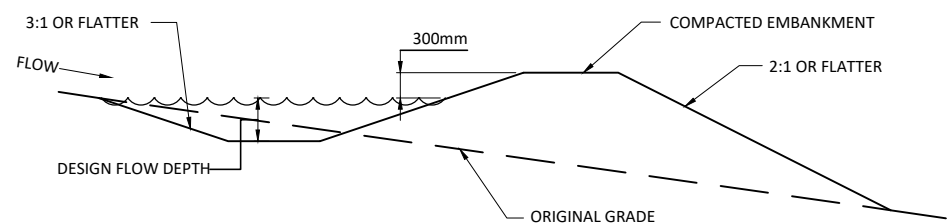
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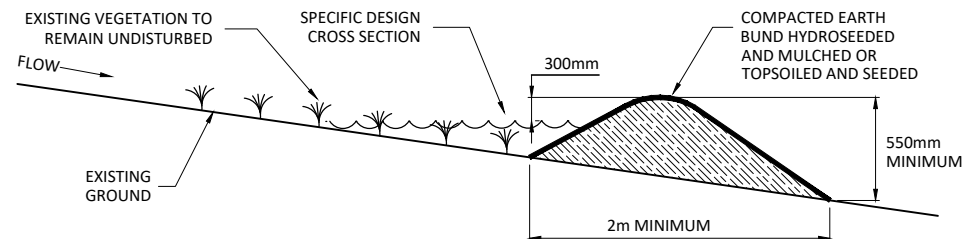
PROJECT TITLE:  
**KĀINGA ORA**  
 161 BEACH HAVEN ROAD  
 BEACH HAVEN

SHEET TITLE:  
**PROPOSED EARTHWORKS**  
**SEDIMENT AND EROSION CONTROL**  
**STANDARD DETAILS SHEET 1**

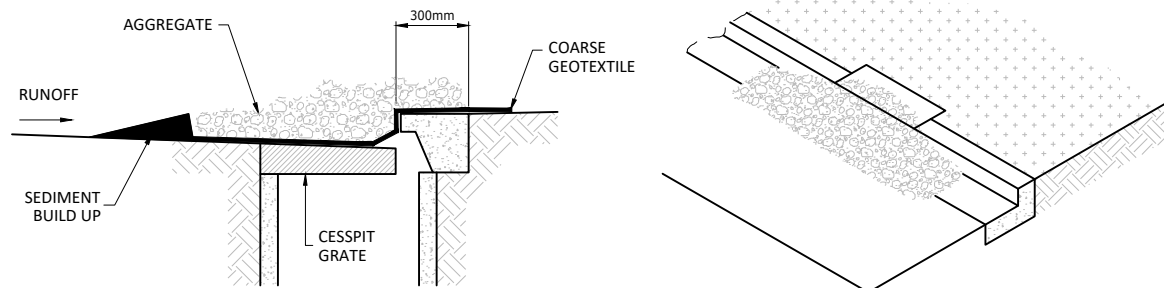
ISSUE STATUS: **CONSENT ISSUE**  
 SCALE: (A1/A3) **NOT TO SCALE**  
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 N.T.S.  
 DRAWING NUMBER: **2108-02-235** REV: **C1**



DIRTY WATER DIVERSION - CROSS SECTION



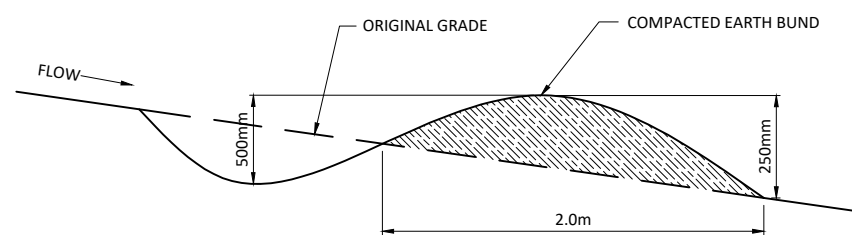
CLEANWATER DIVERSION - CROSS SECTION



CROSS SECTION

PERSPECTIVE VIEW

STORMWATER INLET PROTECTION



CONTOUR DRAIN

**STABILISED CONSTRUCTION ENTRANCE:**

**APPLICATION**

- USE A STABILISED CONSTRUCTION ENTRANCE AT ALL POINTS OF CONSTRUCTION SITE INGRESS AND EGRESS WITH A CONSTRUCTION PLAN LIMITING TRAFFIC TO THESE ENTRANCES ONLY.

**DESIGN**

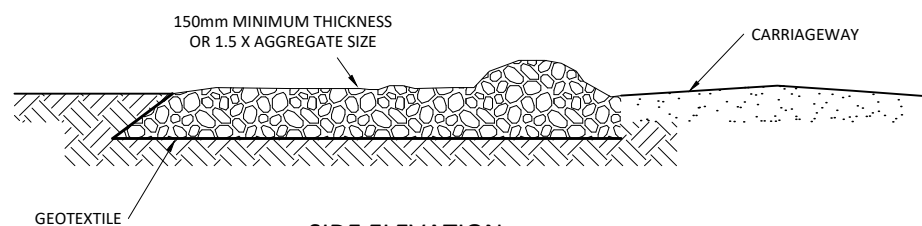
- CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS AND OTHER UNSUITABLE MATERIAL AND PROPERLY GRADE IT.
- LAY WOVEN GEOTEXTILE; PIN DOWN EDGES AND OVERLAP JOINTS.
- PROVIDE DRAINAGE TO CARRY RUNOFF FROM THE STABILISED CONSTRUCTION ENTRANCE TO A SEDIMENT CONTROL MEASURE.
- PLACE AGGREGATE TO THE SPECIFICATIONS BELOW AND SMOOTH IT.

**STABILISED CONSTRUCTION ENTRANCE AGGREGATE SPECIFICATIONS:**

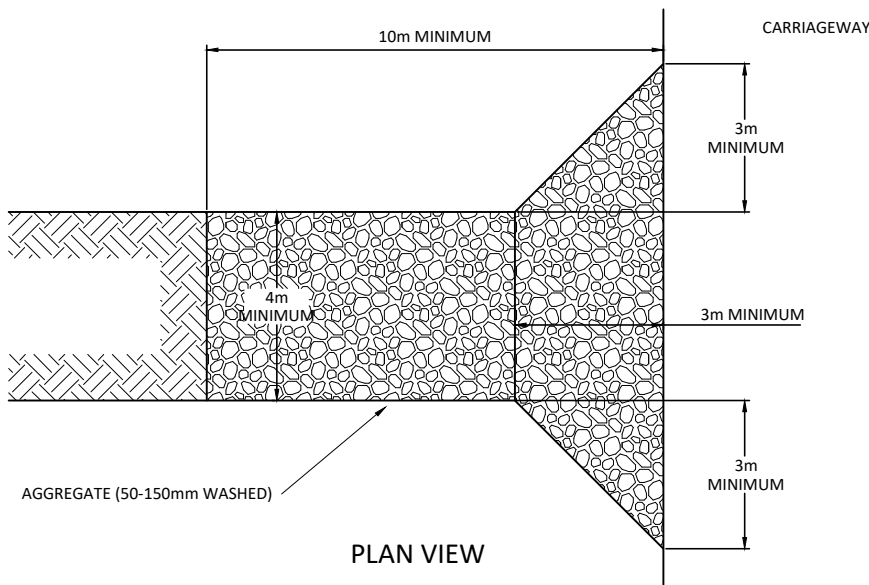
AGGREGATE SIZE	50-150mm WASHED AGGREGATE
THICKNESS	150mm MINIMUM OR 1.5 X AGGREGATE SIZE
LENGTH	10m MINIMUM LENGTH RECOMMENDED
WIDTH	4m MINIMUM WIDTH

**MAINTENANCE**

- MAINTAIN THE STABILISED CONSTRUCTION ENTRANCE IN A CONDITION TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. AFTER EACH RAINFALL INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT FROM THE STABILISED CONSTRUCTION ENTRANCE AND CLEAN OUT AS NECESSARY.
- WHEN WHEEL WASHING IS ALSO REQUIRED, ENSURE THIS IS DONE ON AN AREA STABILISED WITH AGGREGATE WHICH DRAINS TO AN APPROVED SEDIMENT RETENTION FACILITY.

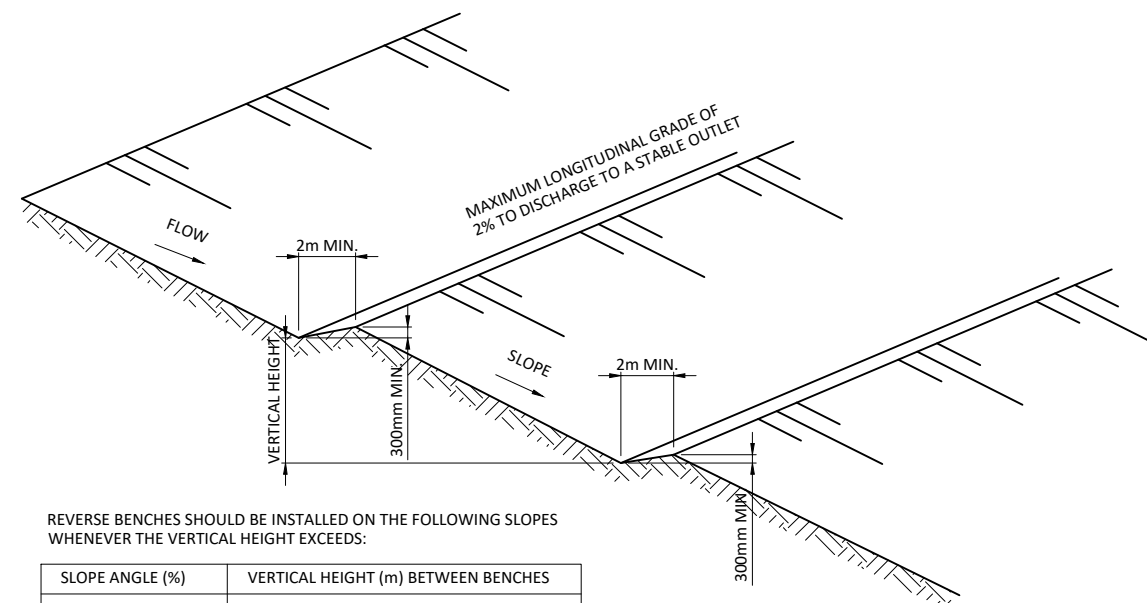


SIDE ELEVATION



PLAN VIEW

STABILISED CONSTRUCTION ENTRANCE



REVERSE BENCHES SHOULD BE INSTALLED ON THE FOLLOWING SLOPES WHENEVER THE VERTICAL HEIGHT EXCEEDS:

SLOPE ANGLE (%)	VERTICAL HEIGHT (m) BETWEEN BENCHES
50	10
33	15
25	20

BENCHED SLOPE

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CL	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021
REV	REVISION DETAILS	BY	DATE

DRAWN:	DATE:	
DEH	08.2021	
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WJR	15.10.2021	
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WJR	15.10.2021	

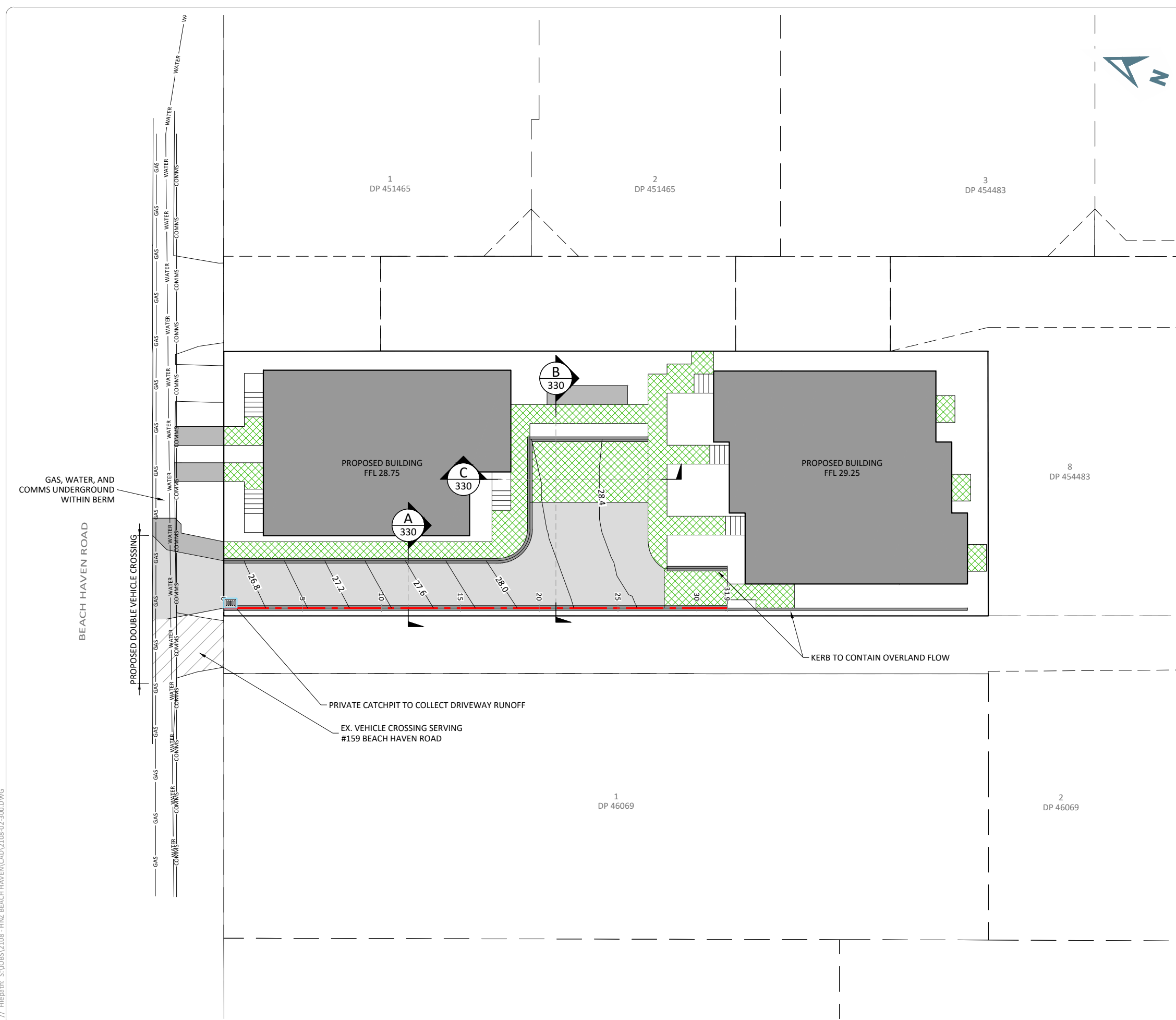
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PROJECT TITLE:  
**KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN**

SHEET TITLE:  
**PROPOSED EARTHWORKS  
SEDIMENT AND EROSION CONTROL  
STANDARD DETAILS SHEET 2**

ISSUE STATUS: **CONSENT ISSUE**  
SCALE: (A1/A3) **NOT TO SCALE**  
SCALE BAR  
DRAWING NUMBER: **2108-02-236** REV: **C1**



**NOTES:**

1. ALL WORKS AND MATERIALS ARE TO COMPLY WITH AUCKLAND TRANSPORT TDM TECHNICAL STANDARDS.
2. REFER TO 320 PLAN SERIES FOR LONGITUDINAL SECTIONS.
3. REFER TO 330 PLAN SERIES FOR TYPICAL CROSS SECTIONS, AGGREGATE, KERBING TYPES AND FOOTPATH CONSTRUCTION.
4. ALL EXISTING VEHICLE CROSSINGS AND FOOTPATH LINKS WITHIN THE ROAD RESERVE THAT ARE ASSOCIATED WITH THE DEVELOPMENT ARE TO BE REMOVED. BERM, FOOTPATHS, AND KERBING TO BE REINSTATED.
5. PROPOSED VEHICLE CROSSING TO BE IN ACCORDANCE WITH AUCKLAND TRANSPORT STANDARD DETAIL TDM GDO17A-1C - RESIDENTIAL VEHICLE CROSSING.
6. VEHICLE CROSSING PERMITS REQUIRED FROM AUCKLAND TRANSPORT FOR PROPOSED CROSSING AND REMOVAL OF EXISTING CROSSING PRIOR TO COMMENCING WORKS.
7. CONTRACTOR TO LOCATE AND PILOT ALL SERVICES IN THE BERM PRIOR TO WORKS THERE.

