Application for Planning Approval

Land Use Planning and Approvals Act 1993

APPLICATION NO.

DA2024/209

LOCATION OF AFFECTED AREA

58A KATHLEEN DRIVE, OLD BEACH

DESCRIPTION OF DEVELOPMENT PROPOSAL

SINGLE DWELLING

A COPY OF THE DEVELOPMENT APPLICATION MAY BE VIEWED AT www.brighton.tas.gov.au AND AT THE COUNCIL OFFICES, 1 TIVOLI ROAD, OLD BEACH, BETWEEN 8:15 A.M. AND 4:45 P.M, MONDAY TO FRIDAY OR VIA THE QR CODE BELOW. ANY PERSON MAY MAKE WRITTEN REPRESENTATIONS IN ACCORDANCE WITH S.57(5) OF THE LAND USE PLANNING AND APPROVALS ACT 1993 CONCERNING THIS APPLICATION UNTIL 4:45 P.M. ON **13/01/2025**. ADDRESSED TO THE CHIEF EXECUTIVE OFFICER AT 1 TIVOLI ROAD, OLD BEACH, 7017 OR BY EMAIL AT development@brighton.tas.gov.au. REPRESENTATIONS SHOULD INCLUDE A DAYTIME TELEPHONE NUMBER TO ALLOW COUNCIL OFFICERS TO DISCUSS, IF NECESSARY, ANY MATTERS RAISED.

JAMES DRYBURGH
Chief Executive Officer

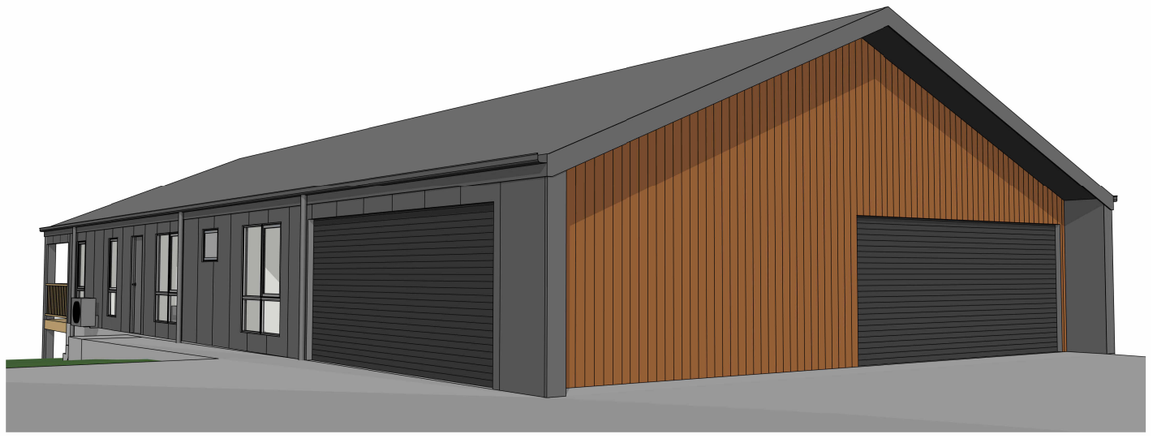
SCAN ME

Brighton
going places

another perspective
drafting&design

AP2024-2385 - PROPOSED OATES RESIDENCE
58a Kathleen Drive
OLD BEACH

SHEET		DRAWING TITLE
01	A	LOCATION PLAN
01a	A	SITE PLAN
01b	A	DRAINAGE LOCATION PLAN
01c	A	DRAINAGE PLAN
02		FLOOR PLAN
03		ELEVATIONS SHEET 1
03a		ELEVATIONS SHEET 2
03b		PERSPECTIVE VIEWS



No.	Amendment	Date	Drawn	Checked	Sheet
A	Provide note and references related to Despersive Soil Assessment report by GEO.	10 Dec. 24	KV	SF	01 - 01c
	DA PLAN SET	23 Oct. 2024	KV	CK	01 - 03

Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
- All work to be carried out in accordance with the current National Construction Code.
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Designer:

ANOTHER PERSPECTIVE PTY LTD
PO BOX 21
NEW TOWN
LIC. NO. 685230609 (S. Turvey)
Ph: (03) 6231 4122
Fx: (03) 6231 4166
Email:
info@anotherperspective.com.au

Client / Project info

PROPOSED OATES RESIDENCE

58a Kathleen Drive
OLD BEACH

Soil Classification:	M
Title Reference:	CT185606/2
Floor Areas:	242.34m²
Porch / Deck Areas:	39.53
Wind Speed:	N3
Climate Zone:	7
Alpine Zone:	N/A
Corrosion Environment:	LOW
Certified BAL:	BAL-19
Designed BAL:	BAL-19
(Refer to Standard Notes for Explanation)	

COVER SHEET

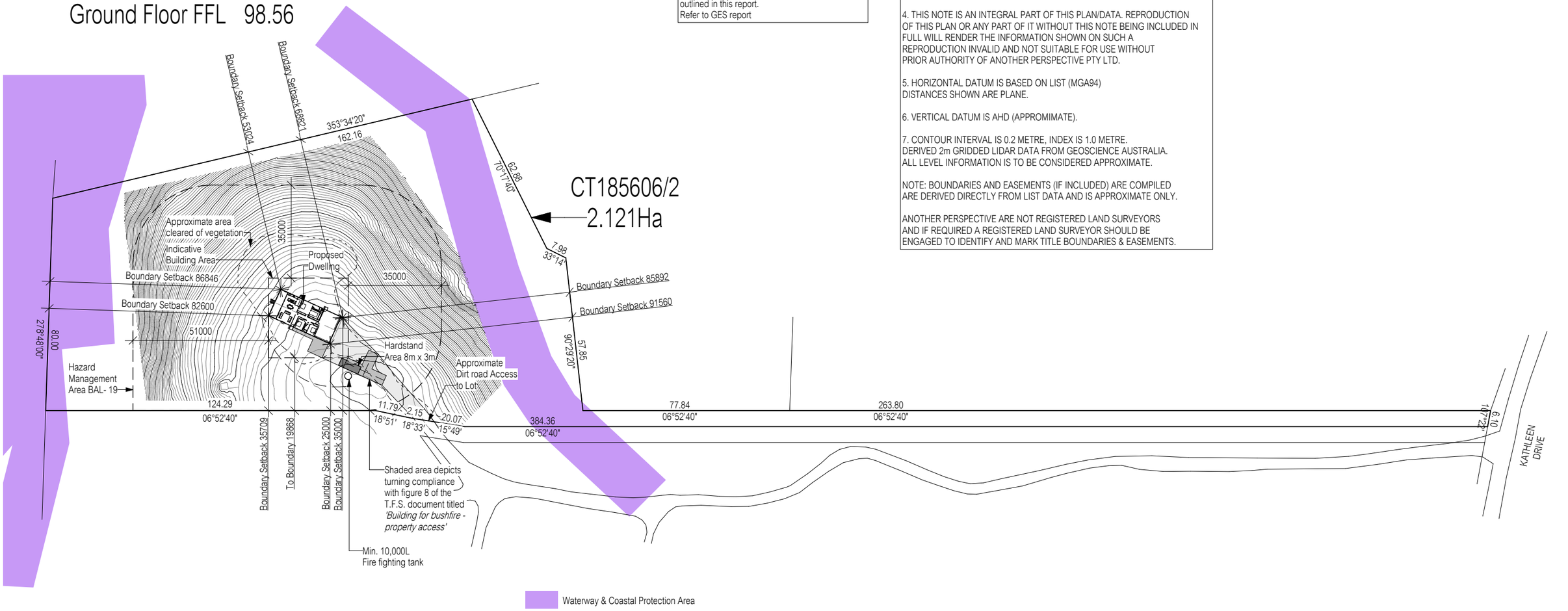
AP2024-2385

Date 23 October 2024

Scale

Sheet 00/03

Ground Floor FFL 98.56



DISPERSIVE SOIL ASSESSMENT :
There is a very low risk associated with dispersive soils and potential erosion on the site. It is recommended, however, that all excavation works on site should be monitored for signs of soil dispersion and remedial action taken as required if necessary.
During construction GES will need to be notified of any major variation to the soil conditions as outlined in this report.
Refer to GES report

1. THIS PLAN HAS BEEN PREPARED BY ANOTHER PERSPECTIVE PTY LTD FROM A COMBINATION OF EXISTING SURVEY PLANS, LIST CADASTRE.

2. TITLE BOUNDARIES SHOWN WERE NOT VERIFIED ON SITE AND ARE CONSIDERED APPROXIMATE ONLY.

3. ANOTHER PERSPECTIVE PTY LTD CAN NOT ACCEPT LIABILITY WHATSOEVER FOR LOSS OR DAMAGE CAUSED TO ANY UNDERGROUND SERVICE AS NO SERVICE INFORMATION HAS BEEN COLLECTED.

4. THIS NOTE IS AN INTEGRAL PART OF THIS PLAN/DATA. REPRODUCTION OF THIS PLAN OR ANY PART OF IT WITHOUT THIS NOTE BEING INCLUDED IN FULL WILL RENDER THE INFORMATION SHOWN ON SUCH A REPRODUCTION INVALID AND NOT SUITABLE FOR USE WITHOUT PRIOR AUTHORITY OF ANOTHER PERSPECTIVE PTY LTD.

5. HORIZONTAL DATUM IS BASED ON LIST (MGA94)
DISTANCES SHOWN ARE PLANE.

6. VERTICAL DATUM IS AHD (APPROMIMATE).

7. CONTOUR INTERVAL IS 0.2 METRE, INDEX IS 1.0 METRE.
DERIVED 2m GRIDDED LIDAR DATA FROM GEOSCIENCE AUSTRALIA.
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No.	Date	Int.	
A	10 Dec. 24	KV	Amendment changes as per cover sheet

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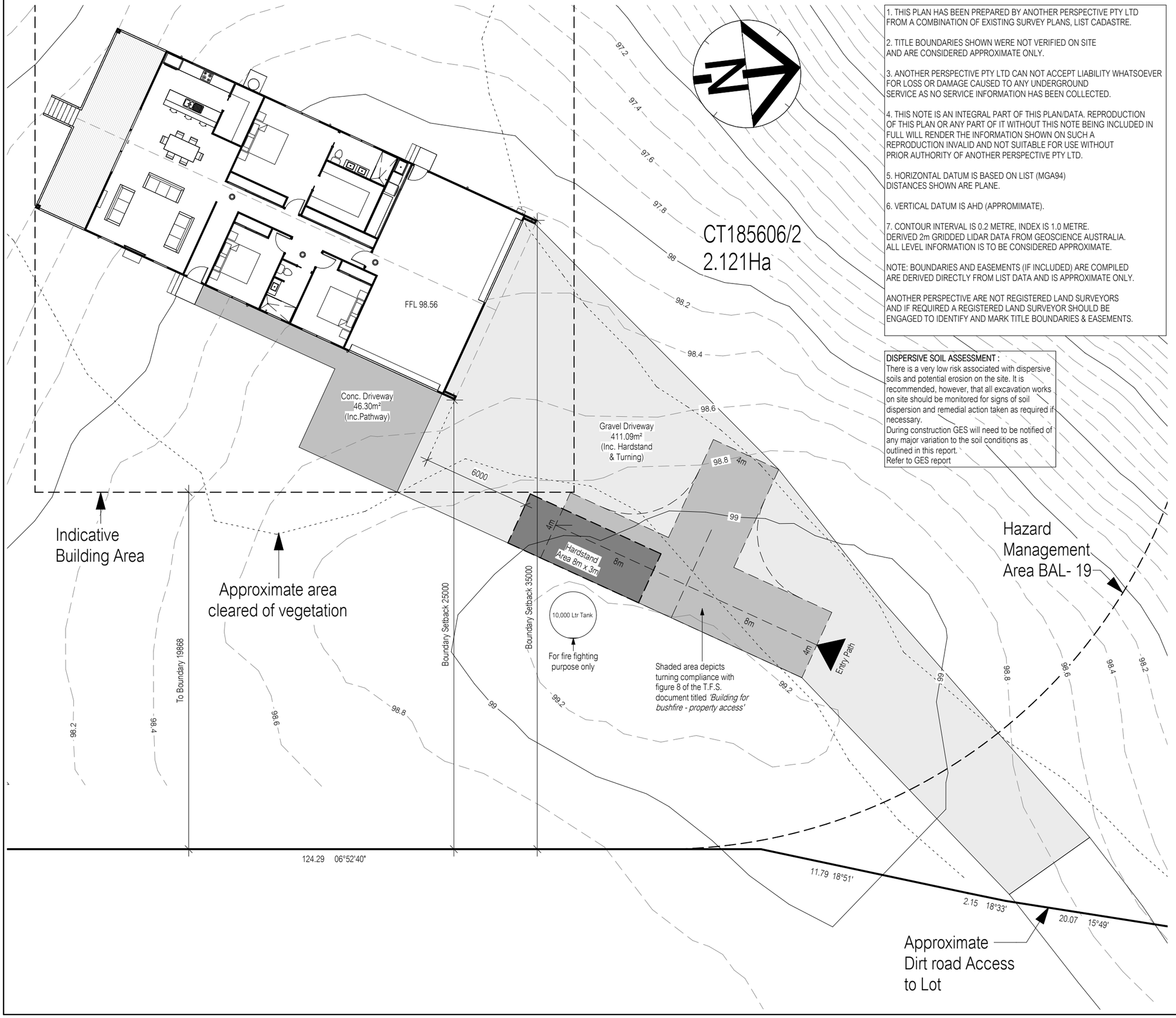
another perspective drafting&design

