

29th January 2019



Glamorgan Spring Bay Council
9 Melbourne Street
Po Box 6
Triabunna, Tasmania, 7190

Michael Bernacki
Registered Architect

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Attention: Planning Department

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Subject:

Development Application for a single residence and detached garage / shed located at 91 Esplanade, Coles Bay. This letter outlines and addresses the relevant / applicable codes for this development.

To whom it May Concern:

Overview: These 2 new buildings (1 residence and 1 detached garage / shed) are located on a vacant parcel of land and within the Low Density Residence zone of the planning scheme in Coles Bay.

These new buildings have been designed to take full advantage of its location, site parameters, view opportunities, natural light, site conditions, minimal site excavations and being considerate of its future neighbours.

These buildings have been environmentally design. The materials are to be exposed concrete and light weight cladding. The colours, materials and textures are borrowed from the iconic view over The Hazards. These residence are orientated to achieve maximise views of The Hazards like a majority of dwellings in Coles Bay.

We have undertaken a waste water design and storm water management report, please find attached.

We believe with research undertaken and gathered, our considered / proposed design should be acceptable.

This Document also outlines and addresses the relevant planning standards and should be cross referenced with Honed Architecture + Design drawings attached.

Response to Planning Requirements:

12.4 Development Standards for Building Works

12.4.1 Non-dwelling development N/A

12.4.2 Setbacks and building envelope

A1

Unless within a building area, a dwelling, excluding protrusions (such as eaves, steps, porches, and awnings) that extend not more than 0.6 m into the frontage setback, must have a setback from a frontage that is:

(a) if the frontage is a primary frontage, at least 4.5 m, or, if the setback from the primary frontage is less than 4.5 m, not less than the setback, from the primary frontage, of any existing dwelling on the site; or **As our proposed development is on an internal vacant lot, not visible from the street and adjoining an internal driveway of the neighbouring vacant block, we are proposing a setback of 1.5m from the front boundary. This is consistent with other residences within Coles Bay.**

(c) if for a vacant site with existing dwellings on adjoining sites on the same street, not more than the greater, or less than the lesser, setback for the equivalent frontage of the dwellings on the adjoining sites on the same street. **We are consistent with other residences within Coles Bay.**

P1

A dwelling must:

(a) be compatible with the relationship of existing buildings to the road in terms of setback or in response to slope or other physical constraints of the site; and **Due to the tight site constraints we are compatible with surrounding residences.**

(b) have regard to streetscape qualities or assist the integration of new development into the streetscape. **As our proposed development site is an internal block, our development will not be visible from the street.**

A2

A garage or carport must have a setback from a frontage of at least:

- (a) 5.5 m, or alternatively 1m behind the façade of the dwelling; or
- (b) the same as the dwelling façade, if a portion of the dwelling gross floor area is located above the garage or carport; or
- (c) 1m, if the natural ground level slopes up or down at a gradient steeper than 1 in 5 for a distance of 10 m from the frontage.

P2

The setback of a garage or carport from a frontage must:

- (a) provide separation from the frontage that complements or enhances the existing streetscape, taking into account the specific constraints and topography of the site; and **Due to the nature of this internal block and the tight site constraints we are proposing a garage / shed setback of 1.5m which increases to 4.5m on an angle. This is consistent with similar residences in Coles Bay.**
- (b) allow for passive surveillance between the dwelling and the street. **We believe there to be ample passive surveillance of the driveway to the street. We have proposed to maintain this as a clear space and line of sight.**

A3

A dwelling, excluding outbuildings with a building height of not more than 2.4m and protrusions (such as eaves, steps, porches, and awnings) that extend not more than 0.6m horizontally beyond the building envelope, must:

- (a) be contained within a building envelope (refer to diagrams 12.4.2A, 12.4.2B, 12.4.2C and 12.4.2D) determined by:
 - (i) a distance equal to the frontage setback or, for an internal lot, a distance of 4.5m from the rear boundary of a lot with an adjoining frontage; and **Due to the tight site constraints we are proposing our rear setback to be 3.0m. As our rear boundary neighbours are heavily vegetated with forest we do not believe we propose any loss of amenity to any neighboring property's.**
 - (ii) projecting a line at an angle of 45 degrees from the horizontal at a height of 3m above natural ground level at the side boundaries and a distance of 4m from the rear boundary to a building height of not more than 8.5m above natural ground level; and **Due to the tight sight constraints, the proposed residence is built slightly outside to the building envelope.**
- (b) only have a setback within 1.5m of a side boundary if the dwelling:
 - (i) does not extend beyond an existing building built on or within 0.2m of the boundary of the adjoining lot; or
 - (ii) does not exceed a total length of 9m or one-third the length of the side boundary (whichever is the lesser).