**LEGEND**

- PROPOSED**
- REINFORCED CONCRETE DRIVEWAY/PARKING
  - PERMEABLE PAVERS
  - CONCRETE FOOTPATH
  - PRIVATE CATCHPIT

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REV	REVISION DETAILS	BY	DATE
C2	ADDED PERMEABLE PAVERS	DEH	05.11.2021
C1	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021

DRAWN:	DEH	DATE:	08.2021
CHECKED:	WJR	DATE:	15.10.2021
APPROVED:	WJR	DATE:	15.10.2021

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PROJECT TITLE:  
**KĀINGA ORA  
 161 BEACH HAVEN ROAD  
 BEACH HAVEN**

SHEET TITLE:  
**PROPOSED ROADING  
 ACCESSWAY PLAN**

ISSUE STATUS: **CONSENT ISSUE**

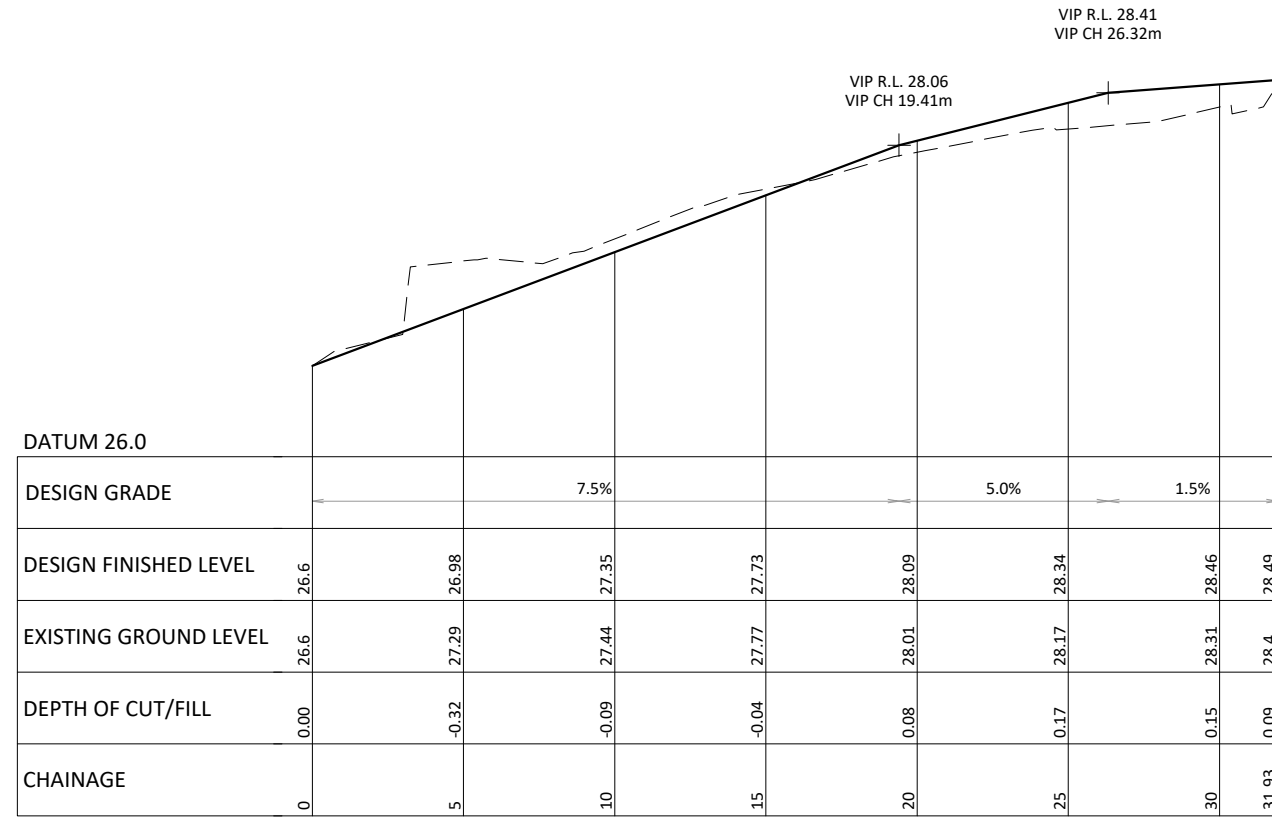
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SCALE BAR: 0 2.5 5 7.5 10 12.5m

DRAWING NUMBER: **2108-02-300** REV: **C2**

**LEGEND**

- — — — — EXISTING GROUND LINE
- PROPOSED GROUND LINE



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REV	REVISION DETAILS	BY	DATE
C1	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021

DRAWN: DEH	DATE: 08.2021
CHECKED: WJR	DATE: 15.10.2021
APPROVED: WJR	DATE: 15.10.2021

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PROJECT TITLE:  
**KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN**

SHEET TITLE:  
**PROPOSED ROADING  
ACCESSWAY LONG SECTION**

ISSUE STATUS: **CONSENT ISSUE**

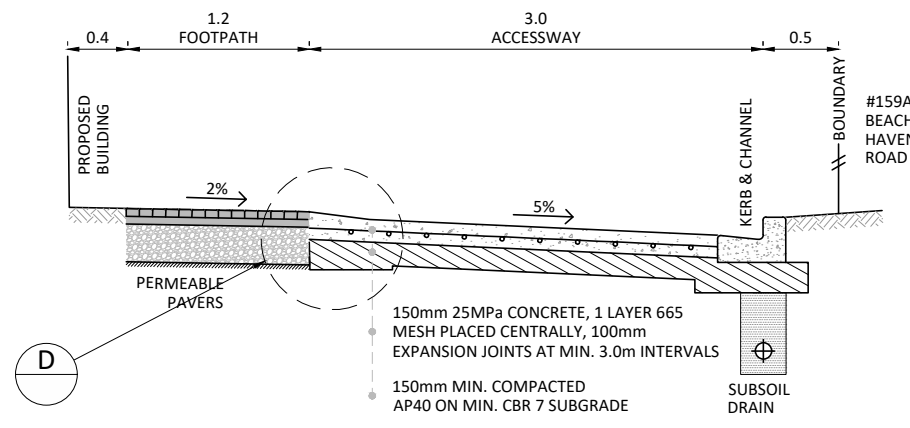
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SCALE BAR  
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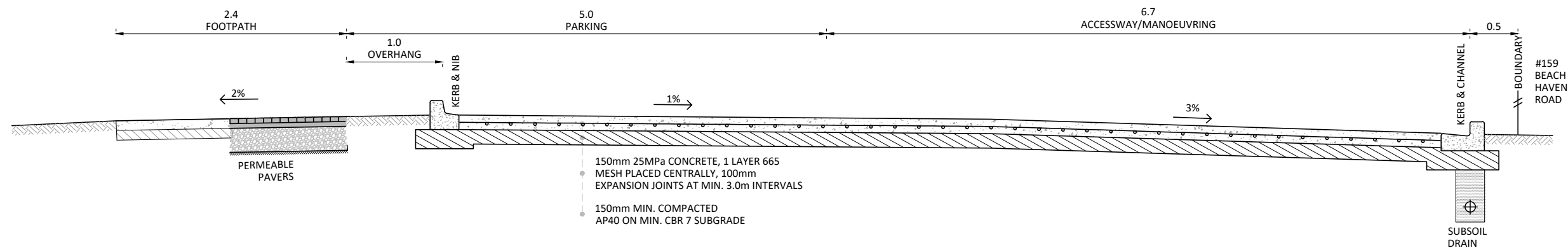
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**NOTES**

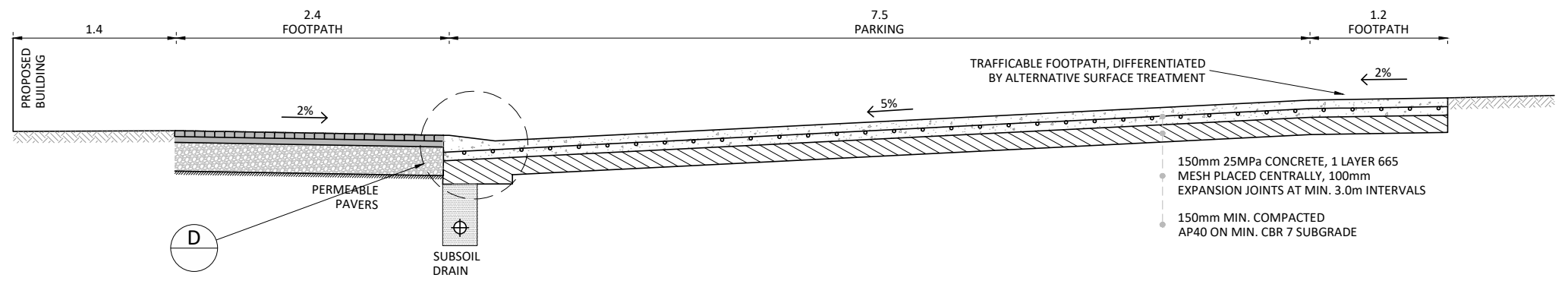
- ALL WORKS AND MATERIALS ARE TO COMPLY WITH RELEVANT COUNCIL ENGINEERING STANDARDS.
- FOOTPATHS TO BE 100mm MINIMUM CONCRETE (20 MPa) BROOM FINISH ON 100mm GAP40 GRANULAR BEDDING ON A FIRM SUBGRADE (CBR>3) TO COUNCIL DETAIL FP001. BEDDING LAYER DEPTH TO BE INCREASED FOR CBR<3 AT THE ENGINEER'S INSTRUCTION. TRANSVERSE CONTROL JOINTS TO BE INSTALLED AT MAXIMUM 3.0m SPACINGS. REFER TO ATCOP STANDARD DETAIL DRAWING FP001.
- KERBING TO BE STANDARD SLIP FORM VERTICAL KERB AND CHANNEL, STANDARD SLIP FORM VERTICAL KERB AND NIB, OR INTEGRAL KERB AND CHANNEL AS DETAILED. ALL TO BE IN ACCORDANCE WITH STANDARD DETAILS GD008-GD010 (20 MPa STANDARD CONCRETE).
- DN100 UNDERCHANNEL DRAINCOIL WITH FILTER SOCK TO BE INSTALLED IN ACCORDANCE WITH COUNCIL DETAILS, CONNECTED TO ROAD CATCHPIT SUMPS. TO BE INSTALLED IN 300mm WIDE TRENCH WITH MINIMUM OF 450mm COVER BELOW SUBGRADE LEVEL. BACKFILL WITH CLEAN DRAINAGE METAL. REFER TO ATCOP STANDARD DETAIL DRAWING RD025 FOR FURTHER SPECIFICATION.
- CONTRACTOR TO TEST SUBGRADE AT 5m CENTRES AND REPORT BACK TO ENGINEER PRIOR TO COMMENCING PLACEMENT OF MATERIALS. IF SUBGRADE CBR IS 3% OR LESS, SUBGRADE IMPROVEMENT WILL BE REQUIRED AT THE ENGINEER'S INSTRUCTION.
- PAVEMENT MATERIALS ARE TO BE TO THE FOLLOWING SPECIFICATION:
  - SURFACING:  
150mm 25MPa CONCRETE, 1 LAYER 665 MESH PLACED CENTRALLY WITH 10mm EXPANSION JOINTS AT 3.0m INTERVALS TO MATCH KERBS AND FOOTPATH WHERE PRACTICABLE.
  - SUBBASE:  
150mm MIN. AP40 (WITH MIN. SUBGRADE CBR OF 7).
- REFER TO LANDSCAPE PLANS FOR SURFACE FINISHES AT BOUNDARY FENCING DETAILS.
- FOR CONCRETE POURS OF ADJOINING SECTIONS OF DRIVEWAY, KERBING, AND FOOTPATH, THE SECTIONS ARE TO BE TIED TOGETHER WITH D12 REINFORCING BARS AT 350 CTRS INTO EXISTING CONCRETE.



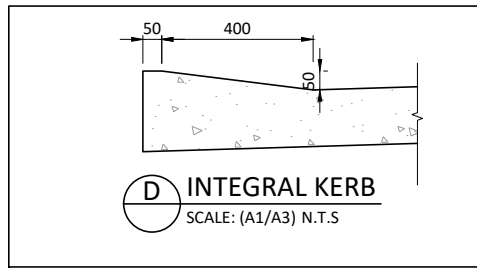
**A ACCESSWAY SECTION**  
300 SCALE: (A1/A3) N.T.S



**B ACCESSWAY SECTION**  
300 SCALE: (A1/A3) N.T.S



**C ACCESSWAY SECTION**  
300 SCALE: (A1/A3) N.T.S



**D INTEGRAL KERB**  
SCALE: (A1/A3) N.T.S

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REV	REVISION DETAILS	BY	DATE
C2	ADDED PERMEABLE PAVERS	DEH	05.11.2021
C1	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021

DRAWN:	DATE:	08.2021
CHECKED:	DATE:	15.10.2021
APPROVED:	DATE:	15.10.2021

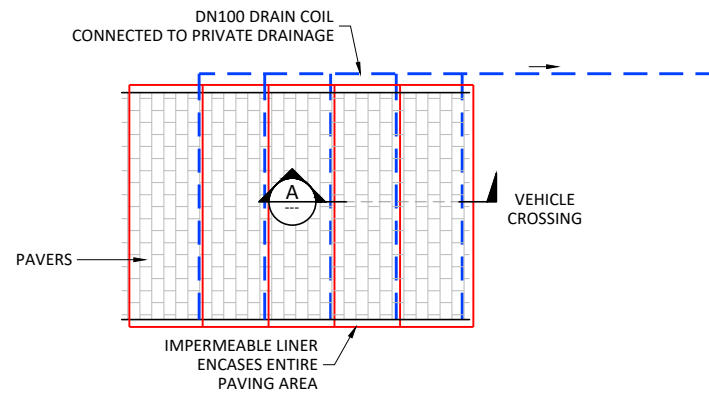
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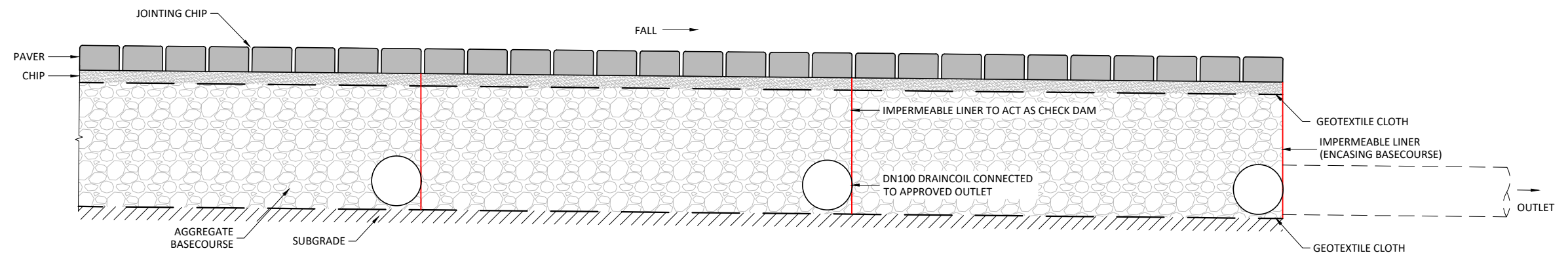
PROJECT TITLE:  
**KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN**