LOCATION PLAN

Drawn	KV	AP2024-2385	
Date	17 October 2024	Sheet	01/03
Scale	1 : 1500		



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Ground Floor FFL 98.56

EXPLANATORY NOTES: TASMANIAN PLANNING SCHEME - BRIGHTON COUNCIL		
11.4.1 - Site coverage		
A1		Site Coverage: Not more than 400m² Proposed site coverage (excl. eaves up to 0.6m): 282.70m²

0 2 4 6 8m
1:200

No.	Date	Int.
A	10 Dec. 24	KV

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another perspective drafting&design

SITE PLAN

Drawn	KV	AP2024-2385	
Date	17 October 2024	Sheet	01a/03
Scale	1 : 200		

Wastewater system:
AWTS Unit with venting according to NCC Vol 3 Tas C2D6
Surface diversion drain
Subsurface irrigation area (200m2)
e.g. 26m x 8m x 0.2m
Min 3m from upslope or level buildings
Min 4.25m from downslope buildings
Min 1.5m from upslope or level boundaries
Min 10.5m from downslope boundary
Min 33m from downslope surface water
Refer to GES report

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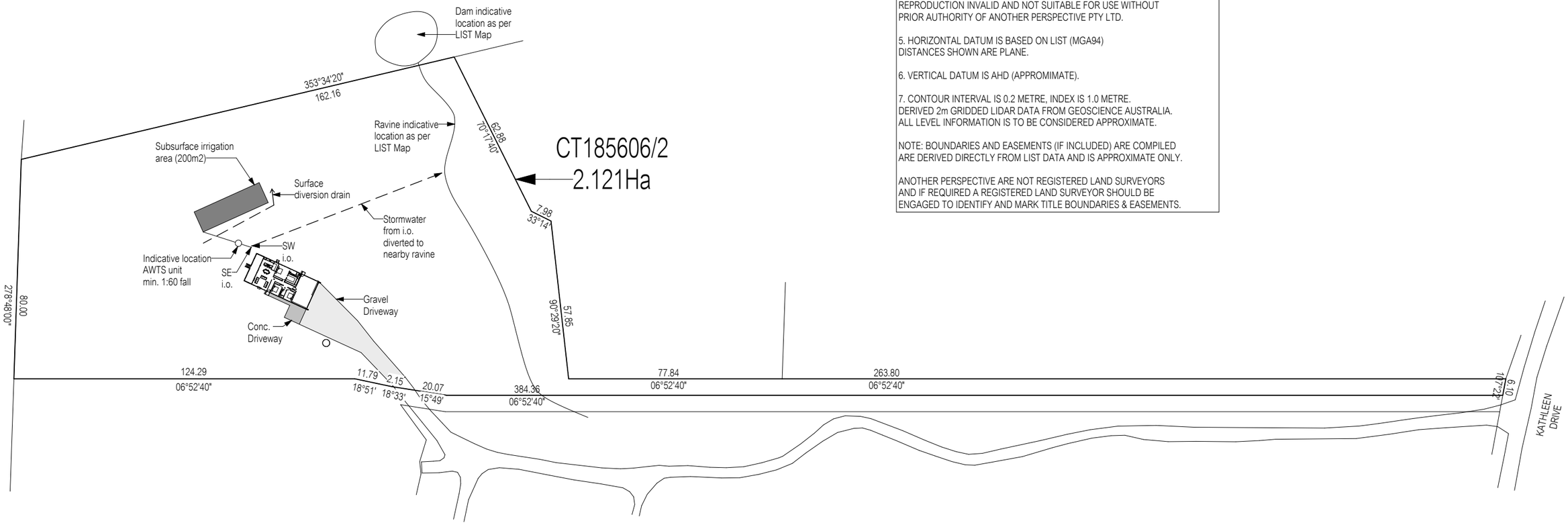

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DRAINAGE LOCATION PLAN

Drawn	KV	AP2024-2385	
Date	23 October 2024	Sheet	01b/03
Scale	1 : 1500		

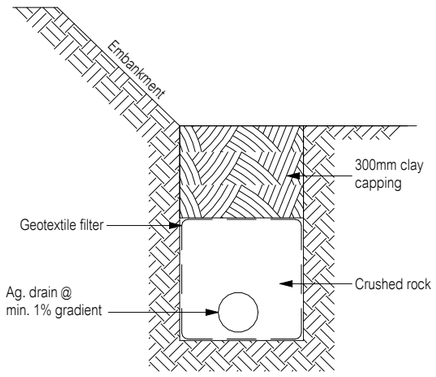
Where ag drain is < 1.5m from footing, the following engineering principles are required:

1. Ag drain to be capped with 300mm of clay to prevent ingress of surface run-off unless it is under a paving slab etc (ag drains are designed for removal of ground water, surface water should be dealt with separately).

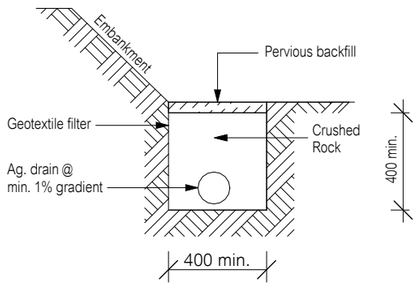
2. Ag drain to have a minimum 1% fall to a grated pit which drains to the stormwater system.

3. Install a geotextile filter sock to the slotted drain, and enclose the whole drain in geofabric (to the underside of clay capping).

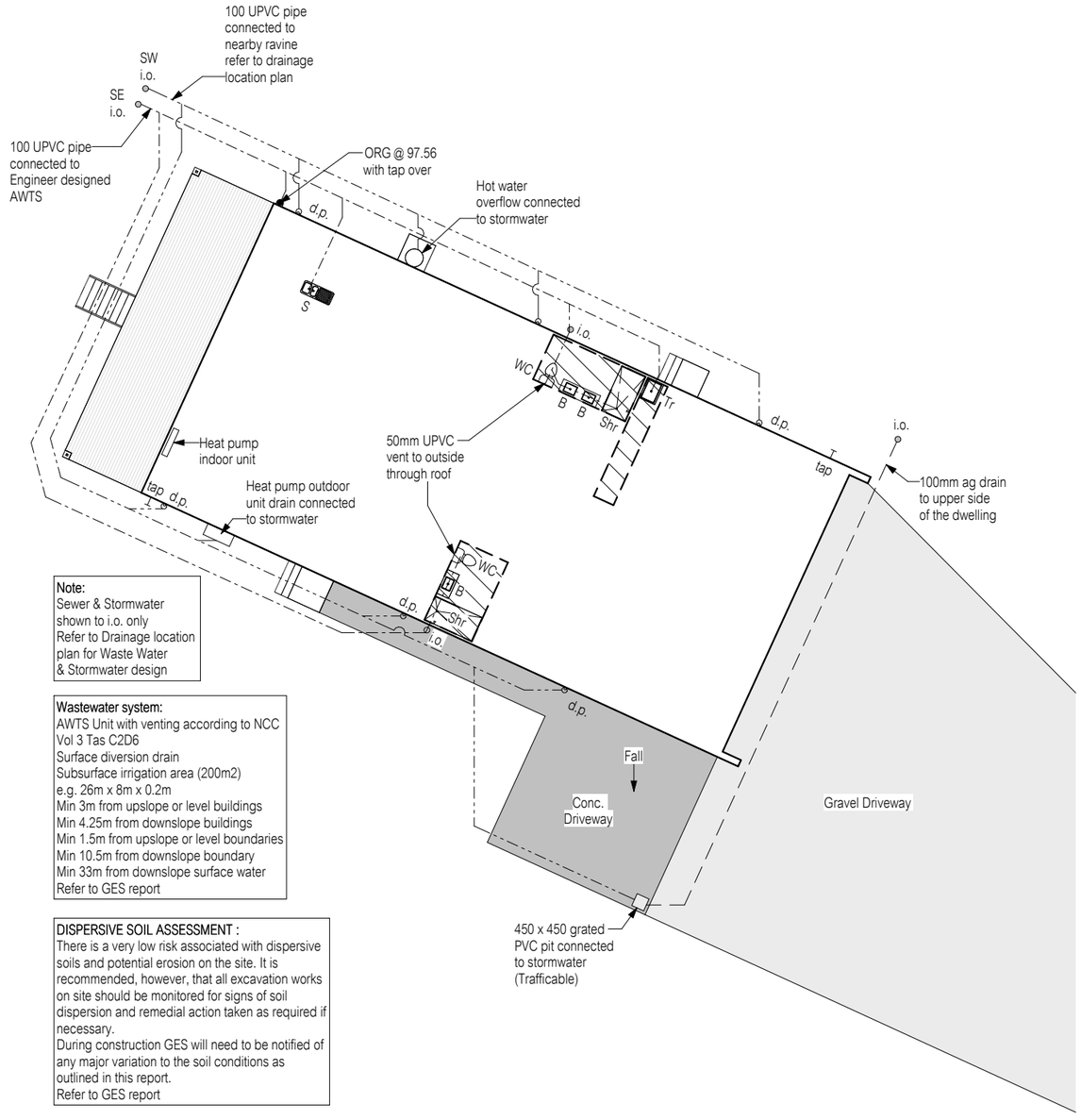
4. Provide additional grated pits / or inspection openings along the length of the ag drain and at the high point to make the effect of a blockage visible and enable a blockage to be cleared.



TYPICAL AG. DRAIN DETAIL
(<1800 FROM HOUSE)
Not to scale



TYPICAL AG. DRAIN DETAIL
(≥1800 FROM HOUSE)
Not to scale



DRAINAGE LEGEND		
Abbreviation	Fixture	Min. Outlet Size
B	Basin	40Ø
Bth	Bath	40Ø (incl. trap)
Shr	Shower	40Ø (Note 3)
S	Sink	50Ø
Tr	Trough	40Ø
WC	Water Closet Pan	100Ø
d.p.	Downpipe	90Ø
ORG	Overflow Relief Gully	100Ø
FWG	Floor Waste Gully	65Ø (Note 2)
	Sewer Line (100Ø UPVC) (unless noted otherwise)	
	Stormwater Line (100Ø UPVC) (unless noted otherwise)	
	Stormwater Line (150Ø UPVC) (unless noted otherwise)	

NOTES:
1. Flexible connections are to be installed on any pipes emerging from beneath the building in accordance with AS2870 & AS/NZS3500.2:2021.
2. Untrapped Bath tub pipe to connect to FWG if trap not accessible from below or access panel.
3. 50Ø required for multiple shower heads.
4. Showers to comply with N.C.C. 10.2.14.
5. Falls to floor waste to be minimum 1:80 & maximum 1:50

Note:
Sewer & Stormwater shown to i.o. only
Refer to Drainage location plan for Waste Water & Stormwater design

Wastewater system:
AWTS Unit with venting according to NCC Vol 3 Tas C2D6
Surface diversion drain
Subsurface irrigation area (200m2)
e.g. 26m x 8m x 0.2m
Min 3m from upslope or level buildings
Min 4.25m from downslope buildings
Min 1.5m from upslope or level boundaries
Min 10.5m from downslope boundary
Min 33m from downslope surface water
Refer to GES report

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Refer to GES report

Refer to Roof Plan for downpipe calculations

All works are to in accordance with the Water Supply Code of Australia WSA 03-2011-3.1 Version 3.1 MRWA Edition V2.0 and Sewerage Code of Australia Melbourne Retail Water Agencies Code WSA 02-2014-3.1 MRWA Version 2.0 and TasWater's supplements to these codes.

ROOF DRAINAGE NOTE:
Min. medium rectangular gutter & min. 90ø downpipe specified as per N.C.C. part 7.4. These sizes and downpipe quantities are based on a max. roof catchment area of 70m²

0 2 4 6 8m
1:200

Soil classification: M

Refer to Soil Report for nominated founding depth and description of founding material.