P3

The siting and scale of a dwelling must:

- (a) not cause unreasonable loss of amenity by: **The eastern neighbour is a vacant block of land, we do not believe there is any loss of amenity to this vacant block. We have designed this residence to accommodate all views and aspects on site.**
- (i) reduction in sunlight to a habitable room (other than a bedroom) of a dwelling on an adjoining lot; or **No neighbor will be effected.**
- (ii) overshadowing the private open space of a dwelling on an adjoining lot; or **Due to surrounding vegetation no neighbor will be effected.**
- (iii) overshadowing of an adjoining vacant lot; or **The eastern neighbouring vacant block will still receive 4 hours of sunlight on the 21st June. We do not believe there to be any adverse shadowing as the northern boundary of this block is already heavily forested casting shadow.**
- (iv) visual impacts caused by the apparent scale, bulk or proportions of the dwelling when viewed from an adjoining lot; and **All of the neighbouring properties are 2 storey's in height. We are consistent with the neighbouring properties.**
- (b) provide separation between dwellings on adjoining lots that is compatible with that prevailing in the surrounding area. **We have provided ample and consistent separations to all existing neighbouring property's.**

12.4.3 Site coverage and private open space

A1

Dwellings must have:

- (a) a site coverage of not more than 25% (excluding eaves up to 0.6m); and **The proposed site coverage is 21%**
- (b) a site area of which at least 25% of the site area is free from impervious surfaces; **We comply.**

Dwellings must have:

- (a) private open space that is of a size and dimensions that are appropriate for the size of the dwelling and is able to accommodate: **We comply.**
 - (i) outdoor recreational space consistent with the projected requirements of the occupants; and **We comply.**
 - (ii) operational needs, such as clothes drying and storage; and **We comply.**
- (b) have reasonable space for the planting of gardens and landscaping. **We comply.**
- (c) not be out of character with the pattern of development in the surrounding area; and **We comply.**
- (d) not result in an unreasonable loss of natural or landscape values. **We comply.**

A2

A dwelling must have an area of private open space that:

- (a) is in one location and is at least:
 - (i) 24 m²; or **We comply.**
 - (ii) 12 m², if the dwelling has a finished floor level that is entirely more than 1.8 m above the finished ground level (excluding a garage, carport or entry foyer); and **We comply.**
- (b) has a minimum horizontal dimension of:
 - (i) 4 m; or **We comply.**
 - (ii) 2 m, if the dwelling has a finished floor level that is entirely more than 1.8 m above the finished ground level (excluding a garage, carport or entry foyer); and **We comply.**
- (c) is directly accessible from, and adjacent to, a habitable room (other than a bedroom); and **We comply.**
- (d) is not located to the south, south-east or south-west of the dwelling, unless the area receives at least 3 hours of sunlight to 50% of the area between 9.00am and 3.00pm on the 21st June; and **We comply.**
- (e) is located between the dwelling and the frontage only if the frontage is orientated between 30 degrees west of north and 30 degrees east of north, excluding any dwelling located behind another on the same site; and
- (f) has a gradient not steeper than 1 in 10; and **We comply.**
- (g) is not used for vehicle access or parking. **We comply.**

12.4.4 Sunlight and overshadowing

A1

A dwelling must have at least one habitable room (other than a bedroom) window that faces between 30 degrees west of north and 30 degrees east of north (see diagram 12.4.4A). **We comply.**

P1

A dwelling must be sited and designed so as to allow sunlight to enter at least one habitable room (other than a bedroom). **We comply.**

12.4.5 Width of openings for garages and carports

A1

A garage or carport within 12 m of a primary frontage (whether the garage or carport is free-standing or part of the dwelling) must have a total width of openings facing the primary frontage not exceeding 6m or half the width of the frontage (whichever is the lesser). **We comply.**

12.4.6 Privacy

A1

A balcony, deck, roof terrace, parking space, or carport (whether freestanding or part of the dwelling) that has a finished surface or floor level more than 1 m above natural ground level must have a permanently fixed screen to a height of at least 1.7 m above the finished surface or floor level, with a uniform transparency of no more than 25%, along the sides facing a:

- (a) side boundary, unless the balcony, deck, roof terrace, parking space, or carport has a setback of at least 3 m from the side boundary; **We comply.**
- (b) rear boundary, unless the balcony, deck, roof terrace, parking space or carport has a setback of at least 4m from the rear boundary; **We comply.**

A2

A window or glazed door, to a habitable room, of a dwelling, that has a floor level more than 1 m above the natural ground level, must be in accordance with (a), unless it is in accordance with (b):

- (a) The window or glazed door:
 - (i) is to have a setback of at least 3 m from a side boundary; **We comply with regards to a majority of this residence, except for our feature master bedroom window. We kindly seek approval as the eastern neighbouring property is vacant and there is no loss of amenity. We wish to maximise the view opportunitys to the Hazards.**
 - (ii) is to have a setback of at least 4 m from a rear boundary; **There are currently 2 ensuite windows within this setback, there are also 2 northern windows to the main kitchen, dining & livin area. As the northern neighbouring property is heavily forested with vegetation we do not believe there to be a loss of amendity to the neighbour. We kindly seek approval.**
- (b) The window or glazed door:
 - (i) is to be offset, in the horizontal plane, at least 1.5 m from the edge of a window or glazed door, to a habitable room of another dwelling; or
 - (ii) is to have a sill height of at least 1.7 m above the floor level or has fixed obscure glazing extending to a height of at least 1.7 m above the floor level; or
 - (iii) is to have a permanently fixed external screen for the full length of the window or glazed door, to a height of at least 1.7 m above floor level, with a uniform transparency of not more than 25%.