SHEET TITLE:  
**PROPOSED ROADING  
ACCESSWAY CROSS SECTIONS**

ISSUE STATUS: **CONSENT ISSUE**  
SCALE: (A1/A3) NOT TO SCALE  
SCALE BAR  
DRAWING NUMBER: **2108-02-330** REV: **C2**



**RESIDENTIAL DRIVEWAY PERMEABLE PAVEMENT**  
SCALE: (A1/A3) 1:50/1:100



**PERMEABLE PAVEMENT - TYPICAL SECTION A**  
SCALE: (A1/A3) 1:5 / 1:10

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DEH	11.2021	DATE	
WJR	05.11.2021	CHECKED	
WJR	05.11.2021	APPROVED	
C1	ISSUED FOR RESOURCE CONSENT	DEH	05.11.2021
REV	REVISION DETAILS	BY	DATE

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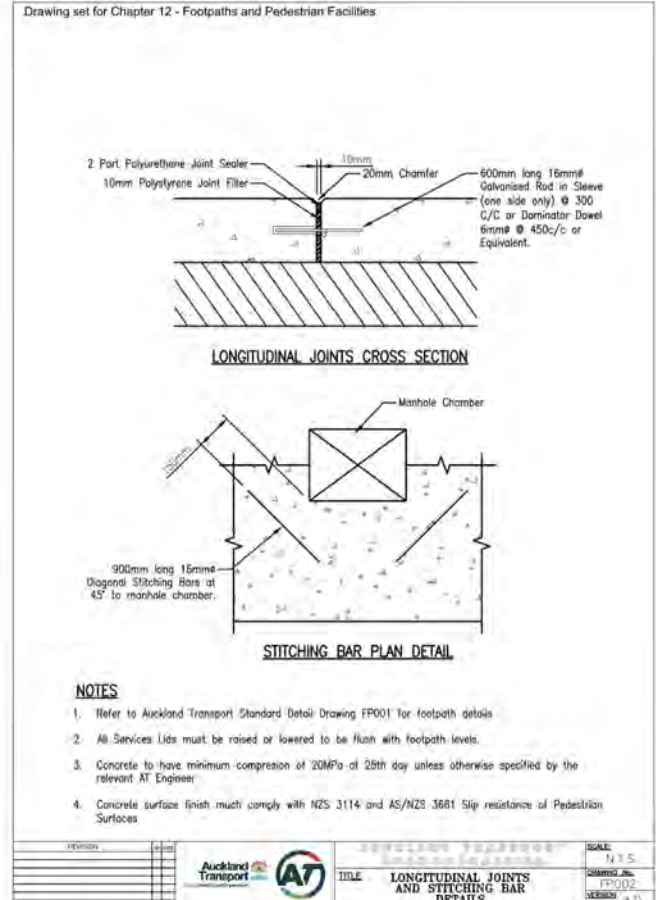
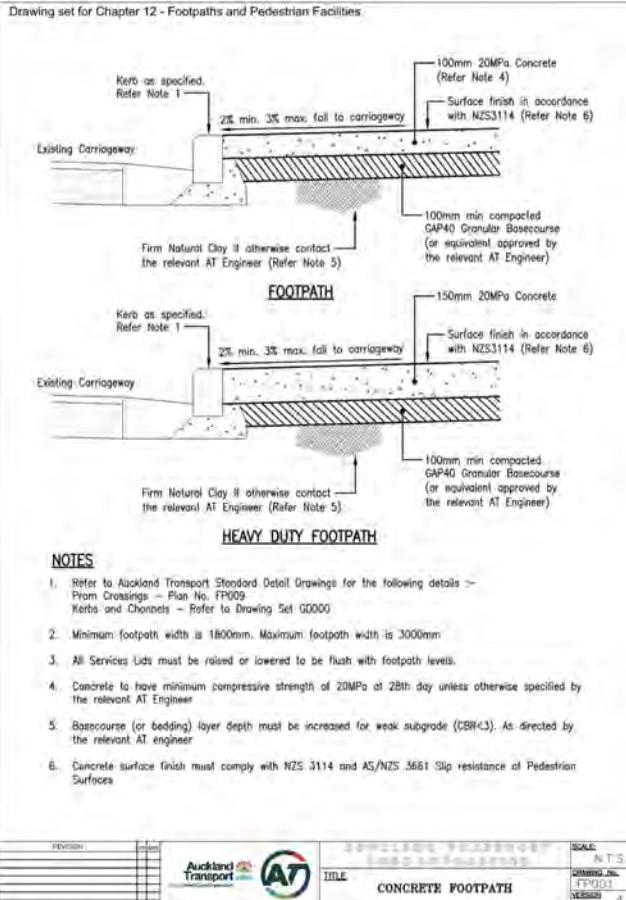
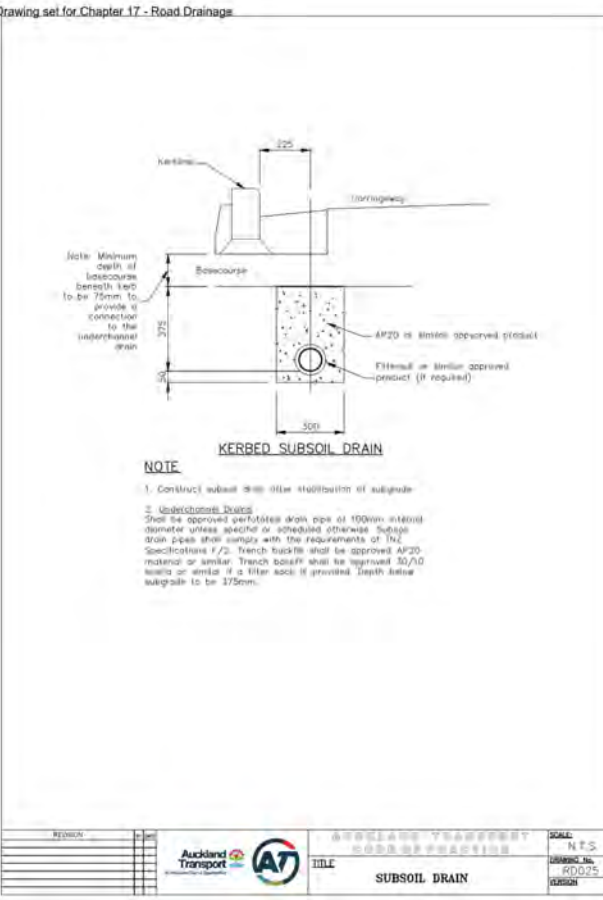
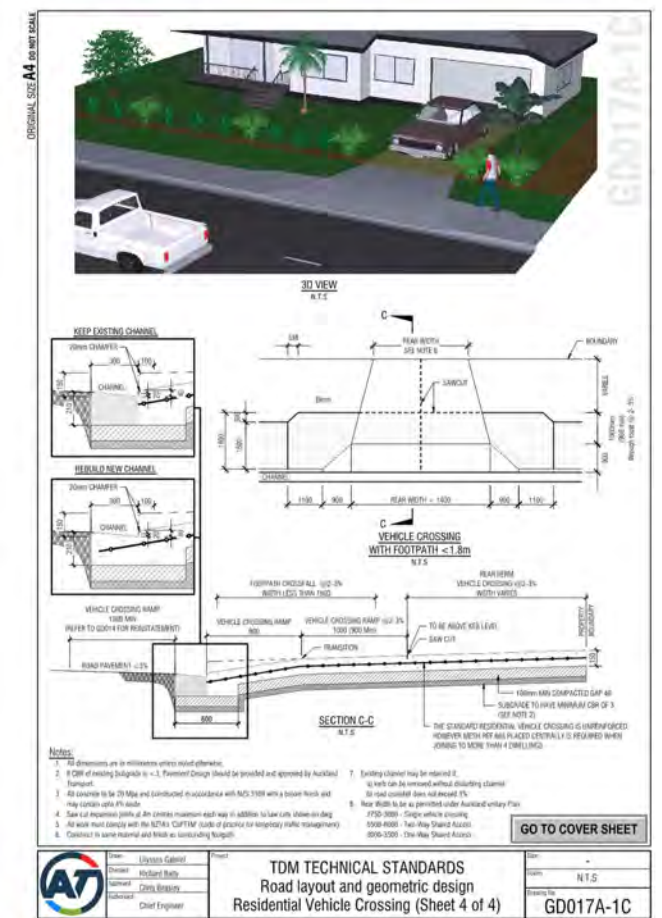
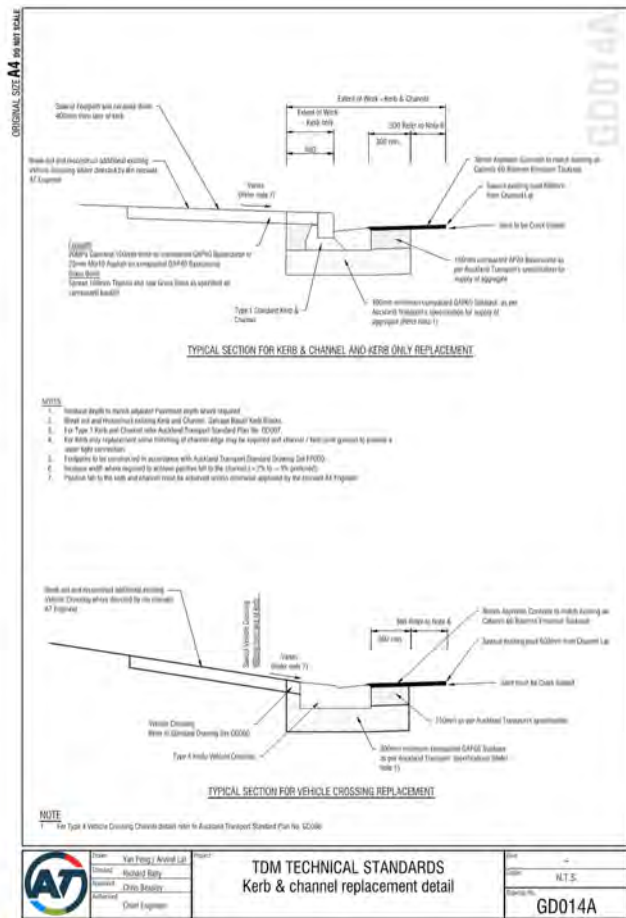
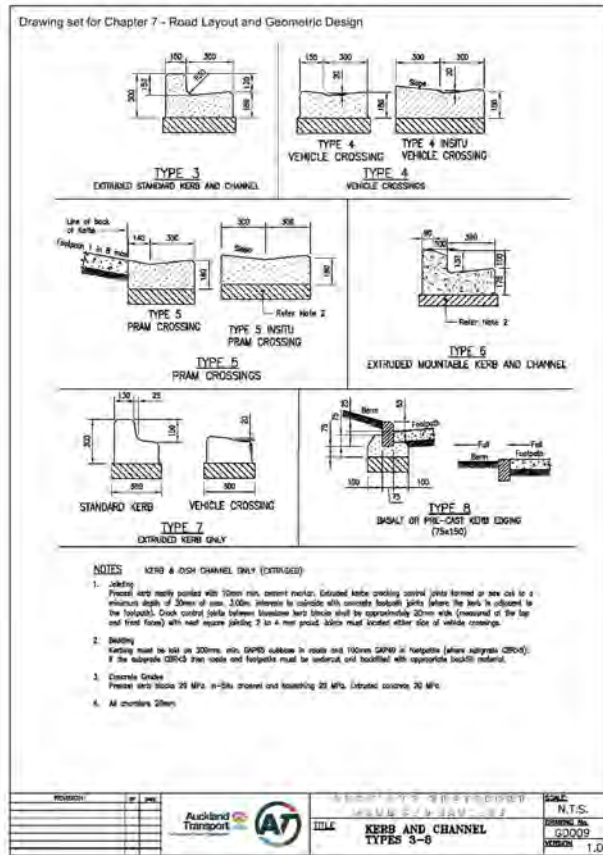
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PROJECT TITLE:  
**KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN**

SHEET TITLE:  
**PROPOSED ACCESSWAY  
PERMEABLE PAVING DETAILS**

ISSUE STATUS: **CONSENT ISSUE**  
SCALE: (A1/A3) **AS SHOWN**  
SCALE BAR  
DRAWING NUMBER: **2108-02-370** REV: **C1**





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REV	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021
REV	REVISION DETAILS	BY	DATE

DRAWN:	DEH	DATE:	08.2021
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APPROVED:	WJR	DATE:	15.10.2021

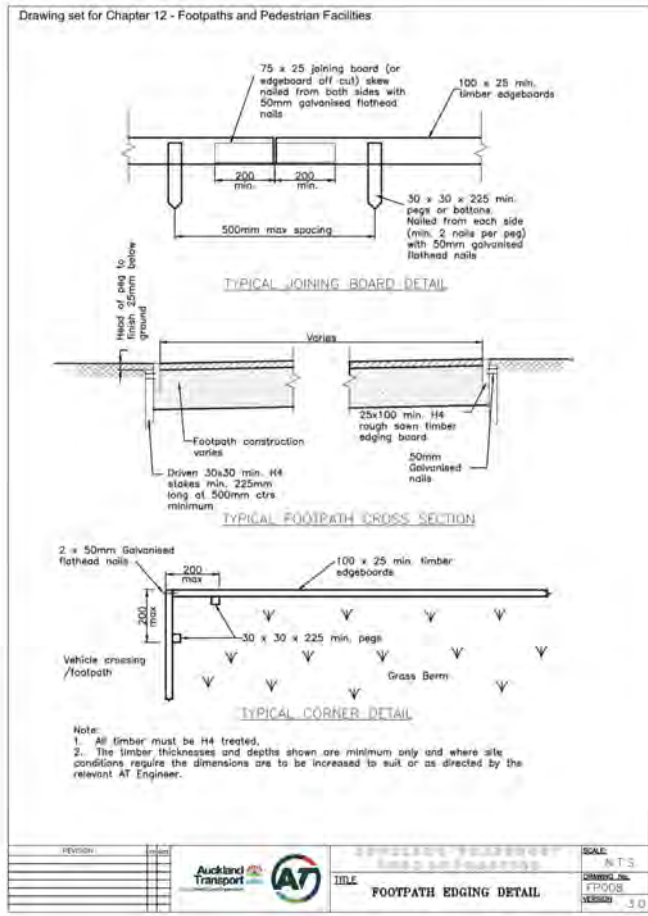
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PROJECT TITLE:  
**KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN**

SHEET TITLE:  
**PROPOSED ROADING  
STANDARD DETAILS  
SHEET 1**

ISSUE STATUS: **CONSENT ISSUE**  
SCALE: (A1/A3) **NOT TO SCALE**  
SCALE BAR  
DRAWING NUMBER: **2108-02-390** REV: **C1**



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DEH	15.10.2021	ISSUED FOR RESOURCE CONSENT
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DRAWN: DEH 08.2021  
 CHECKED: WJR 15.10.2021  
 APPROVED: WJR 15.10.2021