All Materials and construction to comply with AS/NZ3500 Part 2 & Part 3

- Wet areas to comply with NCC 10.2 and AS3740

No.	Date	Int.
A	10 Dec. 24	KV

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DRAINAGE PLAN

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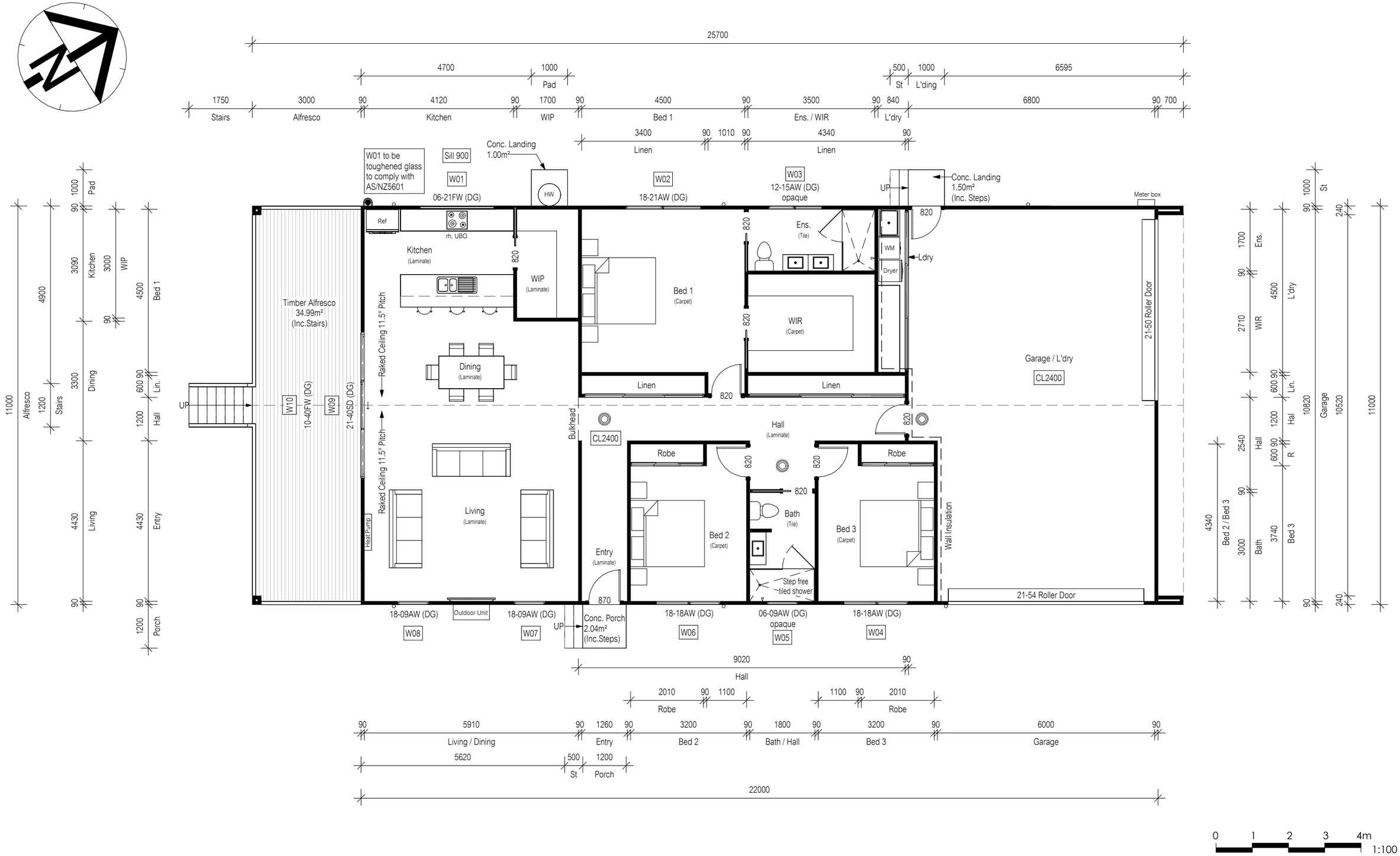
Date	23 October 2024	Sheet	01c/03
Scale	1 : 200		



Floor Area = 242.34m²

Articulation joints

Smoke Alarm (interconnected where more than 1)

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

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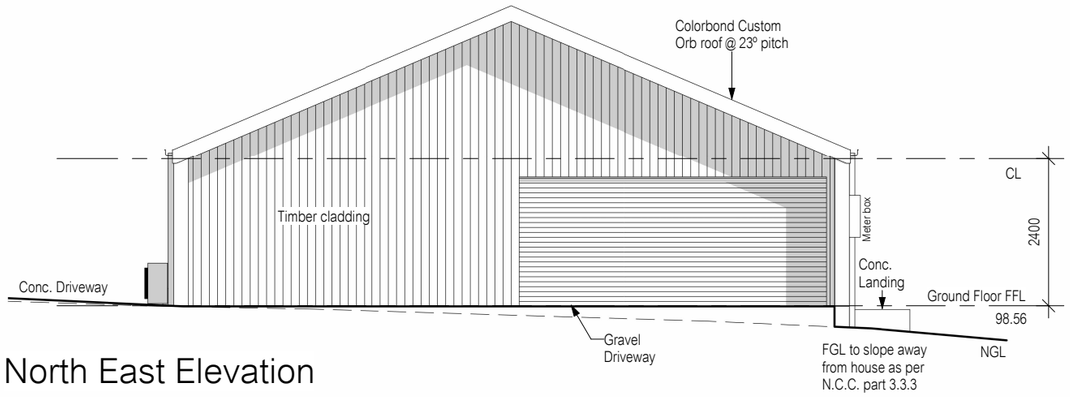
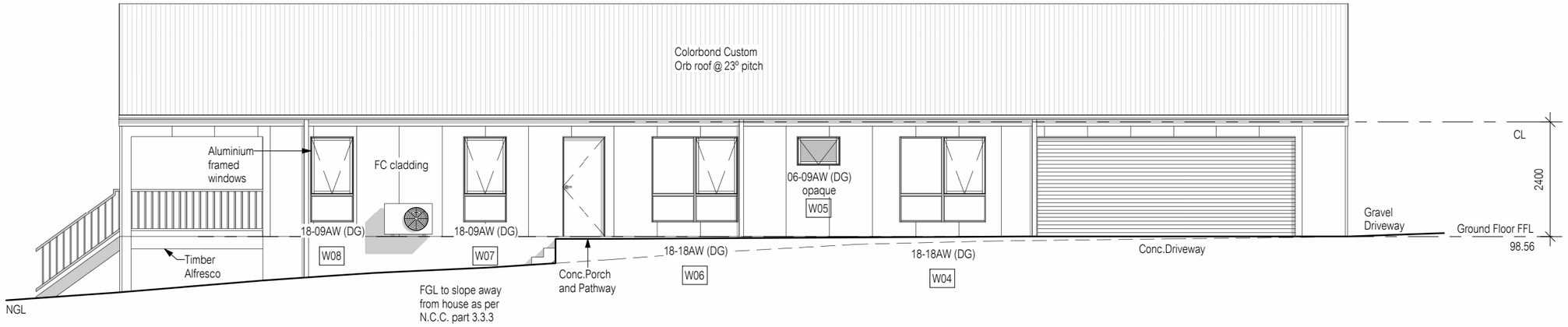
FLOOR PLAN

Drawn	KV	AP2024-2385	
Date	09 October 2024	Sheet	02/03
Scale	1 : 100		

Material	Colour
Colorbond Roof	BASALT
Timber cladding	Natural
FC Sheet	BASALT



North East Elevation



South East Elevation

No.	Date	Int.	Amendment changes as per cover sheet

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LEGEND:
AJ - Articulation Joint
BV - Brick Vent

Shadows shown for stylisation purposes only

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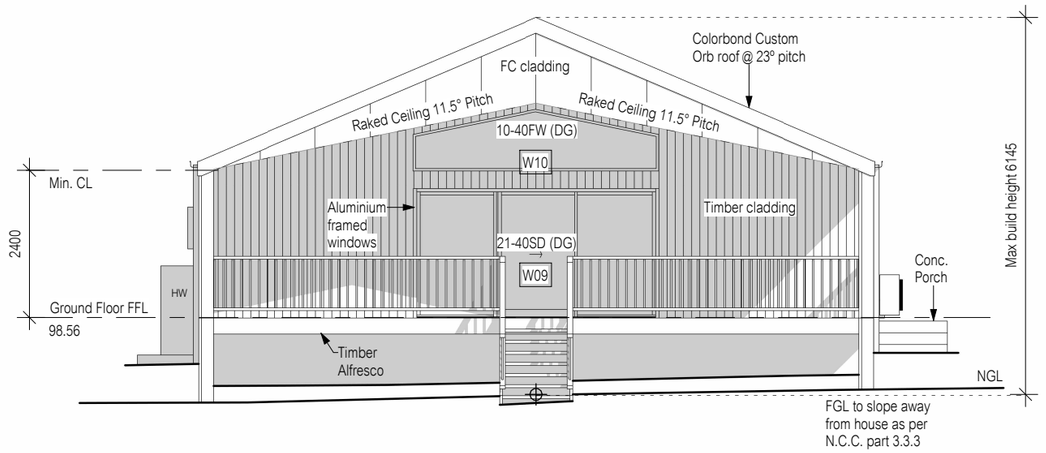
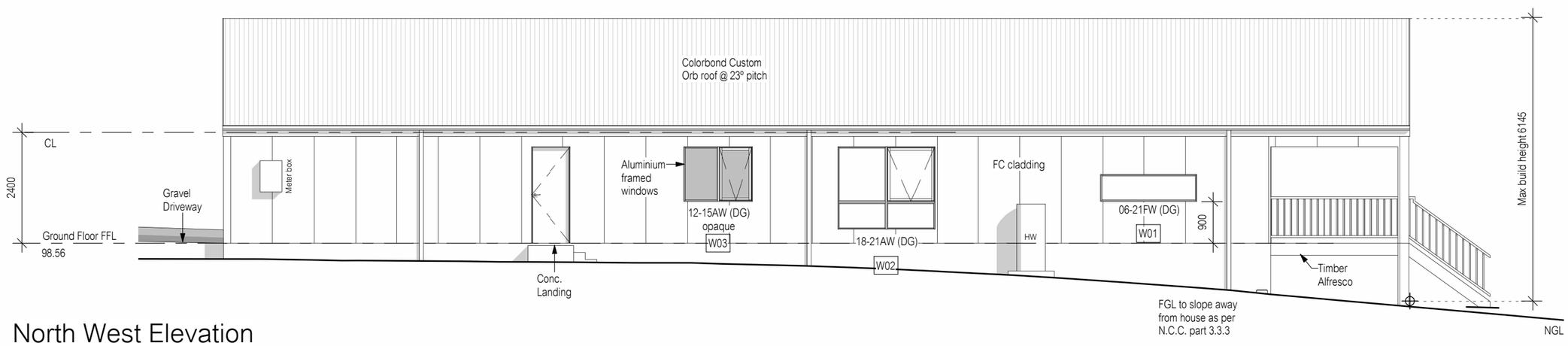
ELEVATIONS SHEET 1

Drawn	KV	AP2024-2385	
Date	23 October 2024	Sheet	03/03
Scale	1 : 100		

Material	Colour
Colorbond Roof	BASALT
Timber cladding	Natural
FC Sheet	BASALT



South West Elevation



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ELEVATIONS SHEET 2

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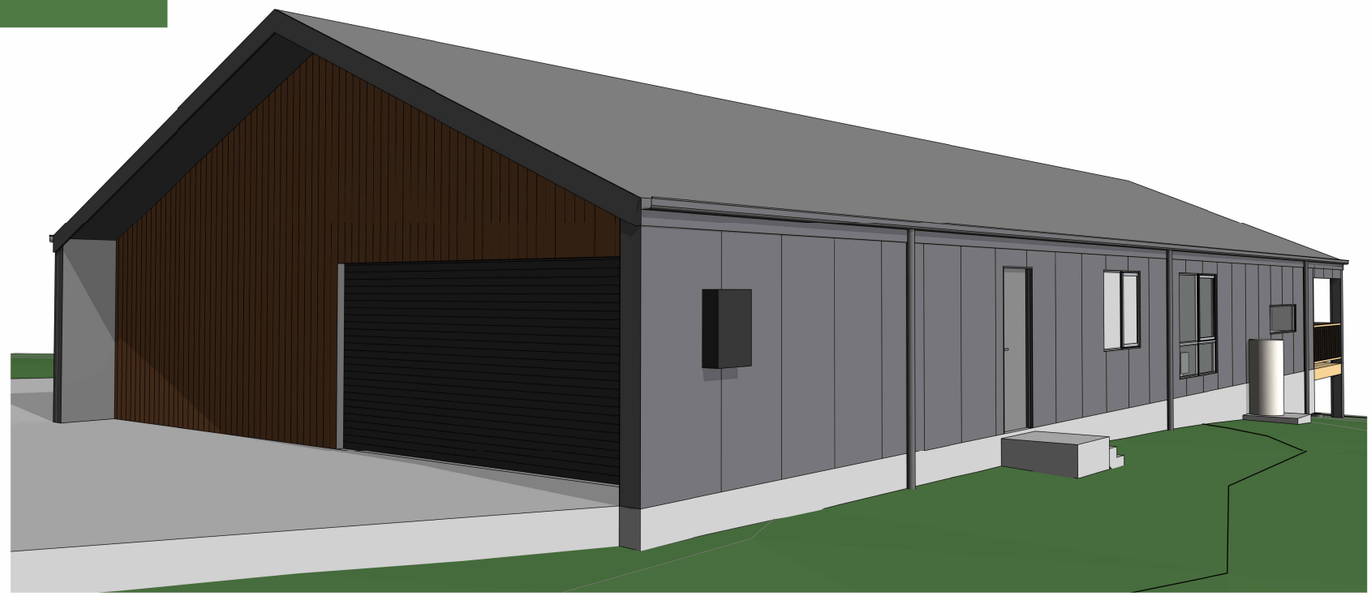
Date	23 October 2024	Sheet 03a/03
Scale	1 : 100	