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PROJECT TITLE: KĀINGA ORA  
 161 BEACH HAVEN ROAD  
 BEACH HAVEN

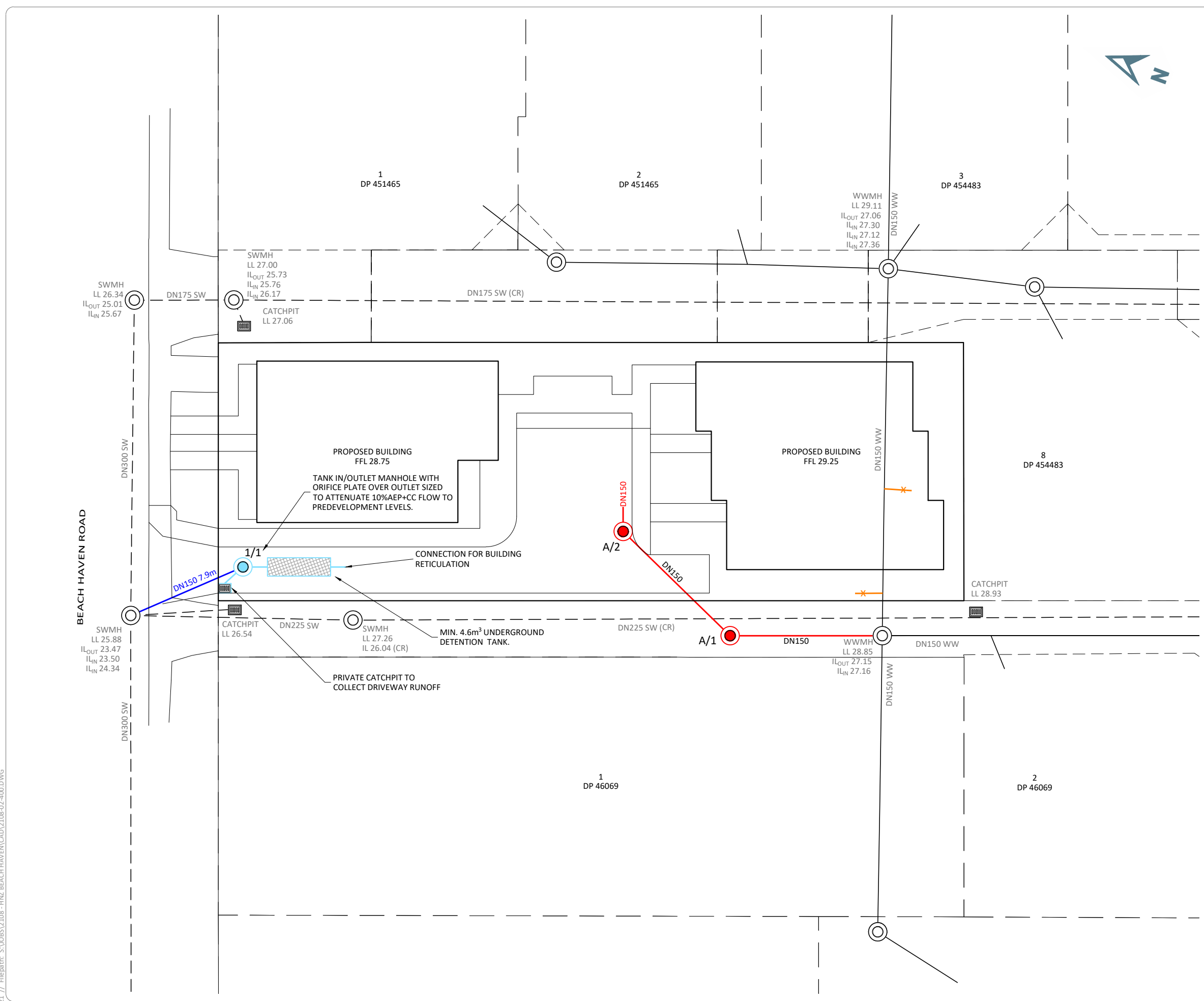
SHEET TITLE: PROPOSED ROADING  
 STANDARD DETAILS  
 SHEET 2

ISSUE STATUS: **CONSENT ISSUE**

SCALE: (A1/A3) NOT TO SCALE

SCALE BAR

DRAWING NUMBER: 2108-02-391 REV: C1



**LEGEND**

**EXISTING**

- (CR) PLOTTED FROM COUNCIL RECORDS
- DN1350 SW — STORMWATER LINE AND MANHOLE
- DN150 WW — WASTEWATER LINE AND MANHOLE

**PROPOSED PUBLIC (UNDER EPA)**

- DN150 WASTEWATER LINE AND MANHOLE
- DN150 STORMWATER CONNECTION
- DN150 WASTEWATER CONNECTION
- WASTEWATER LINE TO BE REMOVED

**PROPOSED PRIVATE (UNDER BC)**

- STORMWATER LINE AND MANHOLE
- STORMWATER CATCHPIT
- STORMWATER DETENTION TANK

- NOTES:**
- ALL WORKS AND MATERIALS ARE TO COMPLY WITH RELEVANT COUNCIL ENGINEERING STANDARDS.
  - ALL WORKS ON EXISTING STORMWATER, WASTEWATER LINES AND WATERMANS TO BE CARRIED OUT BY AN APPROVED LICENSED CONTRACTOR AT THE DEVELOPERS EXPENSE.
  - CONTRACTOR TO LOCATE / MARK AND CONFIRM POSITION AND DEPTHS OF ALL EXISTING DRAINAGE AND SERVICES PRIOR TO COMMENCEMENT OF WORK ON SITE AND PROTECTION OF SAME.
  - CONTRACTOR TO CHECK ALL PIPE INVERTS BEFORE LAYING.
  - ALL WASTEWATER LINES SHALL BE uPVC DWV SN16 AS/NZ 1260, UNLESS SHOWN OTHERWISE.
  - ALL DN 100 & DN 150 STORMWATER LINES SHALL BE uPVC DWV SN16 AS/NZ 1260, UNLESS SHOWN OTHERWISE.
  - ALL PRIVATE CATCHPITS TO BE 675x450 WITH STANDARD CAST IRON GRATING & FRAME AS PER BUILDING CODE E1/AS1 FIGURE 9.
  - PIPE LENGTH ON LONGITUDINAL SECTIONS IS LENGTH OF PIPE HORIZONTALLY BETWEEN CENTRE OF MANHOLES.
  - ALL MANHOLES SHALL BE DN1050 RC WITH MIN. 600mm OPENING, CAST IRON COVERS, HEAVY DUTY CONCRETE LIDS TO BE USED IN PAVEMENT AREAS, UNLESS SHOWN OTHERWISE.
  - WASTEWATER MANHOLES TO HAVE INCREASED INTERNAL COVER TO REINFORCEMENT BY 25mm AND SHALL BE FITTED WITH A STAINLESS STEEL SAFETY GRILLE SUPPORTED BY THE MANHOLE FRAME AND CAPABLE OF CARRYING A 100kg POINT LOAD ANYWHERE. THE GRILLE SHALL HAVE A PATTERN WITH OPENINGS THAT WILL NOT PASS A 150mm DIAMETER SPHERE.
  - BEDDING TO COMPLY WITH RELEVANT COUNCIL DETAILS.
  - HARDFILL BACKFILL ALL PIPE CROSSINGS BELOW CARRIAGEWAY / TRAFFIC AREAS 1.0m BEYOND LIMIT OF CARRIAGEWAY.
  - HARDFILL BACKFILL 1.0m EITHER SIDE OF PIPE CROSSOVERS.
  - WHERE CLEARANCE BETWEEN PIPELINE CROSSOVERS IS LESS THAN 100mm THE GAP IS TO BE POLYSTYRENE PACKED IN ADDITION TO HARDFILLING OF CROSSOVERS.
  - ADJUSTMENT OF ANY INVERT LEVELS IS AT CONTRACTORS OWN RISK DUE TO TIGHT TOLERANCE AT PIPE CROSSINGS.
  - ANY WORK DEEMED BY THE ENGINEER AS BEING SUBSTANDARD WORK SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.

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CL	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021
REV	REVISION DETAILS	BY	DATE

DRAWN:	DEH	DATE:	08.2021
CHECKED:	WJR	DATE:	15.10.2021
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PROJECT TITLE:

**KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN**

SHEET TITLE:

**PROPOSED DRAINAGE PLAN**

ISSUE STATUS: **CONSENT ISSUE**

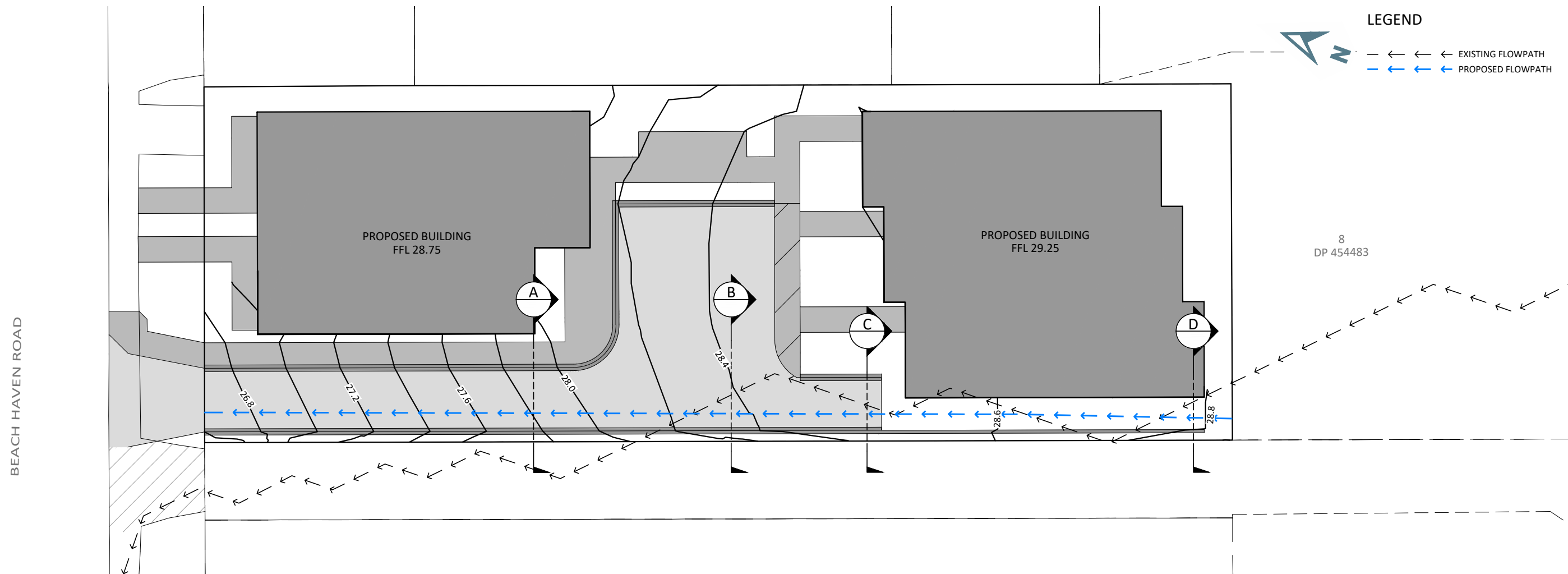
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DRAWING NUMBER: **2108-02-400** REV: **C1**

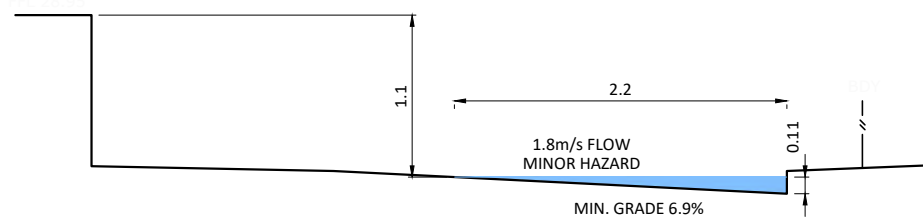
LEGEND

- ← ← ← EXISTING FLOWPATH
- ← ← ← PROPOSED FLOWPATH

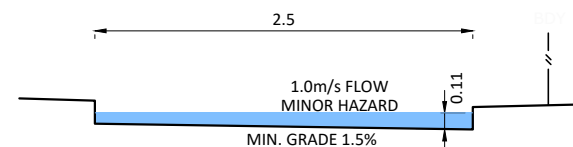


OLFP CROSS SECTION LOCATIONS

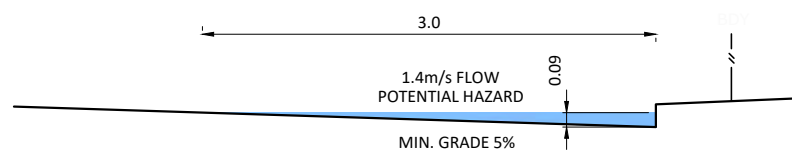
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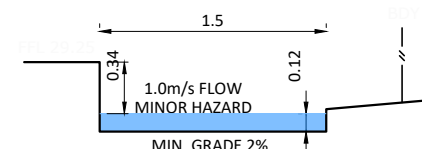
**A** OVERLAND FLOWPATH SECTION  
SCALE: (A1/A3) 1:25/1:50



**C** OVERLAND FLOWPATH SECTION  
SCALE: (A1/A3) 1:25/1:50



**B** OVERLAND FLOWPATH SECTION  
SCALE: (A1/A3) 1:25/1:50



**D** OVERLAND FLOWPATH SECTION  
SCALE: (A1/A3) 1:25/1:50

LEGEND

- 100 YEAR FLOW

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REV	REVISION DETAILS	BY	DATE
C1	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021

DRAWN:	DEH	DATE:	08.2021
CHECKED:	WJR	DATE:	15.10.2021
APPROVED:	WJR	DATE:	15.10.2021

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PROJECT TITLE:  
**KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN**

SHEET TITLE:  
**PROPOSED DRAINAGE  
OVERLAND FLOW**

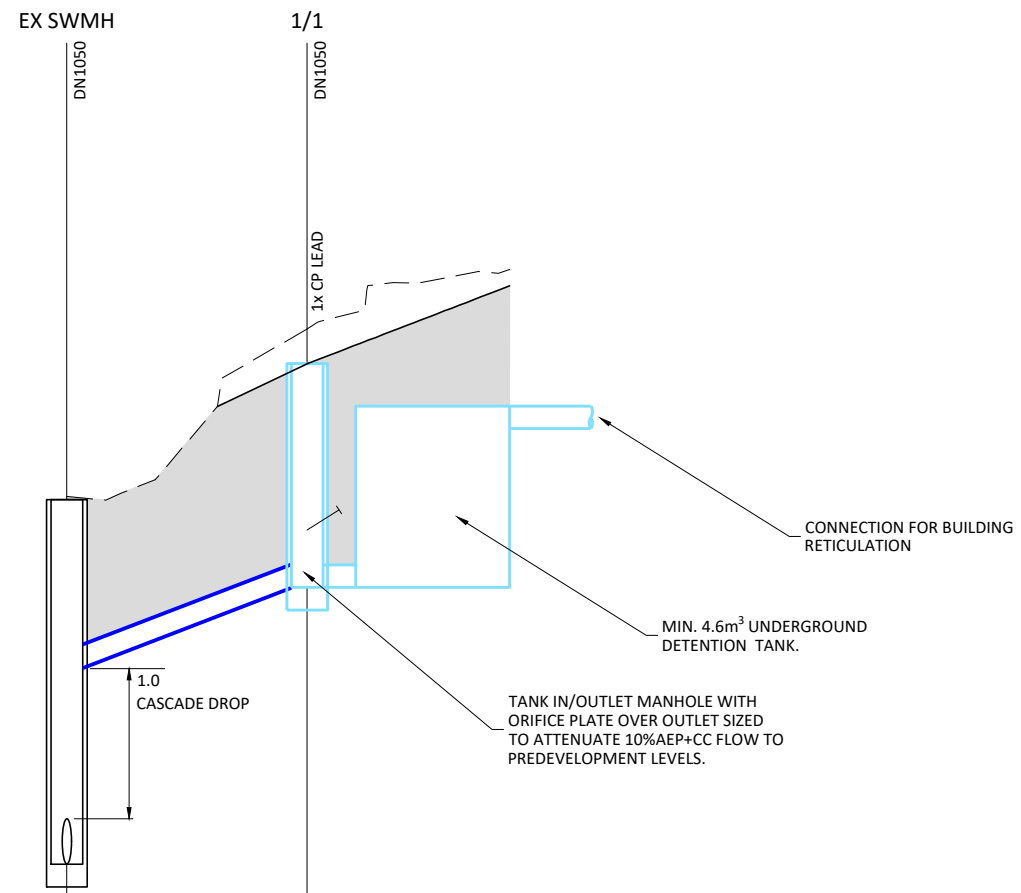
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SCALE: (A1/A3) AS SHOWN  
SCALE BAR N.T.S.  
DRAWING NUMBER: **2108-02-410** REV: **C1**

**LEGEND**

- EXISTING GROUND LINE
- PROPOSED GROUND LINE
- PROPOSED HARDFILL BACKFILL
- PROPOSED CATCHPIT OR RAIN GARDEN CONNECTION
- CASCADE DROP

**NOTES:**

1. REFER TO SHEET 2108-02-400 FOR GENERAL NOTES.



	PUBLIC CONNECTION	PRIVATE RETICULATION
DATUM	22.0	
EXISTING GROUND LEVEL	25.90	
LID LEVEL	25.88	
INVERT LEVEL	23.47	25.30
DEPTH TO INVERT	2.41	1.48
PIPE GRADIENT	6.7%	
PIPE DIAMETER	DN150	
PIPE TYPE	uPVC SN16	
DISTANCE (m)	7.95	

LINE 1

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DEH	08.2021	
WJR	15.10.2021	
WJR	15.10.2021	
C1	ISSUED FOR RESOURCE CONSENT	DEH 15.10.2021
REV	REVISION DETAILS	BY DATE

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PROJECT TITLE:  
**KĀINGA ORA**  
 161 BEACH HAVEN ROAD  
 BEACH HAVEN

SHEET TITLE:  
**PROPOSED DRAINAGE**  
 STORMWATER LONGITUDINAL SECTIONS  
 SHEET 1

ISSUE STATUS: **CONSENT ISSUE**

SCALE: (A1/A3) 1:125H 1:25V / 1:250H 1:50V

SCALE BAR

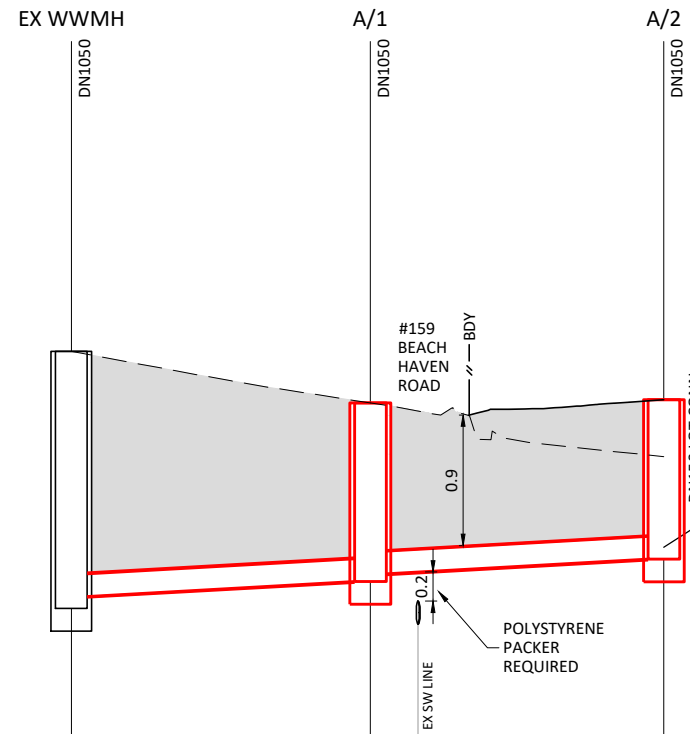
DRAWING NUMBER: **2108-02-430** REV: **C1**

**LEGEND**

- EXISTING GROUND LINE
- PROPOSED GROUND LINE
- █ PROPOSED HARDFILL BACKFILL
- ↗ PROPOSED LOT CONNECTIONS

**NOTES:**

1. REFER TO SHEET 2108-01-400 FOR GENERAL NOTES.



DATUM	24.0	
EXISTING GROUND LEVEL	28.85	28.51
LID LEVEL	28.85	28.51
INVERT LEVEL	27.15 27.23	27.33 27.38
DEPTH TO INVERT	1.70 1.62	1.18 1.13
PIPE GRADIENT	1.00%	
PIPE DIAMETER	DN150	
PIPE TYPE	uPVC SN16	
DISTANCE (m)	9.89	1.58 9.71

LINE A

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DEH	08.2021	DATE
WJR	15.10.2021	CHECKED
WJR	15.10.2021	APPROVED
DEH	15.10.2021	BY
REVISION DETAILS		DATE

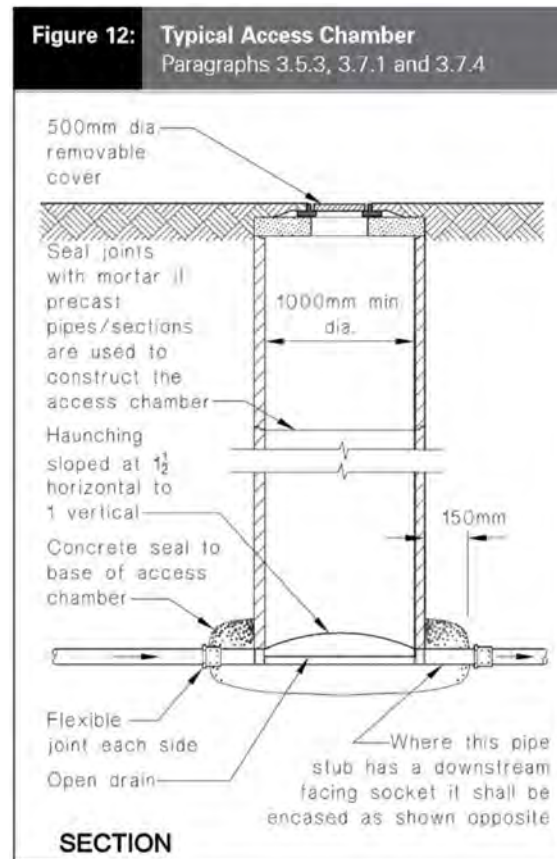
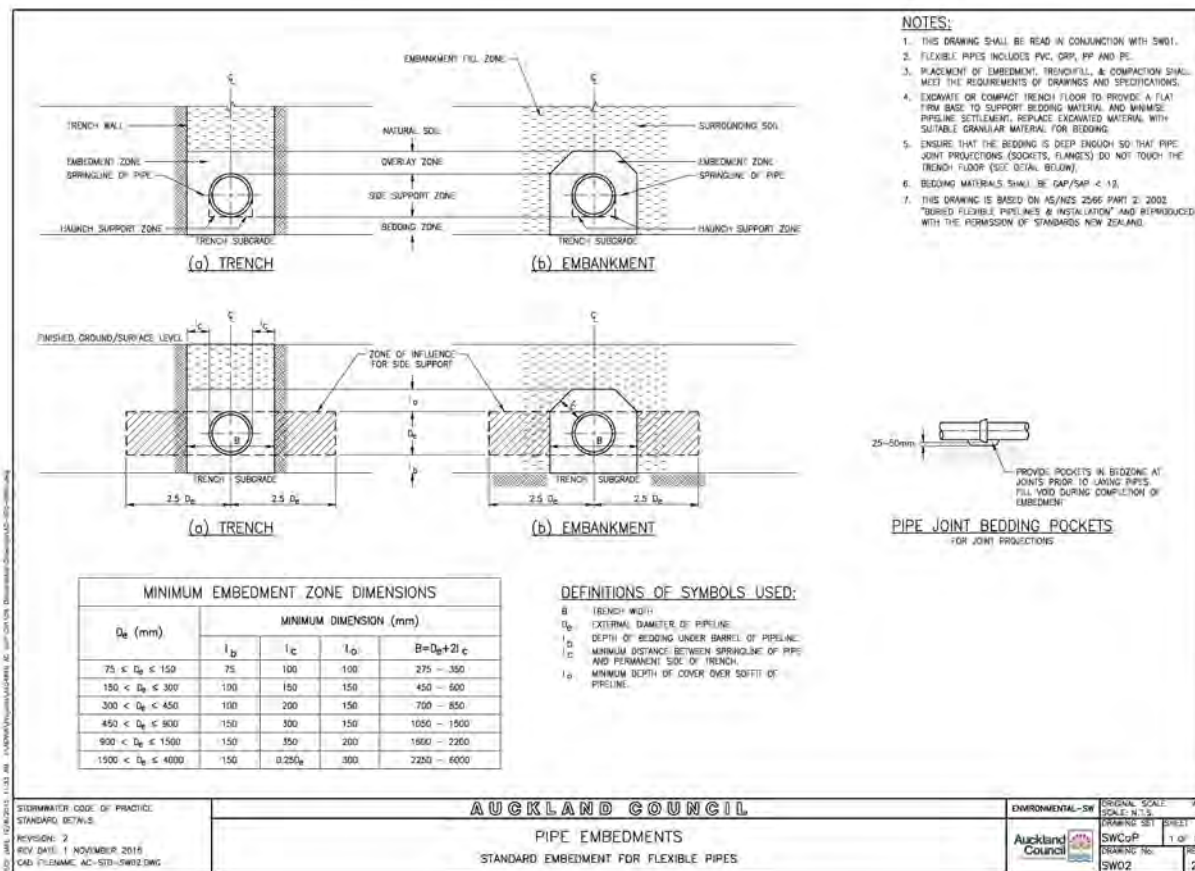
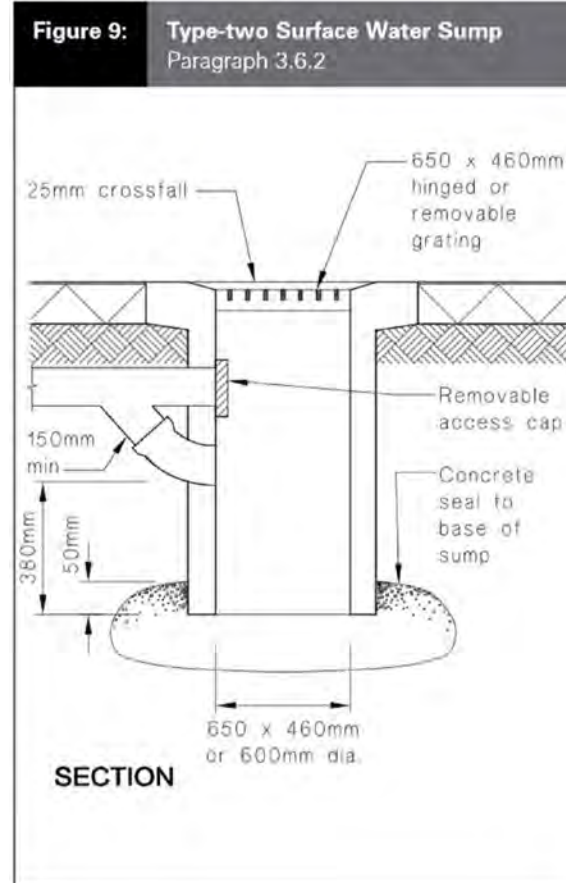
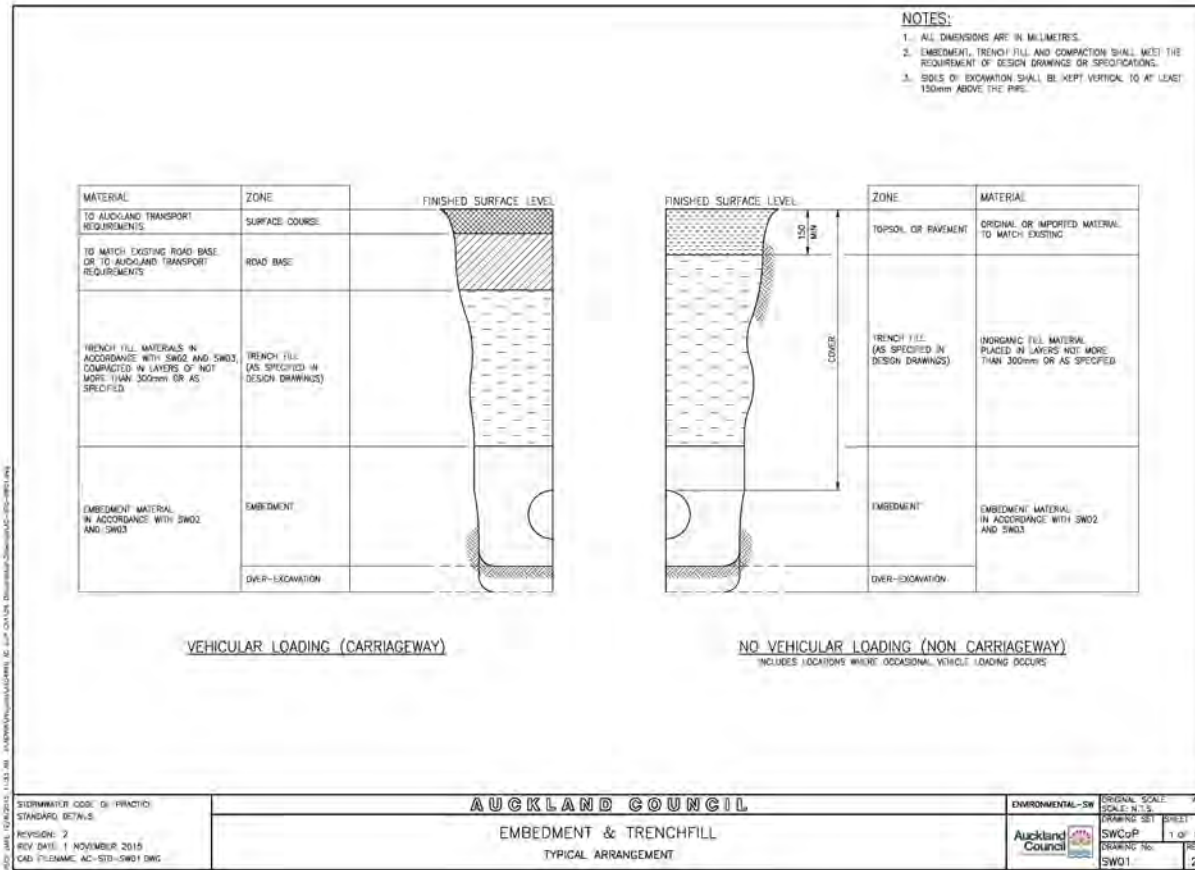
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PROJECT TITLE:  
**KĀINGA ORA  
 161 BEACH HAVEN ROAD  
 BEACH HAVEN**

SHEET TITLE:  
**PROPOSED DRAINAGE  
 WASTEWATER LONG SECTIONS  
 SHEET 1**

ISSUE STATUS: **CONSENT ISSUE**  
 SCALE: (A1/A3) 1:125H 1:25V / 1:250H 1:50V  
 SCALE BAR  
 N.T.S.  
 DRAWING NUMBER: **2108-02-450** REV: **C1**



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REV	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021
BY	REVISION DETAILS	DATE	

DRAWN: DEH	DATE: 08.2021
CHECKED: WJR	DATE: 15.10.2021
APPROVED: WJR	DATE: 15.10.2021

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PROJECT TITLE:  
**KĀINGA ORA**  
161 BEACH HAVEN ROAD  
BEACH HAVEN

SHEET TITLE:  
**PROPOSED DRAINAGE**  
STORMWATER STANDARD DETAILS  
SHEET 1

ISSUE STATUS: **CONSENT ISSUE**  
SCALE: (A1/A3) NOT TO SCALE  
SCALE BAR N.T.S.  
DRAWING NUMBER: **2108-02-490** REV: **C1**

**GENERAL CONSTRUCTION NOTES**

**STANDARDS RELATING TO WORKS**

Works shall be carried out to the requirements of the Health & Safety of Work in Employment Act 2015

Works shall be completed to Watercare Construction Standards.