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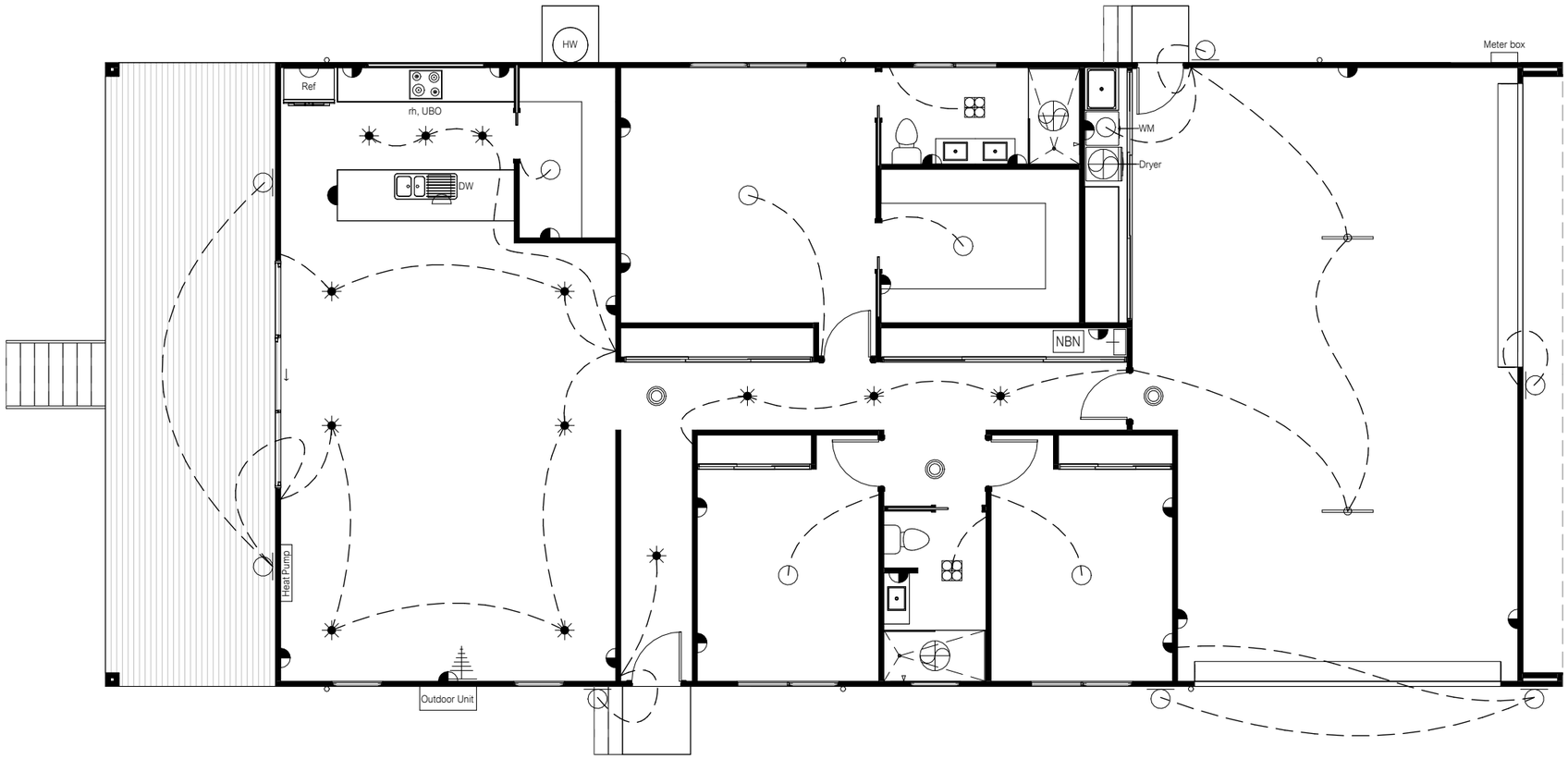
PERSPECTIVE VIEWS

Drawn	KV	AP2024-2385
Date	09 October 2024	Sheet
Scale		03b/03

NOTE
NBN CAT6 data point &
GPO located second shelf
from top in Linen



LEGEND (W = Wattage e.g. 35W = 35 Watts.)

- STANDARD CEILING LIGHT POINT (30W)
- DOWNLIGHT POINT (UNVENTED) (35W)
- LED DOWNLIGHT POINT (10W) SUITABLE FOR & FITTED WITH INSULATION OVER. (IC RATED)
- PENDANT LIGHT (30W)
- WALL LIGHT POINT (30W)
- 2 x 900mm FLUORESCENT LIGHT POINT (36W)
- 2 x SLIM T5 900mm FLUORESCENT LIGHT POINT (28W)
- SINGLE POWER POINT
- DOUBLE POWER POINT
- DOUBLE POWER POINT WITH USB
- WATER PROOF POWER POINT
- MAINS POWERED SMOKE ALARM (INTERCONNECTED WHERE MORE THAN 1)
- FAN / HEATER / LIGHT (8W) (VENT IN ACCORDANCE WITH N.C.C. 10.8.2)
- TV CONNECTION POINT
- NBN/TELEPHONE CONNECTION POINT
- SENSOR LIGHT
- EXHAUST FAN (VENT IN ACCORDANCE WITH N.C.C. 10.8.2)
- FLOOD LIGHT
- CAT 6 CONNECTION POINT
- TREAD LIGHTS (2W)
- DUCTED VACUUM POINT
- SECURITY SYSTEM KEYPAD
- SECURITY SYSTEM SENSOR

ALL EXHAUST FANS:
25 L/s for a bathroom or sanitary compartment, 40 L/s for a kitchen or laundry. Exhaust from a kitchen, kitchen range hood, bathroom, sanitary compartment, or laundry must be discharged directly or via a shaft or duct to outdoor air.

No.	Date	Int.	Amendment changes as per cover sheet

Notes
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Designer:

ANOTHER PERSPECTIVE PTY LTD
PO BOX 21
NEW TOWN
LIC. NO. 685230609 (S. Turvey)
Ph: (03) 6231 4122
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Client / Project info

PROPOSED OATES RESIDENCE

58a Kathleen Drive
OLD BEACH

another perspective drafting&design

ELECTRICAL PLAN

Drawn	KV	AP2024-2385	
Date	23 October 2024	Sheet	09/03
Scale	1 : 100		

ABCB

National Construction Code

Lighting

Class 1 & 10a buildings

Calculator

Building name/description	Classification
PROPOSED OATES RESIDENCE, 58a Kathleen Drive, OLD BEACH	Class 1

Number of rows preferred in table below	14	*(as currently displayed)*

Separate aggregate allowances are calculated for Class 1 cases; for a verandah or balcony; or for a Class 10 building. The '% of allowance used' outcomes refer to these aggregate allowances.

ID	Description	Type of space	Floor area of the space	Design lamp or illumination power load	Location	Adjustment factor	Adjustment factor: Dimming % area	Adjustment factor: Dimming % of full power	Adjustment factor: Design lumen depreciation factor	SATISFIES PART 13.7.6: Lamp or illumination power density: System allowance	SATISFIES PART 13.7.6: Lamp or illumination power density: System design	SATISFIES PART 13.7.6: System share of % of aggregate allowance used
						Adjustment factors						
1	Kitchen	Kitchen	12.7 m²	30 W	Class 1 building					5.0 W/m²	2.4 W/m²	9% of 38%
2	WIP	Other	5.1 m²	30 W	Class 1 building					5.0 W/m²	5.9 W/m²	23% of 38%
3	Bed 1	Bedroom	20.9 m²	30 W	Class 1 building					5.0 W/m²	1.4 W/m²	5% of 38%
4	Ens.	Bathroom	6.0 m²	8 W	Class 1 building					5.0 W/m²	1.3 W/m²	5% of 38%
5	WIR	Other	9.5 m²	30 W	Class 1 building					5.0 W/m²	3.2 W/m²	12% of 38%
6	Hall	Corridor	17.9 m²	30 W	Class 1 building					5.0 W/m²	1.7 W/m²	7% of 38%
7	Bed 3	Bedroom	13.9 m²	30 W	Class 1 building					5.0 W/m²	2.2 W/m²	8% of 38%
8	Bath	Bathroom	5.3 m²	8 W	Class 1 building					5.0 W/m²	1.5 W/m²	6% of 38%
9	Bed 2	Bedroom	13.9 m²	30 W	Class 1 building					5.0 W/m²	2.2 W/m²	8% of 38%
10	Entry	Other	5.6 m²	10 W	Class 1 building					5.0 W/m²	1.8 W/m²	7% of 38%
11	Living	Living room	26.2 m²	40 W	Class 1 building					5.0 W/m²	1.5 W/m²	6% of 38%
12	Dining	Living room	19.5 m²	20 W	Class 1 building					5.0 W/m²	1.0 W/m²	4% of 38%
13	Alfresco	Verandah or balcony	32.9 m²	60 W	Verandah or balcony					4.0 W/m²	1.8 W/m²	100% of 45%
14	Garage / L'dry	Other	73.8 m²	102 W	Class 10a building					3.0 W/m²	1.4 W/m²	100% of 47%

263.1 m²	458 W

	Allowance	*Design average*
Class 1 building	5.0 W/m²	1.9 W/m²
Verandah or balcony	4.0 W/m²	1.8 W/m²
Class 10a building (associated with a Class 1 building)	3.0 W/m²	1.4 W/m²

if inputs are valid ✓

IMPORTANT NOTICE AND DISCLAIMER IN RESPECT OF THIS LIGHTING CALCULATOR

By accessing or using this calculator, you agree to the following: While care has been taken in the preparation of this calculator, it may not be complete or up-to-date. You can ensure that you are using a complete and up-to-date version by checking the Australian Building Codes Board website (abcb.gov.au). The Australian Building Codes Board, the Commonwealth of Australia and States and Territories of Australia do not accept any liability, including liability for negligence, for any loss (howsoever caused), damage, injury, expense or cost incurred by any person as a result of accessing, using or relying upon this publication, to the maximum extent permitted by law. No representation or warranty is made or given as to the currency, accuracy, reliability, merchantability, fitness for any purpose or completeness of this publication or any information which may appear on any linked websites, or in other linked information sources, and all such representations and warranties are excluded to the extent permitted by law. This calculator is not legal or professional advice. Persons rely upon this calculator entirely at their own risk and must take responsibility for assessing the relevance and accuracy of the information in relation to their particular circumstances.

WINDOW MANUFACTURER:
DOWEL WINDOWS

LEGEND:
SW = Sliding Window, AW = Awning Window, SD = Sliding door, FD = French Door,
BRPG = Bushfire Rated Privacy Glass
NOTE: Window tags including (DG) are to be Double Glazed, otherwise they are to be single glazed.

NOTE:
Windows supplied MUST HAVE Uw better and or equal to stated figures and SHGC within +/- 5% of stated figures.
Windows labelled YES in "Restricted/protected" column to comply with N.C.C. 11.3.7 & 11.3.8
* - Glass specification changed to comply with Bushfire requirements (Refer to Sheet ---)

WINDOW NUMBER	SIZE / TYPE	ID	Uw	SHGC	RESTRICTED
W01	06-21FW (DG)	DOW-015-01	3.66	0.66	NO
W02	18-21AW (DG)	DOW-005-01	3.90	0.58	NO
W03	12-15AW (DG) opaque	DOW-005-01	3.90	0.58	NO
W04	18-18AW (DG)	DOW-005-01	3.90	0.58	NO
W05	06-09AW (DG) opaque	DOW-005-01	3.90	0.58	NO
W06	18-18AW (DG)	DOW-005-01	3.90	0.58	NO
W07	18-09AW (DG)	DOW-005-01	3.90	0.58	NO
W08	18-09AW (DG)	DOW-005-01	3.90	0.58	NO
W09	21-40SD (DG)	DOW-007-04	4.10	0.61	NO
W10	10-40FW (DG)	DOW-015-01	3.66	0.66	NO

INSULATION SCHEDULE

Area	Insulation Details
Roof	Sarking (vapour permeable) OR R1.3 Anticon Sarking
Ceiling	R?? bulk insulation (or equivalent) excluding GARAGE
Walls (external)	R?? bulk insulation (or equivalent) with 1 layer sisalation (vapour permeable). Sisalation only to GARAGE
Walls (Internal)	N/A or R?? bulk insulation (or equivalent) to internal walls adjacent to GARAGE / SUBFLOOR / ROOFSPACE
Floors	R?? bulk insulation (or equivalent) to all timber floors

NOTE:
Clearance is required for uncompressed installation of bulk insulation and timbers should be sized accordingly.
Bulk insulation thicknesses vary depending on manufacturer and should be selected accordingly, and installed to manufacturer's specification.
Min. 20mm clearance required between roofing and vapour permeable sarking (i.e. batten over sarking OR sarking over batten + vented batten)
Min. 25mm air gap above bulk insulation into roof space.
Where solar tubes are located, diffusers are to be installed.
Where skylights are located, ceiling insulation is to be installed to length of shaft.

No.	Date	Int.	Amendment changes as per cover sheet

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Client / Project info
PROPOSED OATES RESIDENCE
58a Kathleen Drive
OLD BEACH