**MANUFACTURERS SPECIFICATIONS**

Materials shall be installed to the Manufacturers requirements unless otherwise specified.

**WELDING & FIXINGS**

All steelwork shall be workshop fabricated.

Steelwork and fixings shall be hot-dip galvanised to AS/NZS 4680 unless otherwise stated.

A Nickel anti-seize free of copper, lead, sulphides, chlorides & carbons ( graphite ) shall be used on bolts.

**REINFORCING STEEL**

Reinforcing shall be centrally placed with the specified minimum cover.

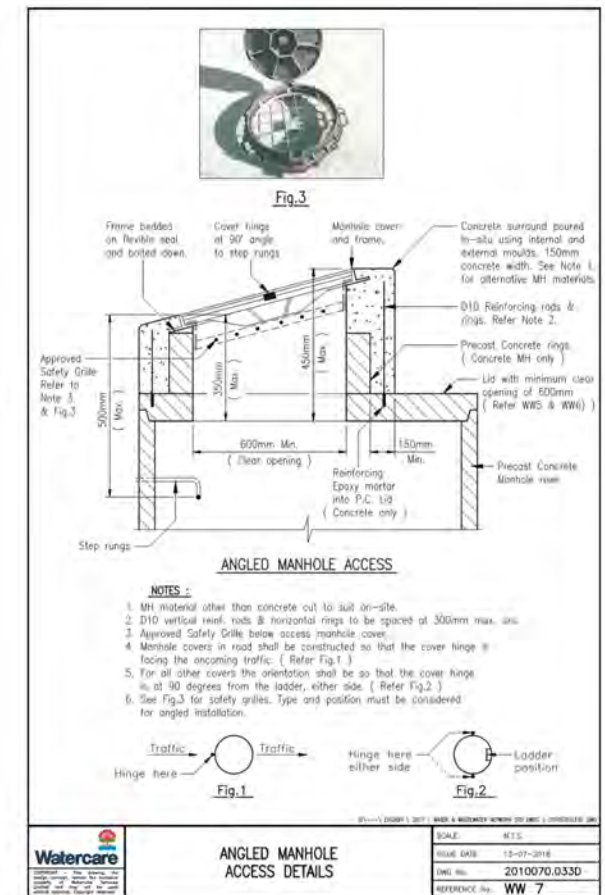
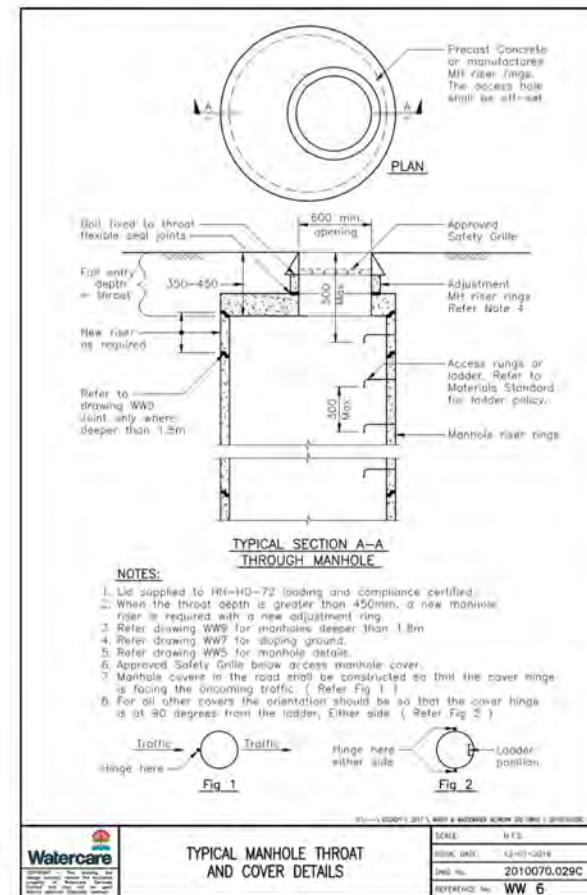
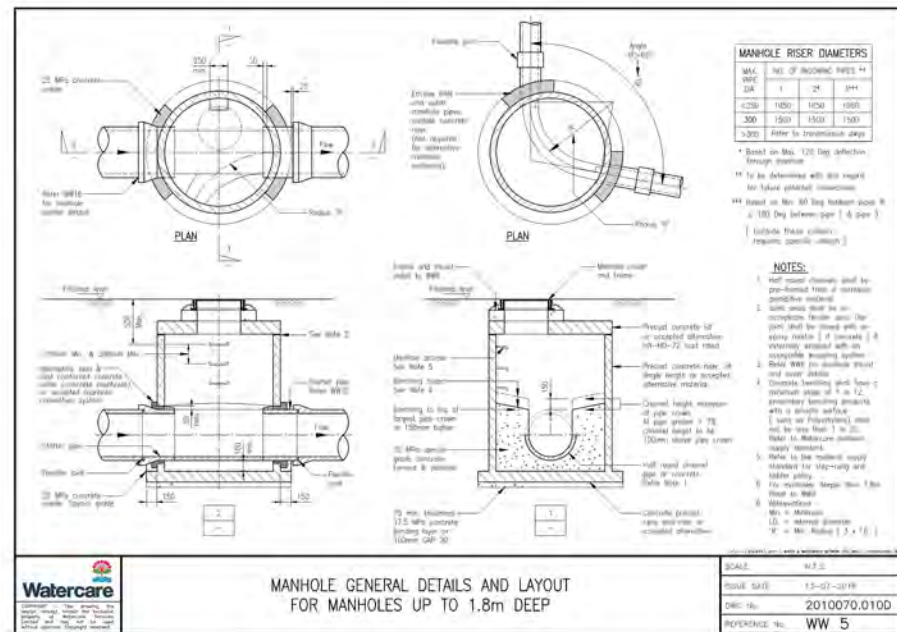
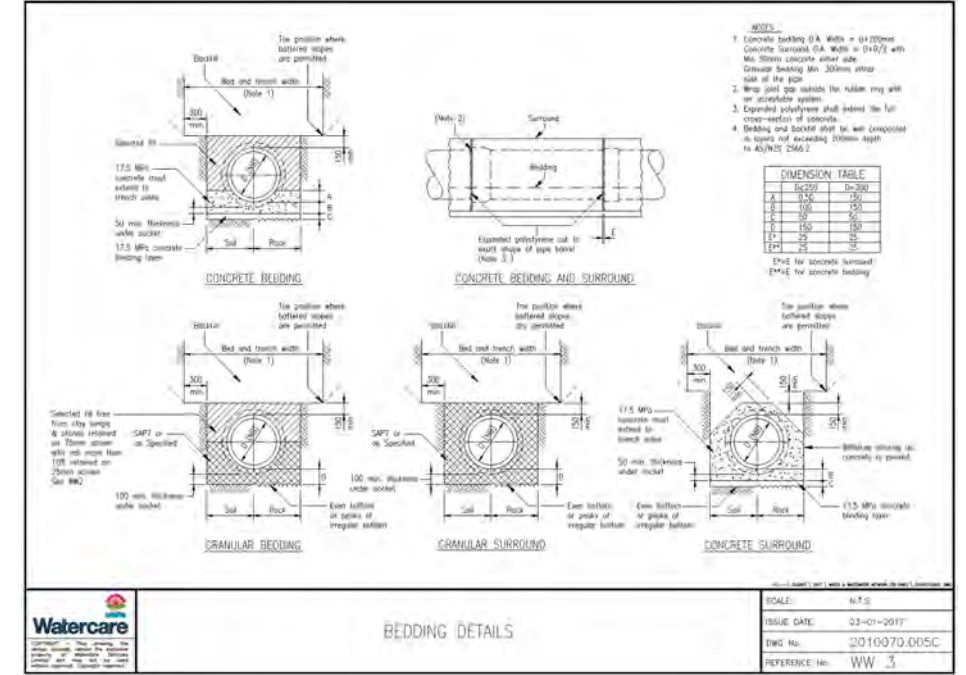
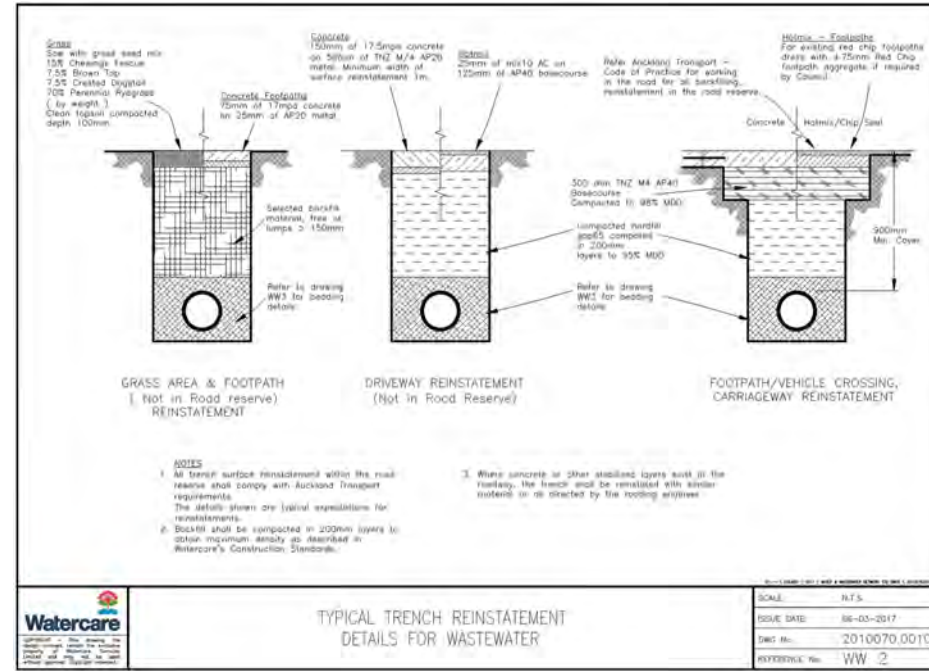
Bolts shall be cold formed.

**JOINT SEALS**

Flanges : Per WSL Material Standard.

Manhole Joints : Concrete manhole with flexible joint seal (such as rubber or butyl).  
All joints must be externally wrapped with an accepted tape wrapping system.  
Alternative materials to suppliers' specifications.

Watercare logo and title block for GENERAL CONSTRUCTION NOTES. Includes scale (N.T.S.), issue date (13-07-2018), DWG No. (2010070.002D), and reference (WW 1).



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CL	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021
REV	REVISION DETAILS	BY	DATE

DRAWN:	DATE:	08.2021
CHECKED:	DATE:	15.10.2021
APPROVED:	DATE:	15.10.2021

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PROJECT TITLE:  
**KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN**

SHEET TITLE:  
**PROPOSED DRAINAGE  
WASTEWATER STANDARD DETAILS  
SHEET 1**

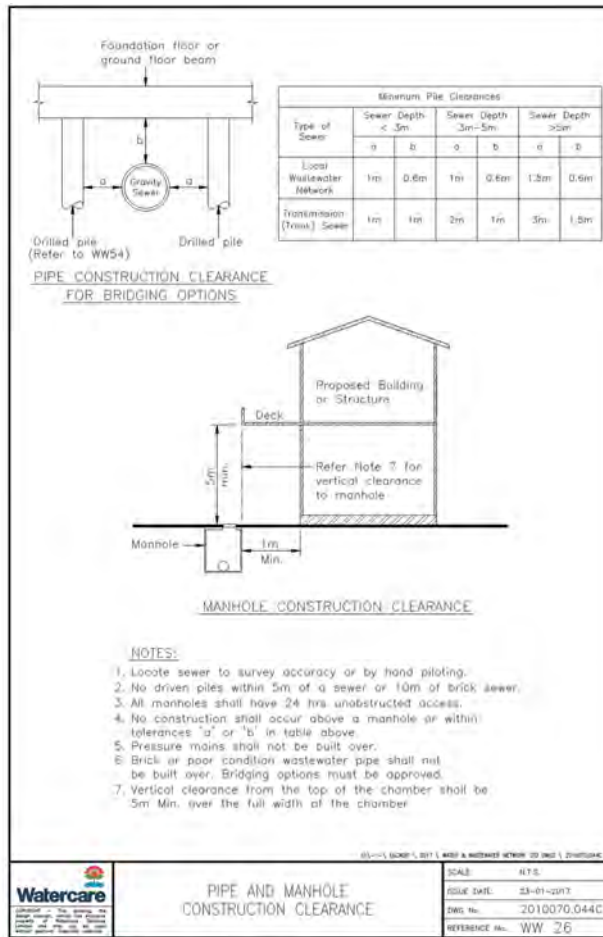
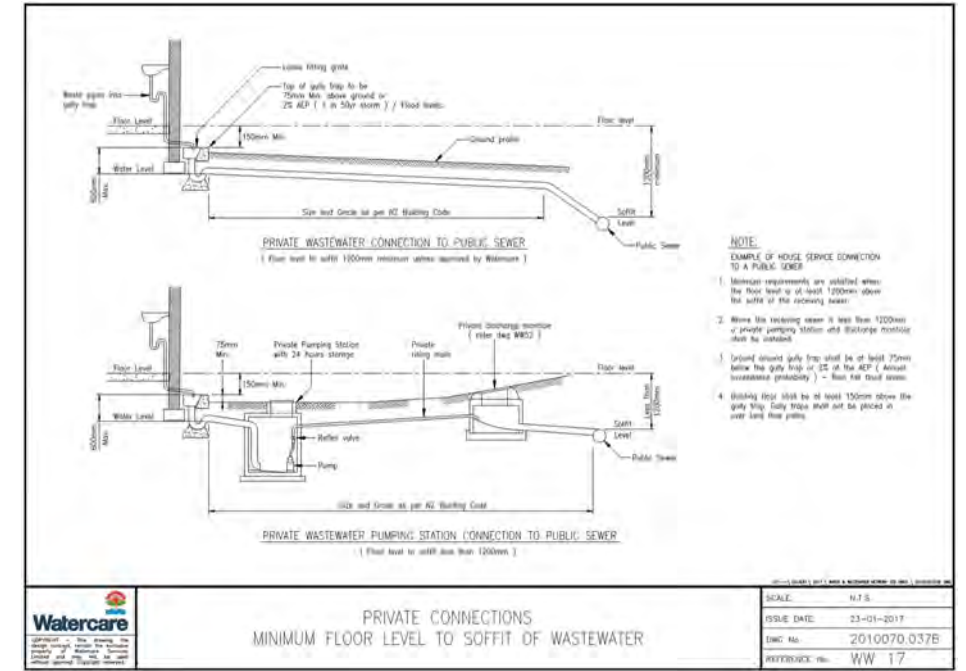
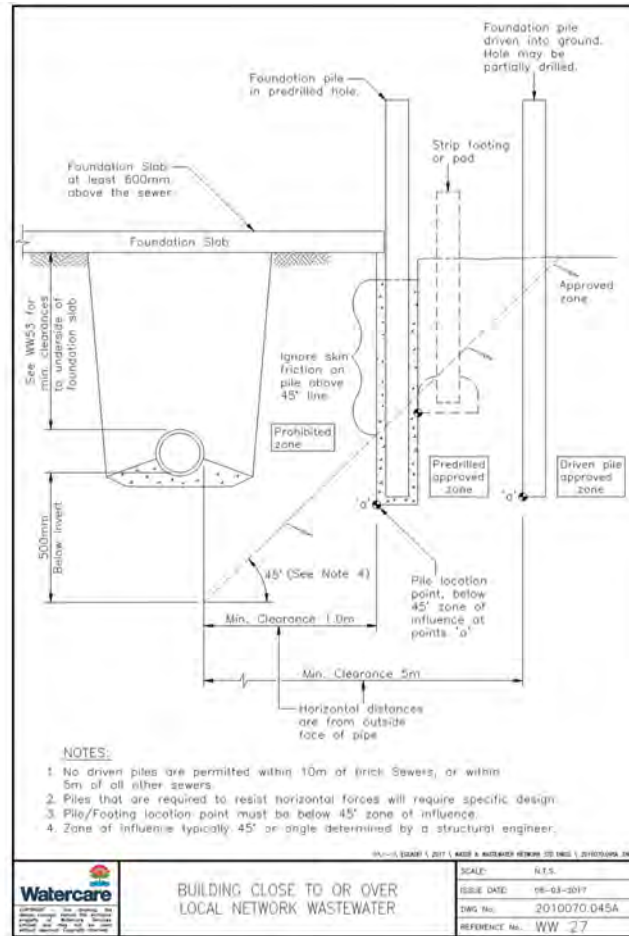
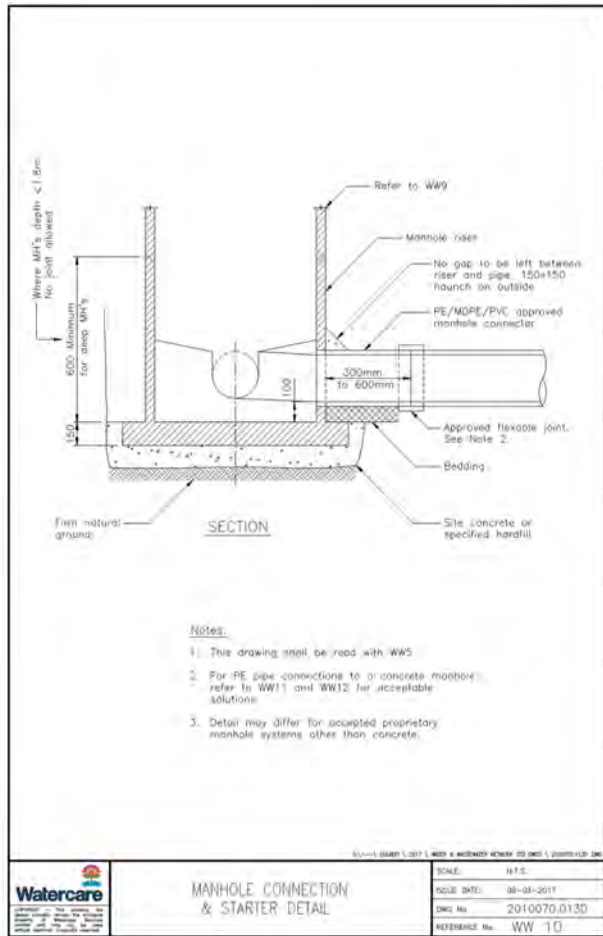
ISSUE STATUS: **CONSENT ISSUE**

SCALE: (A1/A3) **NOT TO SCALE**

SCALE BAR: N.T.S.

DRAWING NUMBER: **2108-02-495** REV: **C1**





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REV	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021
C1	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021
REV	REVISION DETAILS	BY	DATE

DRAWN: DATE: 08.2021  
 CHECKED: DATE: 15.10.2021  
 APPROVED: DATE: 15.10.2021  
 WJR

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PROJECT TITLE:  
**KĀINGA ORA  
 161 BEACH HAVEN ROAD  
 BEACH HAVEN**

SHEET TITLE:  
**PROPOSED DRAINAGE  
 WASTEWATER STANDARD DETAILS  
 SHEET 2**

ISSUE STATUS: **CONSENT ISSUE**  
 SCALE: (A1/A3) **NOT TO SCALE**  
 SCALE BAR  
 N.T.S.  
 DRAWING NUMBER: **2108-02-496** REV: **C1**

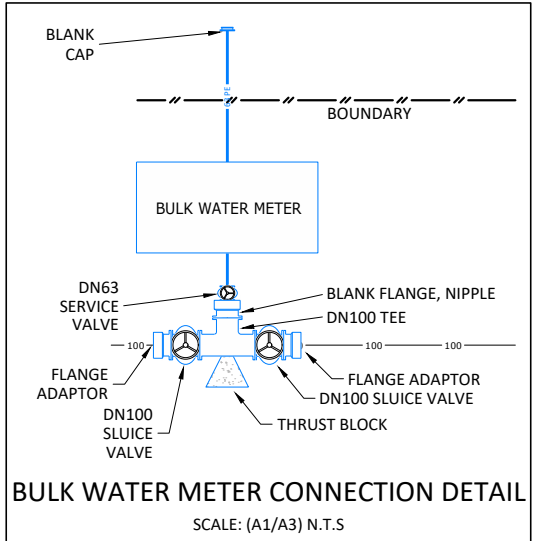
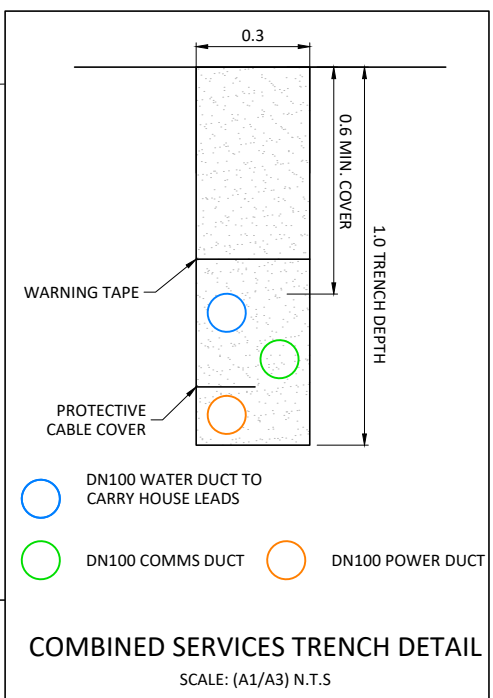
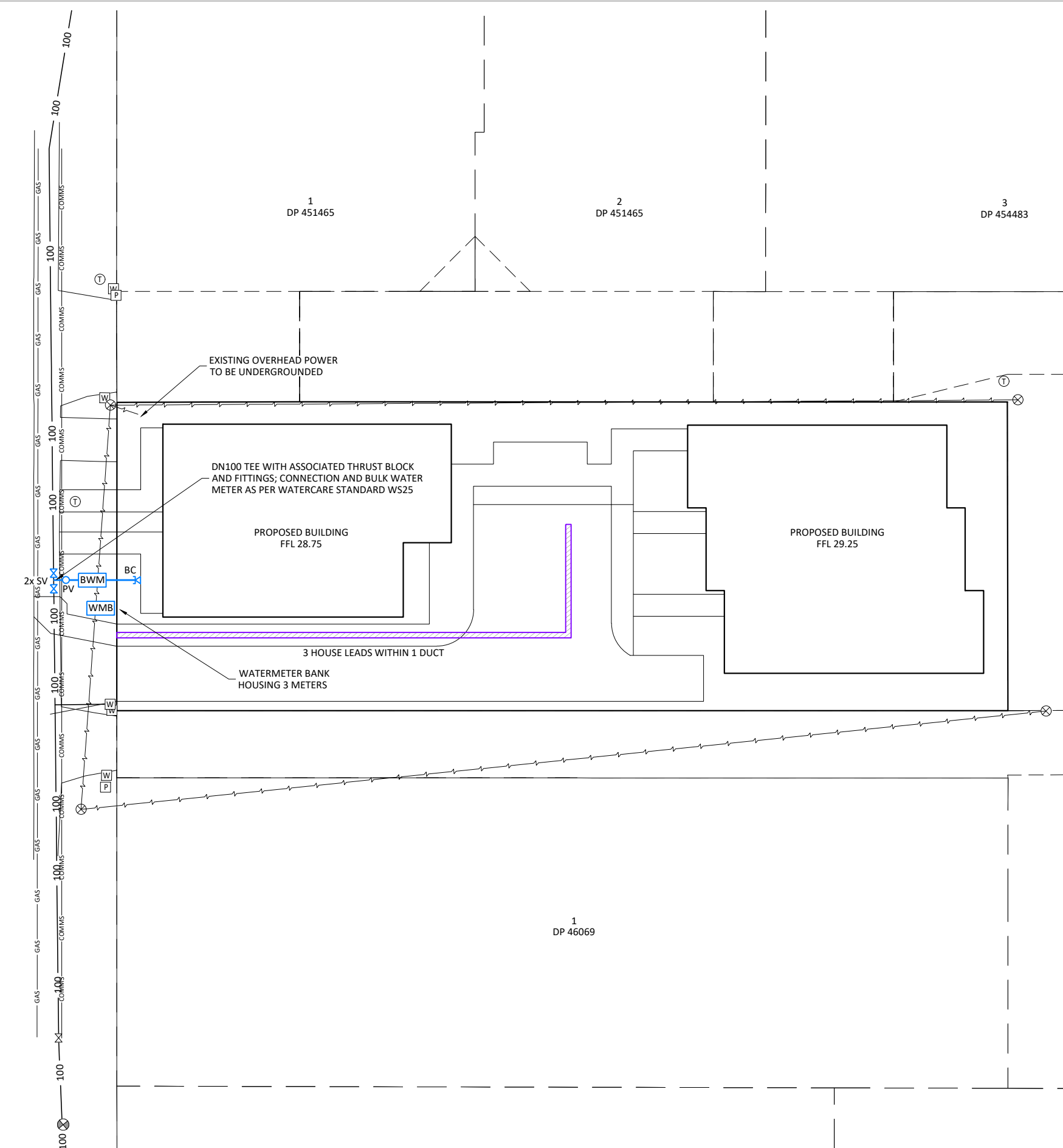


**NOTES:**

1. ALL WORKS TO COMPLY WITH WATERCARE'S 'WATER AND WASTEWATER CODE OF PRACTICE FOR LAND DEVELOPMENT AND SUBDIVISION' AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING CODE.
2. ALL WORKS TO BE LAID AND BACKFILLED IN ACCORDANCE WITH COUNCIL STANDARD SPECIFICATIONS.
3. ALL TRENCHES UNDER CARRIAGEWAY / VEHICLE CROSSINGS TO BE BACKFILLED WITH HARDFILL.
4. ALL WORKS ON EXISTING WATERMANS ARE TO BE CARRIED OUT BY AN APPROVED CONTRACTOR UNDER APPROVAL FROM WATERCARE AT DEVELOPERS EXPENSE.
5. CONTRACTOR TO SEARCH, LOCATE, PROTECT AND MAINTAIN ALL EXISTING SERVICES, POWER, COMMS ETC.
6. CONTRACTOR IS TO FIX BY SURVEY ALL CHANGES IN DIRECTION AND AS-BUILT DEPTH OF WORKS.
7. MATERIALS:  
PE  
OD63 MDPE PE80B PN12.5 (SDR11)
8. SEE SHEET 2108-01-(590-591) FOR STANDARD DETAILS.
9. APPLICATION TO BE MADE TO WATERCARE FOR REMOVAL OF ALL EXISTING METER CONNECTIONS ASSOCIATED WITH THE DEVELOPMENT.
10. WATERCARE CONTRACTOR TO MAKE CONNECTIONS FOR BULK WATERMETER AND WATERMETER BANK.

**LEGEND**

- EXISTING**
- (CR) PLOTTED FROM COUNCIL RECORDS
  - 100 DN100 WATERMAIN
  - W WATER METER
  - GAS GAS
  - COMMS COMMS
  - ⊗ OVERHEAD SERVICES AND POLE
  - P POWER FEATURE
  - T COMMS FEATURE
- PROPOSED**
- 63 PE DN63 PE LINE
  - SV SLUICE VALVE
  - PV PEET VALVE
  - BC BLANK CAP
  - BWM BULK WATER METER
  - WMB WATER METER BANK
  - Combined Services Trench



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DEH	08.2021	DATE	
WJR	15.10.2021	CHECKED	DATE
WJR	15.10.2021	APPROVED	DATE
DEH	15.10.2021	DATE	

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PROJECT TITLE:  
**KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN**

SHEET TITLE:  
**PROPOSED SERVICES  
OVERALL PLAN**

ISSUE STATUS: **CONSENT ISSUE**  
SCALE: (A1/A3) 1:125 / 1:250  
SCALE BAR 0 2.5 5 7.5 10 12.5m  
DRAWING NUMBER: **2108-02-500** REV: **C1**

### GENERAL CONSTRUCTION NOTES

#### STANDARDS RELATING TO WORKS

Works shall be carried out to the requirements of the Health & Safety of Work in Employment Act 2015

Works shall be completed to Watercare Construction Standards

#### MANUFACTURERS SPECIFICATIONS

Materials shall be installed to the Manufacturers requirements unless otherwise specified

#### WELDING & FIXINGS

All steelwork shall be workshop fabricated

Steelwork and fixings shall be hot-dip galvanized to AS/NZS 4680 unless otherwise stated.

A Nickel anti-sieve free of copper, lead, sulphides, chlorides & carbons (graphite) shall be used on bolts.