another perspective drafting&design

CALCULATIONS & SCHEDULES

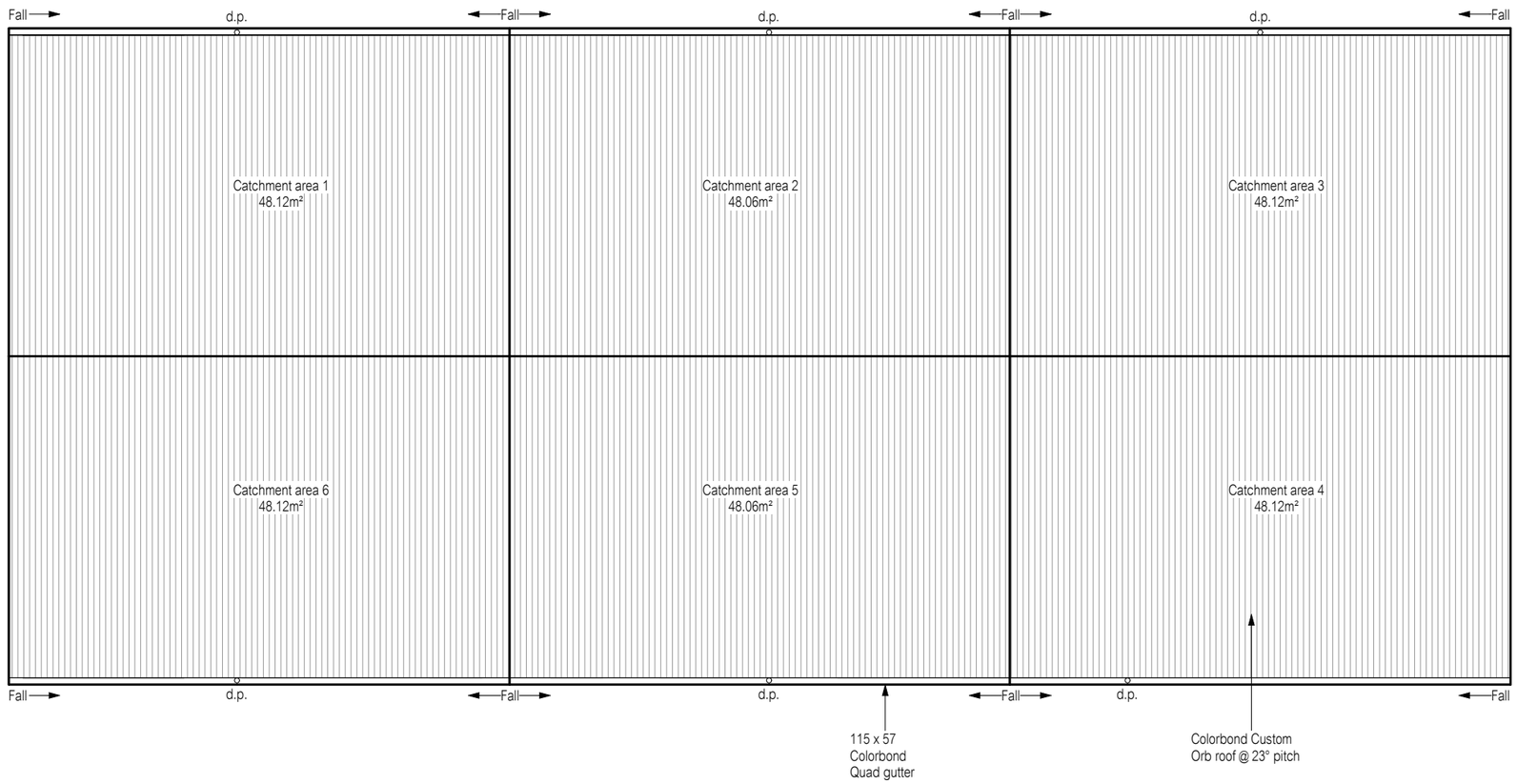
Drawn	KV	AP2024-2385	
Date	23 October 2024	Sheet	10/03
Scale			

GUTTER OVERFLOW REQUIREMENTS as per N.C.C. Figure 7.4.6a:
Minimum slot opening area of 1200 mm² per metre of gutter and the lower edge of the slots installed a minimum of 25 mm below the top of the fascia. The acceptable overflow capacity must be 0.5 L/s/m.

Batten fixings:
100mm type 17, 14g bugle screws to comply with AS1684, or refer to AS1684 for alternatives.

Batten spacing:
75 x 38 F8
@ 900 Centre

Colorbond fixings:
50mm M6 11 x 50 EPDM seal to comply with AS3566 or refer to AS3566 for alternatives.



ROOF VENTILATION GUIDE:
Ventilation calculations must be read in conjunction with *CBOS - Condensation in Buildings - Tasmanian Designers' Guide - Version 2 (published April 2019).*

Continuous gap:

Supply	Exhaust
Continuous gap at eaves is: 25mm for <16˚ pitch 10mm for >16˚ pitch	Continuous gap at ridge is at least 5mm for all roof pitches

OR

Roof vents:
The minimum vent area should be:
a) Ceiling area/150 for <16˚ pitch, or
b) Ceiling area/300 for >16˚ pitch

Supply	Exhaust
75% of ventilation should be supply	25% of ventilation should be exhaust

Vent at gable should be within 900mm of ridge.

ROOF VENTILATION CALCULATION	
Roof vents:	
Ceiling Area:	269.45m²
Roof Pitch:	23°
Supply area required (75%):	0.67m²
Exhaust area required (25%):	0.22m²
Example	
Vent Width	200mm
Vent Length	400mm
Vent area	0.08m²
Opening	50%
Supply number required	17 evenly spaced
Exhaust number required	Continuous 5mm gap to ridge
AS3959 compliant ember mesh and compressible blanket to ridge vents on jobs in BAL zones.	

ROOF DRAINAGE NOTE:
Min. medium rectangular gutter & min. 90ø downpipe specified as per N.C.C. part 7.4. These sizes and downpipe quantities are based on a max. roof catchment area of 70m²

Position and quantity of downpipes are not to be altered without consultation with designer

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PROPOSED OATES RESIDENCE

58a Kathleen Drive
OLD BEACH

another perspective drafting&design

ROOF PLAN

Drawn	KV	AP2024-2385	
Date	23 October 2024	Sheet	11/03
Scale	1 : 100		

DISPERSIVE SOIL ASSESSMENT

58A Kathleen Drive

Old Beach

December 2024

GEO-ENVIRONMENTAL

SOLUTIONS

Investigation Details

Client:	Brad Oates
Site Address:	58A Kathleen Drive, Old Beach
Date of Inspection:	19/09/2024
Proposed Works:	New house
Investigation Method:	Geoprobe 540UD - Direct Push
Inspected by:	C. Cooper

Site Details

Certificate of Title (CT):	185606/2
Title Area:	Approx. 2.12 ha
Applicable Planning Overlays:	Bushfire-prone Areas
	Priority Vegetation Area
Slope & Aspect:	Approx. 5-20%, variable aspect
Vegetation:	Mixed flora

Background Information

Geology Map:	MRT Tea Tree Sheet 1:25 000
Geological Unit:	Tertiary sediments
Climate:	Annual rainfall approx. 600mm
Water Connection:	Tank
Sewer Connection:	Unserviced-On-site required

Investigation

A number of test holes were completed to identify the distribution of, and variation in soil materials on the site. A number of soil samples were taken for laboratory assessment. Site and published geological information were integrated to complete a detailed soil dispersion assessment with reference to the DPIWE dispersive soil technical manual.

Soil Profile Summary

Hole 1 Depth (m)	Hole 2 Depth (m)	USCS	Description
0.00-0.20	0.00-0.20	SM	**Silty SAND**: with gravels, grey, brown, moist, dense
0.20-0.50	0.20-0.40	GC	**Clayey GRAVEL**: pale brown, slightly moist, very dense, refusal.

Hole 3 Depth (m)	Horizon	Description
0.00-0.20	A1	Grey Brown **Silty SAND (SM)**: with gravels, moist dense consistency, visible boundary to
0.20-0.50	B2	Dark Brown **Silty CLAY (CH)**: moderately developed structure, moist stiff consistency, gradual boundary to
0.50-0.80	BC	Pale Orange Brown **Clayey GRAVEL (GC)**: slightly moist very dense consistency, refusal.

Site Notes

Soils on the site are developing from Tertiary sediments. A sample was taken at the site for assessment of dispersion. An Emerson (1968) Dispersion test was conducted to determine if these samples were dispersive. The subsoil sample taken from site showed no signs of dispersion and were found to be Class 6.

Dispersive Soil Assessment

The dispersive soil assessment of the property considers the proposed construction area.

Potential for dispersive soils

Tertiary sediments in the local area are known to produce soils with an excess of sodium on the soil exchange complex, which can cause soil dispersion. Under some circumstances the presence of dispersive soils can also lead to significant erosion, and in particular tunnel erosion. Based upon field survey of the property, no visible tunnel or gully erosion was identified. However, a soil sampling program was undertaken to identify the presence of dispersive soils in the proposed development areas.

Soil sampling and testing

One representative subsoil sample was taken at the site for assessment of dispersion. An Emerson (1968) Dispersion test was conducted to determine if this sample was dispersive. The soil sample showed no signs of dispersion.

Based upon the test results there is little risk of soil dispersion and erosion on the site, and as such no dispersive soil management recommendations have been made.

Conclusions

There is a very low risk associated with dispersive soils and potential erosion on the site. It is recommended, however, that all excavation works on site should be monitored for signs of soil dispersion and remedial action taken as required if necessary.

During construction GES will need to be notified of any major variation to the soil conditions as outlined in this report.

Dr John Paul Cumming B.Agr.Sc (hons) PhD CPSS GAICD

Director

Disclaimer

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The scope of this study does not allow for the review of every possible geotechnical parameter or the soil conditions over the whole area of the site. Soil and rock samples collected from the investigation area are assumed to be representative of the areas from where they were collected and not indicative of the entire site. The conclusions discussed within this report are based on observations and/or testing at these investigation points.

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Appendix 1 – Laboratory Test Results

Sample Submitted By: L. Ravanat

Date Submitted: 27/09/2024

Sample Identification: 58A Kathleen Drive, Old Beach

Soil to be tested: **Emerson soil dispersion test**

Result:

Sample	Texture	Emerson class	Description
BH3 – 0.40m	**Clay**	**Class 6**	**Slaking**

No dispersion detected.

Sample Tested by: L. Ravanat
27/09/2024

GEO-ENVIRONMENTAL ASSESSMENT

58A Kathleen Drive

Old Beach

October 2024

Revised December 2024

GEO-ENVIRONMENTAL

SOLUTIONS

Geo-Environmental Solutions P/L 29 Kirksway Place Battery Point 7004. Ph 6223 1839

Investigation Details

Client:	Brad Oates
Site Address:	58A Kathleen Drive, Old Beach
Date of Inspection:	19/09/2024
Proposed Works:	New house
Investigation Method:	Geoprobe 540UD - Direct Push
Inspected by:	C. Cooper

Site Details

Certificate of Title (CT):	185606/2
Title Area:	Approx. 2.12 ha
Applicable Planning Overlays:	Bushfire-prone Areas
	Priority Vegetation Area
Slope & Aspect:	Approx. 5-20%, variable aspect
Vegetation:	Mixed flora

Background Information

Geology Map:	MRT Tea Tree Sheet 1:25 000
Geological Unit:	Tertiary sediments
Climate:	Annual rainfall approx. 600mm
Water Connection:	Tank
Sewer Connection:	Unserviced-On-site required
Testing and Classification:	AS1547:2012, AS2870:2011, AS1726:2017 & AS4055:2021

Investigation

A number of test holes were completed to identify the distribution of, and variation in soil materials on the site. Representative test holes at the approximate locations indicated on the attached site plan were chosen for testing and classification according to AS2870-2011 & AS1547-2012. See soil profile conditions presented below.

Engineering Profile Summary

Hole 1 Depth (m)	Hole 2 Depth (m)	USCS	Description
0.00-0.20	0.00-0.20	SM	**Silty SAND**: with gravels, grey, brown, moist, dense
0.20-0.50	0.20-0.40	GC	**Clayey GRAVEL**: pale brown, slightly moist, very dense, refusal.

Wastewater Profile Summary

Hole 3 Depth (m)	Horizon	Description
0.00-0.20	A1	Grey Brown **Silty SAND (SM)**: with gravels, moist dense consistency, visible boundary to
0.20-0.50	B2	Dark Brown **Silty CLAY (CH)**: moderately developed structure, moist stiff consistency, gradual boundary to
0.50-0.80	BC	Pale Orange Brown **Clayey GRAVEL (GC)**: slightly moist very dense consistency, refusal.

Site Notes

The soils encountered on site were generally consistent throughout bore holes drilled, which were silty topsoils overlying shallow clay rich subsoils grading into weathered gravel deposits. The profile is expected to exhibit moderate ground surface movements with moisture fluctuations and has moderate capacity to accept onsite wastewater disposal.

Site Classification

The site has been assessed and classified in accordance with AS2870:2011 *"Residential Slabs and Footings".*

The site has been classified as:

Class M

Y_s range: **20-40mm**

Notes: The soils encountered on site are moderately reactive and are expected to exhibit moderate ground surface movements with moisture fluctuations.

Wind Loading Classification

According to *"AS4055:2021 - Wind Loads for Housing"* the house site is classified below:

Wind Classification:	**N3**
Region:	A
Terrain Category:	2.0
Shielding Classification:	PS
Topographic Classification:	T3
Design Wind Gust Speed – m/s ($V_{h,u}$):	50

Dispersion Testing

Samples were taken at the site for assessment of dispersion. An Emerson (1968) Dispersion test was conducted to determine if these samples were dispersive. The soil samples taken from site showed no signs of dispersion.

Wastewater Classification & Recommendations

According to AS1547-2012 for on-site wastewater management the soil on the property is classified as **Light CLAY (Category 5)**. The site is unsuited to a traditional septic system due to the limited soil depth on site. Therefore, it is proposed to install a package treatment system (e.g., AWTS such as Econocycle, Envirocycle, Ozzikleen) with treated effluent disposed via subsurface irrigation. A Design Irrigation Rate (DIR) of 3mm/day has been assigned for secondary treated effluent.

The proposed three-bedroom dwelling has a maximum wastewater output of 600L/day. This is based on a tank water supply and a maximum occupancy of 5 people (120L/day/person). Using the DIR of 3mm/day, an irrigation area of at least 200m^2 will be required. This is best installed as shallow subsurface irrigation within the natural sandy topsoils.

A 100% reserve area should be set aside for future wastewater requirements and should be kept free from development. There is sufficient area available on site, therefore no formal reserve area has been assigned. A surface diversion drain will be required to divert stormwater flows away from the irrigation area. For further details see attached plan and Trench summary reports.

The following setback distances are required to comply with Building Act 2016:

Upslope and level buildings:	3m
Downslope buildings:	4.25m
Upslope or level boundaries:	1.5m
Downslope boundary:	10.5m
Downslope surface water:	33m

Compliance with Building Act 2016 Guidelines for On-site Wastewater Management Systems is outlined in the attached table.

Construction Recommendations

According to *"AS2870-2011 - Residential slabs & footings"* the site has been classified as **Class M**, that is a moderately reactive clay. Design and construction should be made in accordance with this classification.

It is recommended the foundations be placed on the underlying bedrock to minimise the potential for significant foundation movement.

All site Earthworks must comply with AS3798-2012. Attention should be paid to the preparation of a consistent footing surface, and appropriate backfilling in accordance with recommendations in AS2870-2011 for reactive clay sites. In addition, adequate drainage should be installed surrounding the construction areas to ensure soil strength is not compromised by excessive soil moisture.

During construction GES will need to be notified of any major variation to the foundation conditions or wastewater loading as outlined in this report.

Dr John Paul Cumming B.Agr.Sc (hons) PhD CPSS GAICD

Director

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GES P/L

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Assessment Report

Site assessment for on-site waste water disposal

Assessment for	Brad Oates	Assess. Date	1-Oct-24
		Ref. No.	
Assessed site(s)	58A Kathleen Drive, Old Beach	Site(s) inspected	19-Sep-24
Local authority	Brighton Council	Assessed by	John Paul Cumming

This report summarises wastewater volumes, climatic inputs for the site, soil characteristics and sustem sizing and design issues. Site Capability and Environmental sensitivity issues are reported separately, where 'Alert' columns flag factors with high (A) or very high (AA) limitations which probably require special consideration for system design(s). Blank spaces on this page indicate data have not been entered into TRENCH.

Wastewater Characteristics

Wastewater volume (L/day) used for this assessment = 600 (using the 'No. of bedrooms in a dwelling' method)

Septic tank wastewater volume (L/day) = 200

Sullage volume (L/day) = 400

Total nitrogen (kg/year) generated by wastewater = 1.8

Total phosphorus (kg/year) generated by wastewater = 1.1

Climatic assumptions for site (Evapotranspiration calculated using the crop factor method)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean rainfall (mm)	39	31	36	31	52	49	52	70	56	64	52	50
Adopted rainfall (R, mm)	39	31	36	31	52	49	52	70	56	64	52	50
Retained rain (Rr, mm)	31	25	29	25	42	39	42	56	45	51	41	40
Max. daily temp. (deg. C)												
Evapotrans (ET, mm)	130	110	91	63	42	29	32	42	63	84	105	126
Evapotr. less rain (mm)	**99**	**85**	**62**	**38**	**0**	**-10**	**-10**	**-14**	**18**	**33**	**64**	**86**

Annual evapotranspiration less retained rain (mm) = 452

Soil characterisitics

Texture = Light CLAY Category = 5 Thick. (m) = 0.8

Adopted permeability (m/day) = 0.12 Adopted LTAR (L/sq m/day) = 3 Min depth (m) to water = 5

Proposed disposal and treatment methods

Proportion of wastewater to be retained on site:	All wastewater will be disposed of on the site
The preferred method of on-site primary treatment:	In a package treatment plant
The preferred method of on-site secondary treatment:	In-ground
The preferred type of in-ground secondary treatment:	None
The preferred type of above-ground secondary treatment:	None
Site modifications or specific designs:	Not needed

Suggested dimensions for on-site secondary treatment system

Total length (m) =	26
Width (m) =	8
Depth (m) =	0.2
Total disposal area (sq m) required =	200
comprising a Primary Area (sq m) of:	200
and a Secondary (backup) Area (sq m) of:	

Sufficient area is available on site

Comments

The calculated DIR for the Category 5 soil present is 3mm/day, with a required irrigation area of 200m^2 for the proposed three-bedroom dwelling. Therefore the system will have the capacity to cope with predicted climatic and loading events.

GES P/L

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Site Capability Report

Site assessment for on-site waste water disposal

Assessment for	Brad Oates	Assess. Date	1-Oct-24
		Ref. No.	
Assessed site(s)	58A Kathleen Drive, Old Beach	Site(s) inspected	19-Sep-24
Local authority	Brighton Council	Assessed by	John Paul Cumming

This report summarises data relating to the physical capability of the assessed site(s) to accept wastewater. Environmental sensitivity and system design issues are reported separately. The 'Alert' column flags factors with high (A) or very high (AA) site limitations which probably require special consideration in site acceptability or for system design(s). Blank spaces indicate data have not been entered into TRENCH.

Alert	Factor	Units	Value	Confid level	Limitation		Remarks
					Trench	Amended	
	Expected design area	sq m	1,000	V. high	Moderate		
	Density of disposal systems	/sq km	10	Mod.	Very low		
	Slope angle	degrees	9	High	Moderate		
	Slope form	Convex spreading		High	Very low		
	Surface drainage	Imperfect		High	Moderate		
	Flood potential	Site floods <1:100 yrs		High	Very low		
	Heavy rain events	Infrequent		High	Moderate		
	Aspect (Southern hemi.)	Faces SE or SW		V. high	High	Moderate	Other factors lessen impact
	Frequency of strong winds	Common		High	Low		
	Wastewater volume	L/day	600	High	Moderate	No change	
	SAR of septic tank effluent		1.2	High	Low		
	SAR of sullage		2.1	High	Moderate		
	Soil thickness	m	0.8	V. high	Low		
AA	Depth to bedrock	m	0.8	Mod.	Very high		
	Surface rock outcrop	%	0	V. high	Very low		
	Cobbles in soil	%	5	V. high	Low		
	Soil pH		7.0	High	Very low		
	Soil bulk density	gm/cub. cm	1.5	High	Low		
	Soil dispersion	Emerson No.	7	V. high	Very low		
	Adopted permeability	m/day	0.12	Mod.	Very low		
A	Long Term Accept. Rate	L/day/sq m	3	High	High		

Comments

The site has the capability to accept secondary treated onsite wastewater.

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Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Environmental Sensitivity Report

Site assessment for on-site waste water disposal

Assessment for	Brad Oates	Assess. Date	1-Oct-24
		Ref. No.	
Assessed site(s)	58A Kathleen Drive, Old Beach	Site(s) inspected	19-Sep-24
Local authority	Brighton Council	Assessed by	John Paul Cumming

This report summarises data relating to the environmental sensitivity of the assessed site(s) in relation to applied wastewater. Physical capability and system design issues are reported separately. The 'Alert' column flags factors with high (A) or very high (AA) limitations which probably require special consideration in site acceptability or for system design(s). Blank spaces indicate data have not been entered into TRENCH.

Alert	Factor	Units	Value	Confid level	Limitation Trench	Limitation Amended	Remarks
	Cation exchange capacity	mmol/100g	100	High	Low		
	Phos. adsorp. capacity	kg/cub m	0.7	High	Moderate		
	Annual rainfall excess	mm	-452	High	Very low		
	Min. depth to water table	m	5	High	Very low		
	Annual nutrient load	kg	2.9	High	Very low		
	G'water environ. value	Agric non-sensit		V. high	Low		
	Min. separation dist. required	m	2	High	Very low		
	Risk to adjacent bores	Very low		V. high	Very low		
	Surf. water env. value	Agric non-sensit		V. high	Low		
	Dist. to nearest surface water	m	150	V. high	Moderate		
	Dist. to nearest other feature	m	40	V. high	Moderate	No change	
	Risk of slope instability	Low		V. high	Low		
	Distance to landslip	m	500	V. high	Very low		

Comments

The soil onsite has a clayey texture with a good CEC and P absorption, therefore the soil system has a good capacity to cope with the applied nutrient load from the wastewater system. The wastewater system complies with the required setbacks to downslope surface water. There is a low environmental risk associated with onsite wastewater disposal.

Demonstration of wastewater system compliance to *Building Act 2016 Guidelines for On-site Wastewater*

Acceptable Solutions	**Performance Criteria**	**Compliance**
A1 Horizontal separation distance from a building to a land application area must comply with one of the following: a) be no less than 6m; or b) be no less than: (i) 3m from an upslope building or level building; (ii) If primary treated effluent to be no less than 4m plus 1m for every degree of average gradient from a downslope building; (iii) If secondary treated effluent and subsurface application, no less than 2m plus 0.25m for every degree of average gradient from a downslope building.	P1 a) The land application area is located so that (i) the risk of wastewater reducing the bearing capacity of a building's foundations is acceptably low.; and (ii) is setback a sufficient distance from a downslope excavation around or under a building to prevent inadequately treated wastewater seeping out of that excavation	Complies with A1 (b) (i) Land application area will be located with a minimum separation distance of 3m from an upslope or level building. Complies with A1 (b) (iii) Land application area will be located with a minimum separation distance of 4.25m of downslope building.
A2 Horizontal separation distance from downslope surface water to a land application area must comply with (a) or (b) (a) be no less than 100m; or (b) be no less than the following: (i) if primary treated effluent 15m plus 7m for every degree of average gradient to downslope surface water; or (ii) if secondary treated effluent and subsurface application, 15m plus 2m for every degree of average gradient to down slope surface water.	P2 Horizontal separation distance from downslope surface water to a land application area must comply with all of the following: a) Setbacks must be consistent with AS/NZS 1547 Appendix R; b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.	Complies with A2 (b) (ii) Land application area will be located with a minimum separation distance of 33m of downslope surface water.

A3 Horizontal separation distance from a property boundary to a land application area must comply with either of the following: (a) be no less than 40m from a property boundary; or (b) be no less than: (i) 1.5m from an upslope or level property boundary; and (ii) If primary treated effluent 2m for every degree of average gradient from a downslope property boundary; or (iii) If secondary treated effluent and subsurface application, 1.5m plus 1m for every degree of average gradient from a downslope property boundary.	P3 Horizontal separation distance from a property boundary to a land application area must comply with all of the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.	Complies with A3 (b) (i) Land application area will be located with a minimum separation distance of 1.5m from an upslope or level property boundary Complies with A3 (b) (iii) Land application area will be located with a minimum separation distance of 10.5m of downslope property boundary.
A4 Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must be no less than 50m and not be within the zone of influence of the bore whether up or down gradient.	P4 Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must comply with all of the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 demonstrates that the risk is acceptable	No bore or well identified within 50m

A5 Vertical separation distance between groundwater and a land application area must be no less than: (a) 1.5m if primary treated effluent; or (b) 0.6m if secondary treated effluent	P5 Vertical separation distance between groundwater and a land application area must comply with the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 that demonstrates that the risk is acceptable	No groundwater encountered.
A6 Vertical separation distance between a limiting layer and a land application area must be no less than: (a) 1.5m if primary treated effluent; or (b) 0.5m if secondary treated effluent	P6 Vertical setback must be consistent with AS/NZS1547 Appendix R.	Complies with A6 (b)
A7 nil	P7 A wastewater treatment unit must be located a sufficient distance from buildings or neighbouring properties so that emissions (odour, noise or aerosols) from the unit do not create an environmental nuisance to the residents of those properties	Complies

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AS1547:2012 – Loading Certificate – AWTS Design

This loading certificate sets out the design criteria and the limitations associated with use of the system.

Site Address: 58A Kathleen Drive, Old Beach

System Capacity: 5 persons @ 120L/person/day

Summary of Design Criteria

DIR: 3mm/day.

Irrigation area: 200m^2

Reserve area location /use: Not assigned – more than 100% available

Water saving features fitted: Standard fixtures

Allowable variation from design flows: 1 event @ 200% daily loading per quarter

Typical loading change consequences: Expected to be minimal due to use of AWTS and large land area

Overloading consequences: Continued overloading may cause hydraulic failure of the irrigation area and require upgrading/extension of the area. Risk considered acceptable due to monitoring through quarterly maintenance reports.

Underloading consequences: Lower than expected flows will have minimal consequences on system operation unless the house has long periods of non occupation. Under such circumstances additional maintenance of the system may be required. Long term under loading of the system may also result in vegetation die off in the irrigation areas and additional watering may be required. Risk considered acceptable due to monitoring through quarterly maintenance reports.

Lack of maintenance / monitoring consequences: Issues of underloading/overloading and condition of the irrigation area require monitoring and maintenance, if not completed system failure may result in unacceptable health and environmental risks. Monitoring and regulation by the permit authority required to ensure compliance.

Other considerations: Owners/occupiers must be made aware of the operational requirements and limitations of the system by the installer/maintenance contractor.

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form **35**

To: Brad Oates *Owner name*
3/34 Henty Close *Address*
Old Beach 7017 *Suburb/postcode*

Designer details:

Name: John-Paul Cumming
Category: Bld. Srvcs. Dsgnr. - Hydraulic
Business name: Geo-Environmental Solutions
Phone No: 03 6223 1839
Business address: 29 Kirksway Place
Battery Point 7004
Fax No: N/A
Licence No: CC774A
Email address: office@geosolutions.net.au

Details of the proposed work:

Owner/Applicant Brad Oates
Designer's project reference No. J10890
Address: 58a Kathleen Drive
Lot No: 185606/2
Old Beach 7017

Type of work: Building work ☐ Plumbing work ☒ *(X all applicable)*

Description of work:
On-site wastewater management system - design

(new building / alteration / addition / repair / removal / re-erection water / sewerage / stormwater / on-site wastewater management system / backflow prevention / other)

Description of the Design Work (Scope, limitations or exclusions): *(X all applicable certificates)*

Certificate Type:	Certificate	Responsible Practitioner
	☐ Building design	Architect or Building Designer
	☐ Structural design	Engineer or Civil Designer
	☐ Fire Safety design	Fire Engineer
	☐ Civil design	Civil Engineer or Civil Designer
	☒ Hydraulic design	Building Services Designer
	☐ Fire service design	Building Services Designer
	☐ Electrical design	Building Services Designer
	☐ Mechanical design	Building Service Designer
	☐ Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	☐ Other (specify)	

Deemed-to-Satisfy: ☒ Performance Solution: ☐ *(X the appropriate box)*

Other details:

AWTS to subsurface irrigation

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by: Geo-Environmental Solutions	Date: Dec-24
Schedules:	Prepared by:	Date:
Specifications:	Prepared by: Geo-Environmental Solutions	Date: Dec-24
Computations:	Prepared by:	Date:
Performance solution proposals:	Prepared by:	Date:
Test reports:	Prepared by: Geo-Environmental Solutions	Date: Dec-24

Standards, codes or guidelines relied on in design process:

AS1547:2012 On-site domestic wastewater management.