#### REINFORCING STEEL

Reinforcing shall be centrally placed with the specified minimum cover:

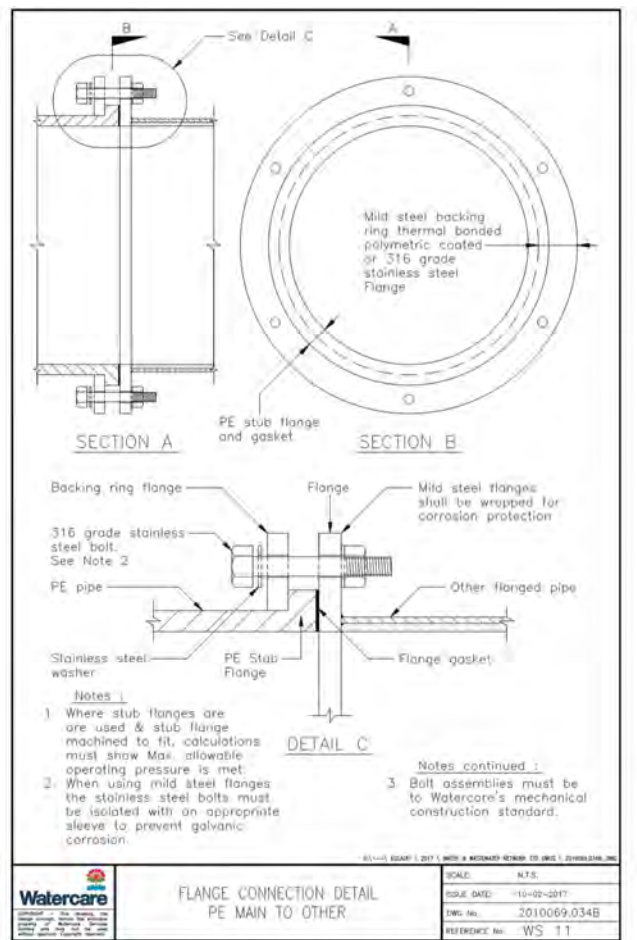
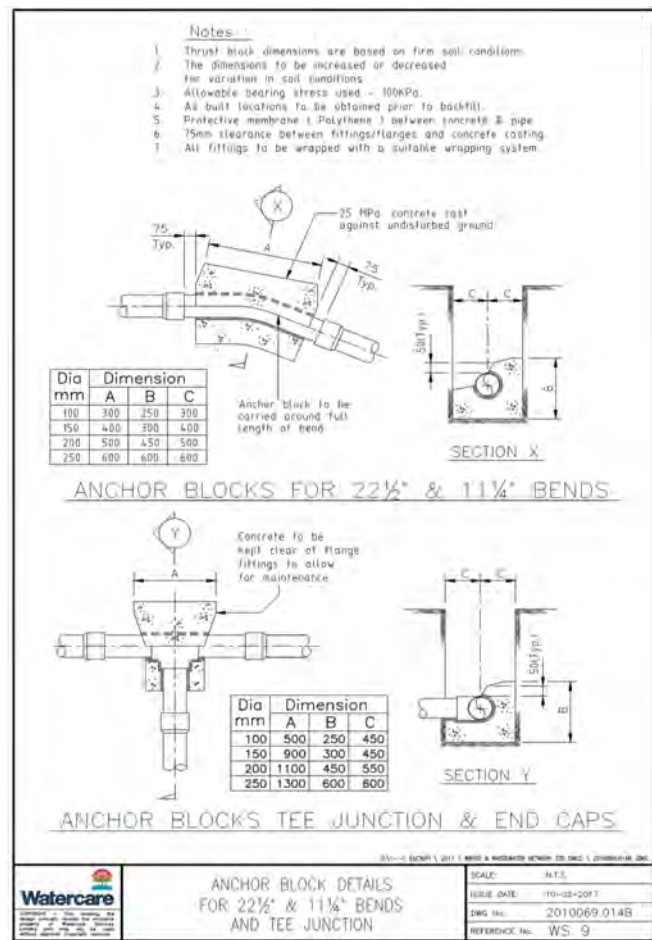
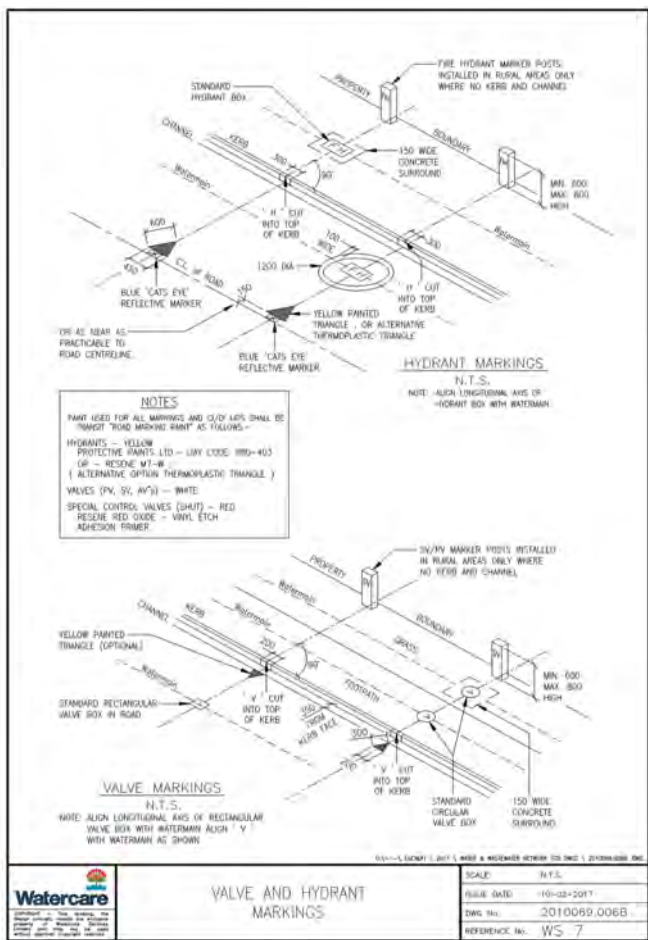
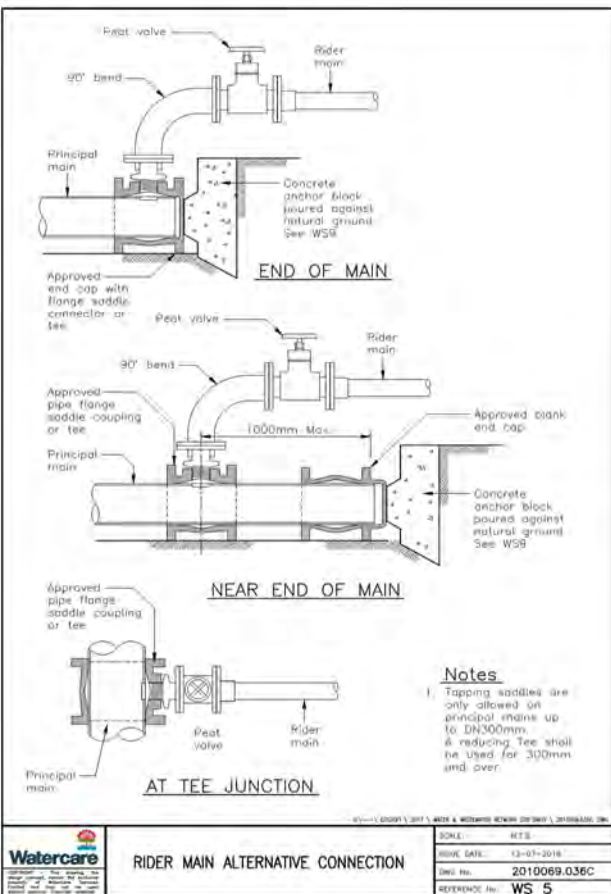
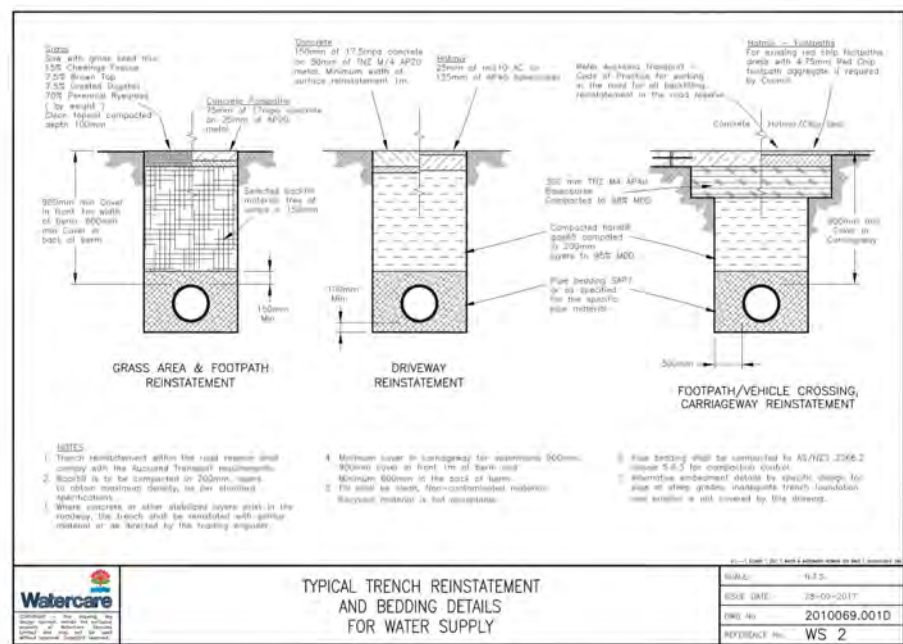
Bands shall be cold formed.

#### JOINT SEALS

Couplings & Flanges - Per WSJ Material Standard.

Concrete joints around pipe penetrations through chambers shall be made with a suitable hydrophilic sealant to the manufacturer's requirements. Concrete repair shall be reinforced and box-coat to prevent cracking from spall forces.

	SCALE: N.T.S.
	ISSUE DATE: 13-07-2018
	ENG No.: 2010069.002D
	REFERENCE No.: WS 1



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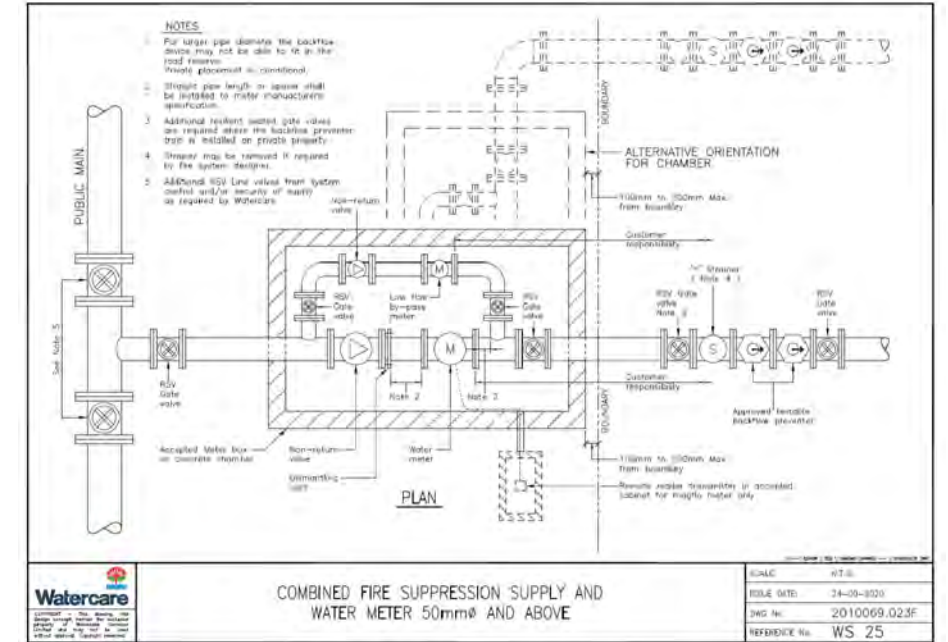
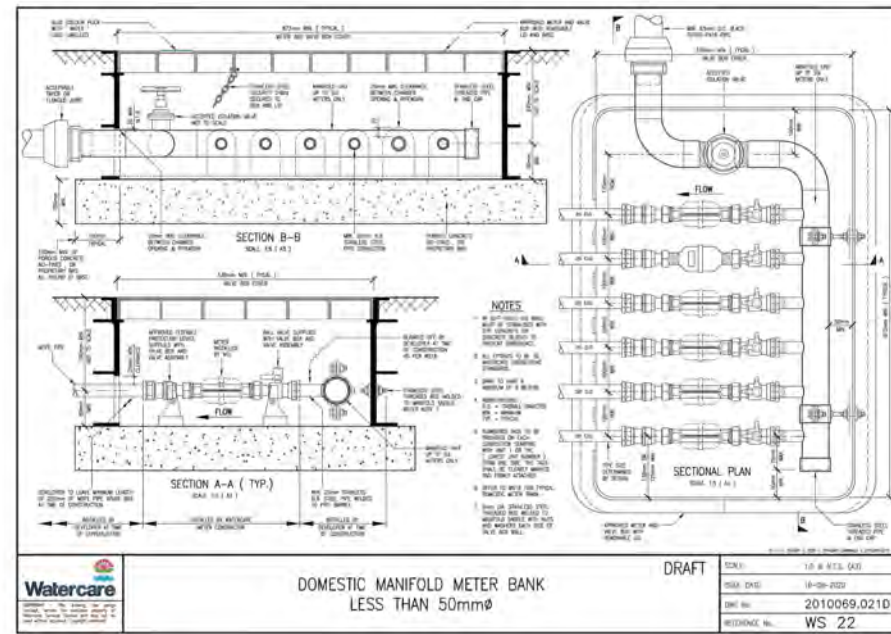
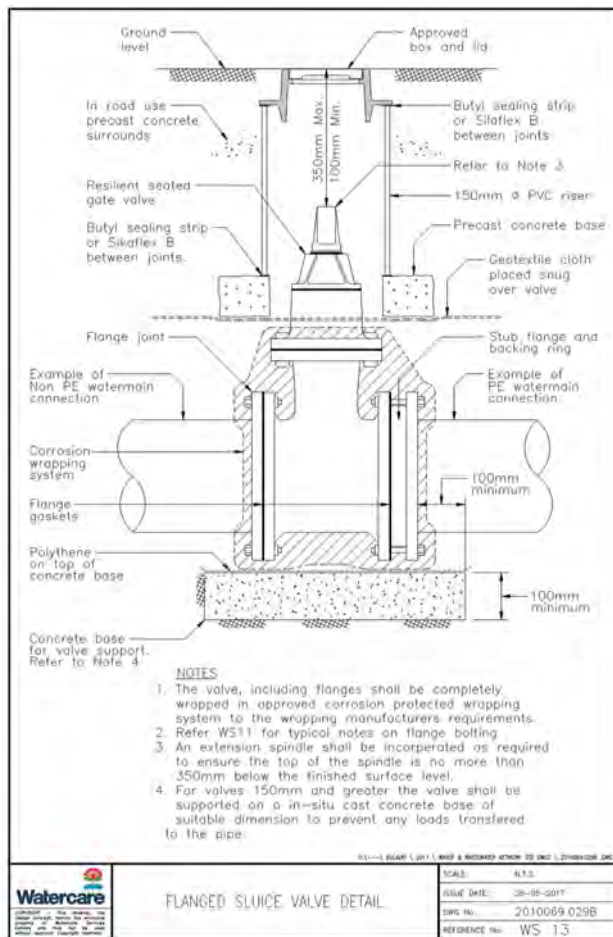
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PROJECT TITLE:  
**KĀINGA ORA  
 161 BEACH HAVEN ROAD  
 BEACH HAVEN**

SHEET TITLE:  
**PROPOSED SERVICES  
 WATER SUPPLY STANDARD DETAILS  
 SHEET 1**

ISSUE STATUS: **CONSENT ISSUE**  
 SCALE: (A1/A3) **NOT TO SCALE**  
 SCALE BAR: N.T.S.  
 DRAWING NUMBER: **2108-02-590** REV: **C1**



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REV	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021
C1	ISSUED FOR RESOURCE CONSENT	DEH	15.10.2021
	REVISION DETAILS	BY	DATE

DRAWN:	DEH	DATE:	08.2021
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APPROVED:	WJR	DATE:	15.10.2021

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PROJECT TITLE:

**KĀINGA ORA  
161 BEACH HAVEN ROAD  
BEACH HAVEN**

SHEET TITLE:

**PROPOSED SERVICES  
WATER SUPPLY STANDARD DETAILS  
SHEET 2**

ISSUE STATUS: **CONSENT ISSUE**

SCALE: (A1/A3) **NOT TO SCALE**

SCALE BAR  
N.T.S.

DRAWING NUMBER: **2108-02-591** REV: **C1**