AS3500 (Parts 0-5)-2013 Plumbing and drainage set.

Any other relevant documentation:

Geo-Environmental Assessment - 58a Kathleen Drive Old Beach - Dec-24

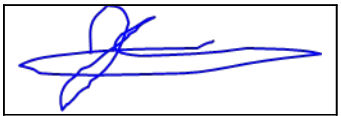
Geo-Environmental Assessment - 58a Kathleen Drive Old Beach - Dec-24

Attribution as designer:

I John-Paul Cumming, am responsible for the design of that part of the work as described in this certificate;

The documentation relating to the design includes sufficient information for the assessment of the work in accordance with the *Building Act 2016* and sufficient detail for the builder or plumber to carry out the work in accordance with the documents and the Act;

This certificate confirms compliance and is evidence of suitability of this design with the requirements of the National Construction Code.

	Name: (print)	*Signed*	*Date*
Designer:	John-Paul Cumming		03/12/2024
Licence No:	CC774A		

Assessment of Certifiable Works: (TasWater)

Note: single residential dwellings and outbuildings on a lot with an existing sewer connection are not considered to increase demand and are not certifiable.

If you cannot check ALL of these boxes, LEAVE THIS SECTION BLANK.

TasWater must then be contacted to determine if the proposed works are Certifiable Works.

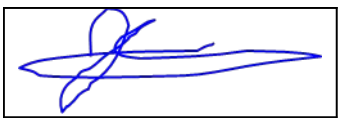
I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- [x] The works will not increase the demand for water supplied by TasWater
- [x] The works will not increase or decrease the amount of sewage or toxins that is to be removed by, or discharged into, TasWater's sewerage infrastructure
- [x] The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- [x] The works will not damage or interfere with TasWater's works
- [x] The works will not adversely affect TasWater's operations
- [x] The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- [x] I have checked the LISTMap to confirm the location of TasWater infrastructure
- [x] If the property is connected to TasWater's water system, a water meter is in place, or has been applied for to TasWater.

Certification:

I ..... John-Paul Cumming..... being responsible for the proposed work, am satisfied that the works described above are not Certifiable Works, as defined within the *Water and Sewerage Industry Act 2008,* that I have answered the above questions with all due diligence and have read and understood the Guidelines for TasWater CCW Assessments.

Note: the Guidelines for TasWater Certification of Certifiable Works Assessments are available at: www.taswater.com.au

	Name: (print)	*Signed*	*Date*
Designer:	John-Paul Cumming		03/12/2024

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form 55

To: Brad Oates *Owner /Agent*

3/34 Henty Close *Address*

Old Beach 7017 *Suburb/postcode*

Qualified person details:

Qualified person: John-Paul Cumming

Address: 29 Kirksway Place

Battery Point 7004

Phone No: 03 6223 1839

Fax No:

Licence No: AO999

Email address: jcumming@geosolutions.net.au

Qualifications and Insurance details: Certified Professional Soil Scientist (CPSS stage 2)

(description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items

Speciality area of expertise: AS2870-2011 Foundation Classification

(description from Column 4 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)

Details of work:

Address: 58a Kathleen Drive

Lot No:

Old Beach 7017

Certificate of title No: 185606/2

The assessable item related to this certificate: Classification of foundation Conditions according to AS2870-2011

(description of the assessable item being certified)
Assessable item includes –
- *a material;*
- *a design*
- *a form of construction*
- *a document*
- *testing of a component, building system or plumbing system*
- *an inspection, or assessment, performed*

Certificate details:

Certificate type: Foundation Classification

(description from Column 1 of Schedule 1 of the Director's Determination - Certificates by Qualified Persons for Assessable Items n)

This certificate is in relation to the above assessable item, at any stage, as part of - *(tick one)*

building work, plumbing work or plumbing installation or demolition work ☒

or

a building, temporary structure or plumbing installation: ☐

In issuing this certificate the following matters are relevant –

Documents:	The attached soil report for the address detailed above in 'details of work'
Relevant calculations:	Reference the above report.
References:	AS2870:2011 residential slabs and footings AS1726:2017 Geotechnical site investigations CSIRO Building technology file – 18.

Substance of Certificate: (what it is that is being certified)

Site Classification consistent with AS2870-2011.

Scope and/or Limitations

The classification applies to the site as inspected and does not account for future alteration to foundation conditions as a result of earth works, drainage condition changes or variations in site maintenance.

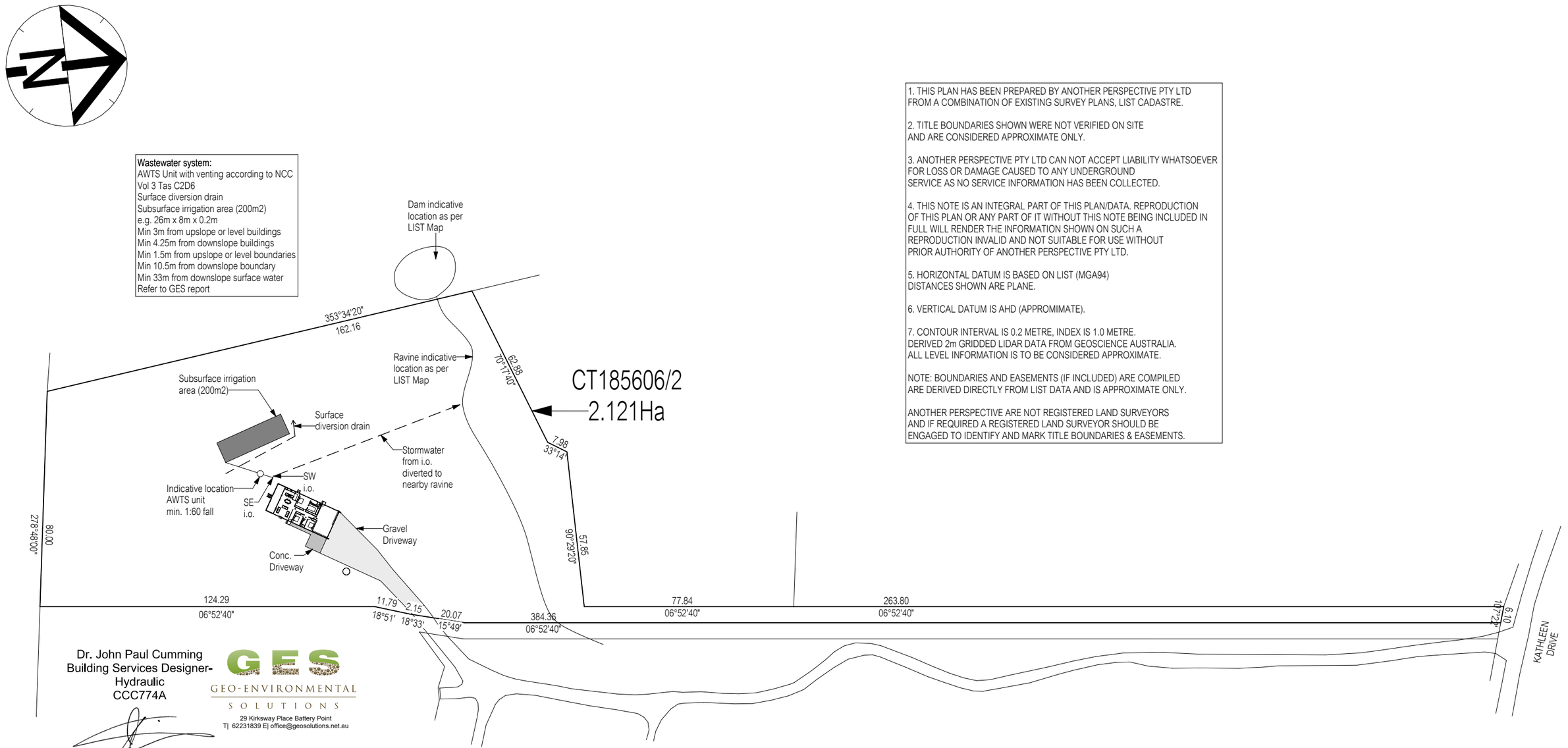
I, John-Paul Cumming certify the matters described in this certificate.

Qualified person:

Signed:

Certificate No: J10890

Date: 01/10/2024



1. THIS PLAN HAS BEEN PREPARED BY ANOTHER PERSPECTIVE PTY LTD FROM A COMBINATION OF EXISTING SURVEY PLANS, LIST CADASTRE.

2. TITLE BOUNDARIES SHOWN WERE NOT VERIFIED ON SITE AND ARE CONSIDERED APPROXIMATE ONLY.

3. ANOTHER PERSPECTIVE PTY LTD CAN NOT ACCEPT LIABILITY WHATSOEVER FOR LOSS OR DAMAGE CAUSED TO ANY UNDERGROUND SERVICE AS NO SERVICE INFORMATION HAS BEEN COLLECTED.

4. THIS NOTE IS AN INTEGRAL PART OF THIS PLAN/DATA. REPRODUCTION OF THIS PLAN OR ANY PART OF IT WITHOUT THIS NOTE BEING INCLUDED IN FULL WILL RENDER THE INFORMATION SHOWN ON SUCH A REPRODUCTION INVALID AND NOT SUITABLE FOR USE WITHOUT PRIOR AUTHORITY OF ANOTHER PERSPECTIVE PTY LTD.

5. HORIZONTAL DATUM IS BASED ON LIST (MGA94) DISTANCES SHOWN ARE PLANE.

6. VERTICAL DATUM IS AHD (APPROMIMATE).

7. CONTOUR INTERVAL IS 0.2 METRE, INDEX IS 1.0 METRE. DERIVED 2m GRIDDED LIDAR DATA FROM GEOSCIENCE AUSTRALIA. ALL LEVEL INFORMATION IS TO BE CONSIDERED APPROXIMATE.

NOTE: BOUNDARIES AND EASEMENTS (IF INCLUDED) ARE COMPILED ARE DERIVED DIRECTLY FROM LIST DATA AND IS APPROXIMATE ONLY.

ANOTHER PERSPECTIVE ARE NOT REGISTERED LAND SURVEYORS AND IF REQUIRED A REGISTERED LAND SURVEYOR SHOULD BE ENGAGED TO IDENTIFY AND MARK TITLE BOUNDARIES & EASEMENTS.

Dr. John Paul Cumming
Building Services Designer-Hydraulic
CCC774A

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29 Kirksway Place Battery Point
T| 62231839 E| office@geosolutions.net.au

03/12/2024

No.	Date	Int.	Amendment changes as per cover sheet

Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
- All work to be carried out in accordance with the current National Construction Code.
- All materials to be installed according to manufacturers specifications.
- Do not scale from these drawings.
- No changes permitted without consultation with designer.

Designer:

ANOTHER PERSPECTIVE PTY LTD
PO BOX 21
NEW TOWN
LIC. NO. 685230609 (S. Turvey)
Ph: (03) 6231 4122
Fx: (03) 6231 4166
Email:
info@anotherperspective.com.au

Client / Project info

PROPOSED OATES RESIDENCE

58a Kathleen Drive
OLD BEACH

another perspective drafting&design

DRAINAGE LOCATION PLAN

Drawn	KV	AP2024-2385	
Date	23 October 2024	Sheet	01b/03
Scale	1 : 1500		

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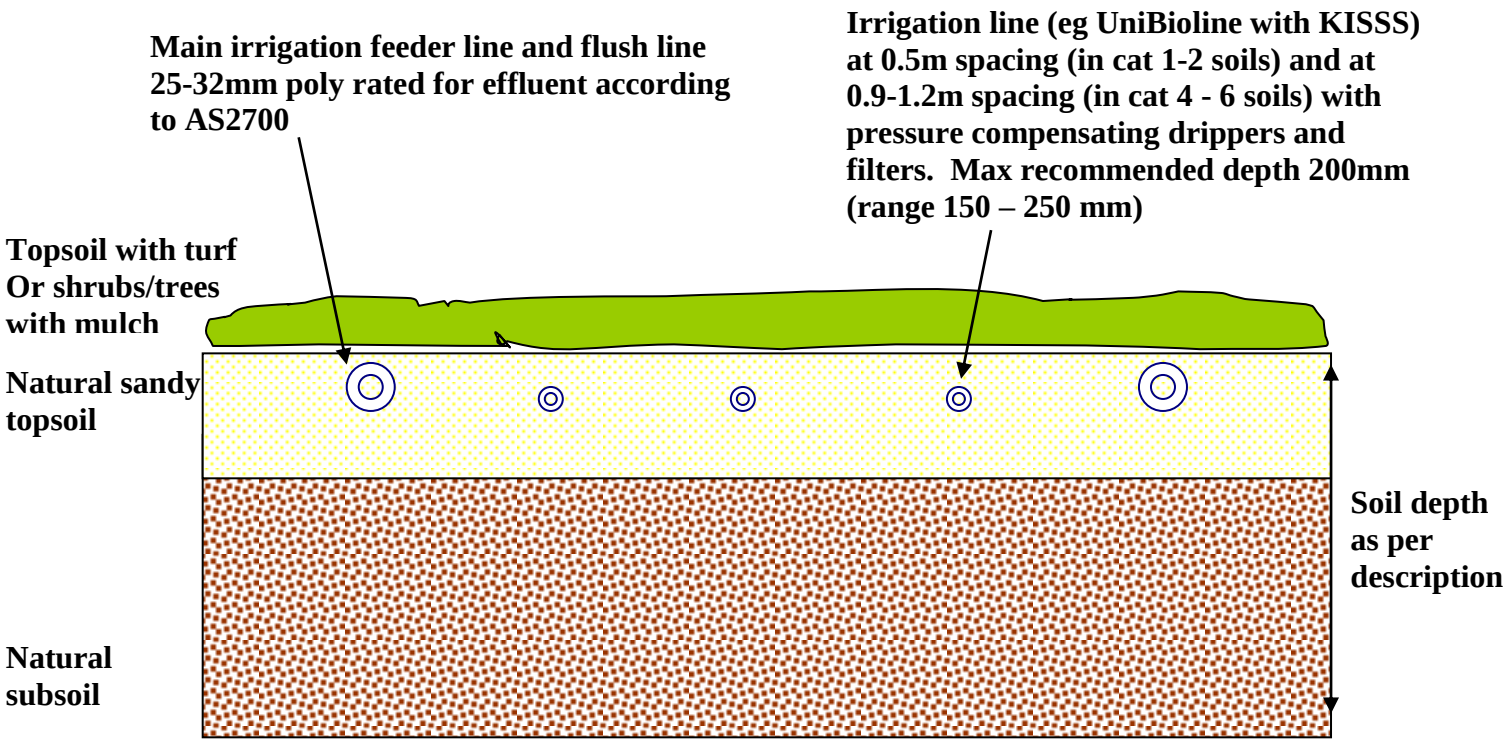
Figure 1 – AWTS

Subsurface irrigation design

To be used in conjunction with site evaluation report for construction of subsurface irrigation areas for use with aerated wastewater treatment systems (AWTS). **On dispersive soils gypsum should be added to tilled natural soil at 1Kg/5m^2**. The irrigation outlet line from the system or holding tank should utilize a 25-32mm main line out stepped down to a 11-16mm lateral drip irrigation lines in each irrigation row. If the final design is for shrubs/trees then a mounded row design is best employed with a nominal mound height of approximately 200mm.

Irrigation Area Cross Section



Note – the topsoil/turf depths are minimum, with a maximum recommended depth of irrigation line below surface of 200mm (range 150-250mm).

- The existing surface of the site should be tilled to a depth of 200mm with a conventional plough, discs or spring tines to break down the turf matt and any large soil clods
- Turf, or grass seed or plants/mulch should be applied to the area as soon as practical after the laying of dripper line and commissioning of the system

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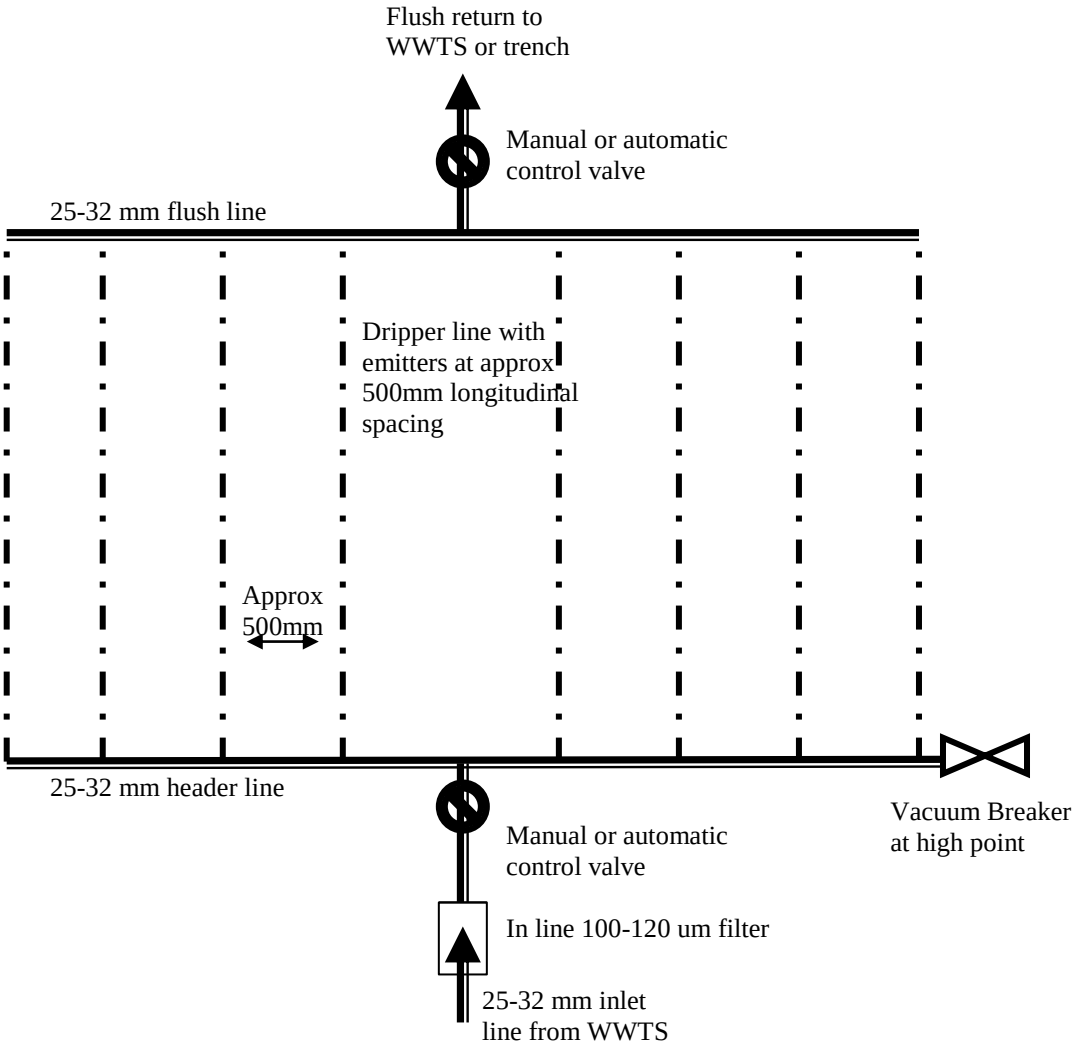
Irrigation Area Plan View



Design specifications:

1. Manufacturer's recommendations for spacing of lateral irrigation lines should be followed (either Techline brand, Geoflow or KISSS) with commonly used with spacing of 0.3m (0.5m KISSS) in highly permeable soils and 0.6m (1.0-1.2m KISSS) in less permeably loams and clays.
2. Dependant upon treatment system a 200µm filter may be installed at the pumping chamber outlet, but a 100-120 µm inline disc filter should be installed prior to discharge into the irrigation area.
3. A vacuum breaker valve must be installed at the highest point of each irrigation zone in a marked and protected valve control box.
4. A flush line must be installed at the lowest point/bottom of the irrigation area with a return valve for flushing back into the treatment chamber of the system (not into the primary chamber as it may affect the performance of the microbial community) or to a dedicated absorption trench.
5. The minimum irrigation pumping capacity should be equivalent to 120kpa (i.e. 12m of head) at the highest point of the irrigation area (a gauge should be placed at the vacuum breaker) – therefore pump size can be matched on site to the irrigation pipe size and design.

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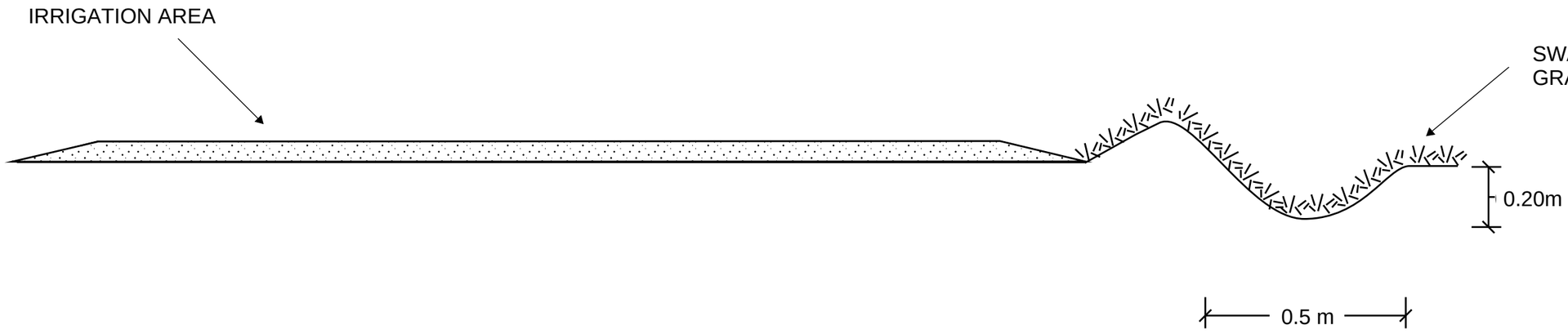
TYPICAL GRASSED SWALE DRAIN CROSS-SECTION

SWALE DRAIN TO BE MIN 0.5M WIDE BY MIN 0.20M DEEP

GRASS COVER TO BE MAINTAINED TO SLOW WATER FLOW AND MINIMSE EROSION



Do not scale from these drawings. Dimensions to take precedence over scale.	Geo-Environmental Solutions		Date: Nov 2021	Grassed swale drain typical cross-section	Sheet 1 of 1 Drawn by SR

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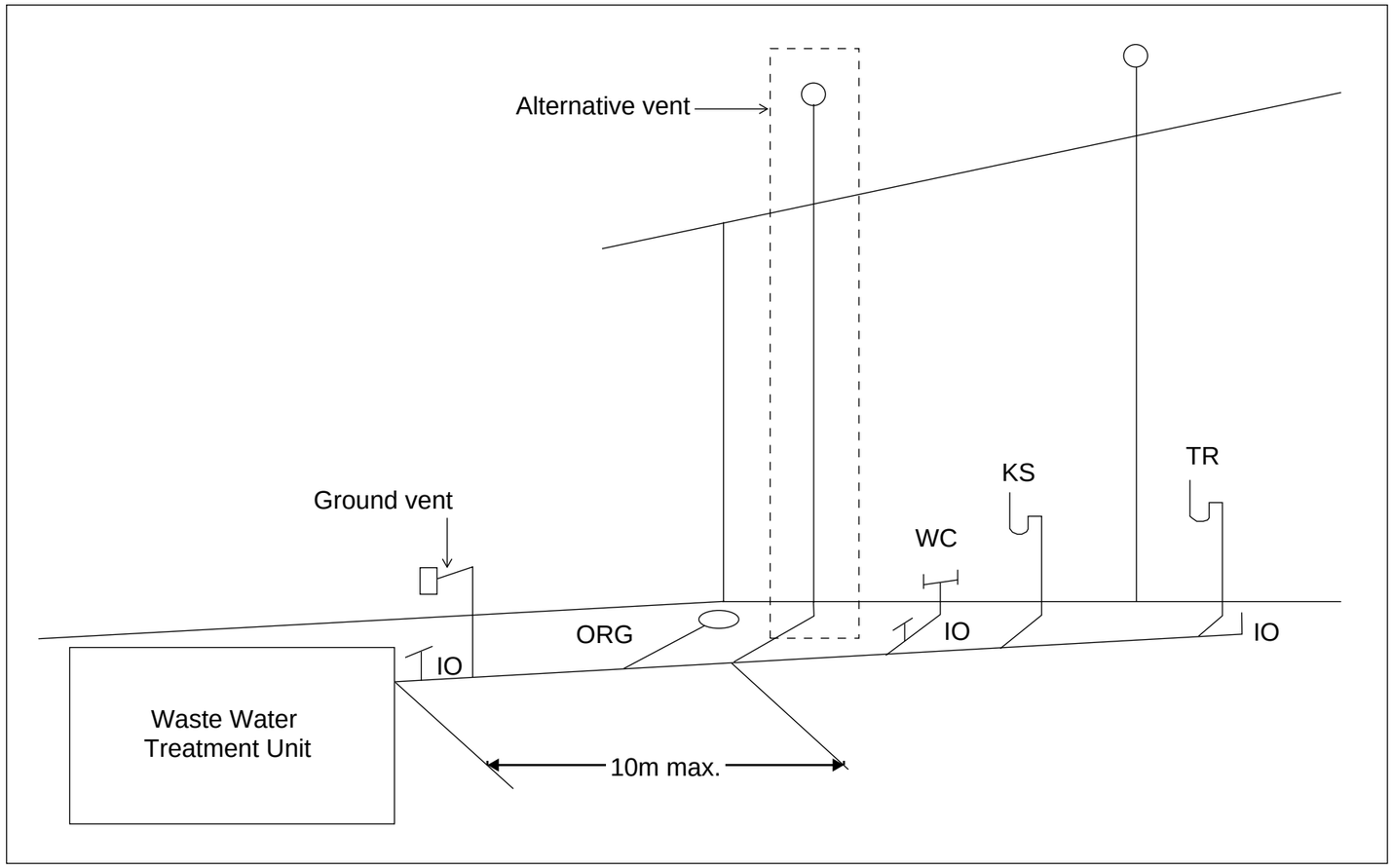

Tas Figure C2D6 Alternative Venting Arrangements

Vents must terminate in accordance with AS/NZS 3500.2

Alternative venting to be used by extending a vent to terminate as if an upstream vent, with the vent connection between the last sanitary fixture or sanitary appliance and the on-site wastewater management system. Use of a ground vent in not recommended

Inspection openings must be located at the inlet to an on-site wastewater management system treatment unit and the point of connection to the land application system and must terminate as close as practicable to the underside of an approved inspection opening cover installed at the finished surface level

Access openings providing access for desludging or maintenance of on-site wastewater management system treatment unites must terminate at or above finished surface level

Do not scale from these drawings. Dimensions to take precedence over scale.				Tas Figure C2D6 Alternative Venting Arrangements		Sheet 1 of 1