12.4.7 Frontage fences

A1

A fence (including a free-standing wall) within 4.5 m of a frontage must have a height above natural ground level of not more than:

(a)

1.2 m if the fence is solid; or **N/A We are not proposed any frontage fences**

(b)

1.5 m, if any part of the fence that is within 4.5 m of a primary frontage has openings above a height of 1.2 m which provide a uniform transparency of not less than 30% (excluding any posts or uprights). **N/A We are not proposed any frontage fences**

I Trust that the contents of this letter and the attached Development Application is satisfactory and does address the Glamorgan Spring Bay Council requirements for our proposed development at 91 Esplanade, Coles Bay

If you require any further information or clarification please do not hesitate to contact myself.

Thank you once again.

Kind Regards

A handwritten signature in black ink that reads "Michael Bernacki". The script is cursive and fluid.

Michael Bernacki / Honed Architecture + Design.

13th February 2019



Glamorgan Spring Bay Council
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Michael Bernacki
Registered Architect

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Australia 7250

Attention: Planning Department

Mobile: 0417541646

Email: mbernacki@honedarchitecture.com

Subject:

Response to Request For Information (RFI) for a single residence and detached garage / shed located at 91 Esplanade, Coles Bay.

To whom it May Concern:

Below are our responses to the Request For Information recieved.

1. Provide an amended design with all structures clear of the existing drainage easement. **Please find attached amended drawings as requested.**
2. Show the existing storm water main in the easement, its diameter and clearance from proposed footings. All footings are to be designed such that they are 1.0m minimum clear of the pipe and accordance with standard drawing TSD-G03 (attached) **Please find attached amended drawings as requested.**
3. The applicant states "We have undertaken a waste water design and storm water management report, please find attached." (sic). No storm water management report was provided. Provide details of storm water drainage including drainage of parking and access areas. **Our apologies, this was only for a Waste Water Design. Please find attached amended drawings as requested. The driveway is to be constructed of non compact gravel making the surface area pervious the rainfall. We have included a pit at the edge of the lower component of the driveway to collect all run off from the property from servre weather events. This pit will be connected to the exisitng Storm water system.**
4. Address the Parking and Access Code in the scheme. Provide details clearly showing the extent, construction and drainage of the proposed driveway and parking areas including surface materials. **Please find attached amended drawings as requested.**

Advice: The existing storm water manhole in the proposed driveway must be provided with a trafficable cover and surround. **From on site inspections, the existing manhole on site is already trafficable.**

I Trust that the contents of this letter and the attached drawings are satisfactory and does address the Glamorgan Spring Bay Council requirements for our proposed development at 91 Esplanade, Coles Bay

If you require any further information or clarification please do not hesitate to contact myself.

Thank you once again.

Kind Regards

Michael Bernacki / Honed Architecture + Design.

GEO-ENVIRONMENTAL ASSESSMENT

Lot 1, 95 Esplanade

Coles Bay

December 2018



GEO-ENVIRONMENTAL

S O L U T I O N S

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Introduction

Client: McCullagh Building
Date of inspection: 19/11/2018
Location: Lot 1, 95 Esplanade, Coles Bay (CT: 146590/1)
Land description: Approx. 1220m² residential block
Building type: Proposed new dwelling and garage
Investigation: Hand auger
Inspected by: JP Cumming B.Agr.Sc (hons) PhD CPSS GAICD

Background information

Map: Mineral Resources Tasmania – SE Sheet 1:250 000
Rock type: Windblown sand overlying granite
Soil depth: Approx. 0.40 – 0.70m
Planning overlays: None identified
Local meteorology: Annual rainfall approx 600 mm
Local services: Tank with on-site waste water disposal required

Site conditions

Slope and aspect: Approx. 5-7% slope to the South-East
Site drainage: Well drained
Vegetation: Mixed grass species
Weather conditions: Fine, approx. 8mm rainfall received in preceding 7 days.
Ground surface: Slightly moist sandy surface

Investigation

A number of auger holes were completed to identify the distribution of, and variation in soil materials onsite. Representative excavations at the approximate location indicated on the site plan were chosen for testing and classification according to AS2870-2011 and AS1547-2012 (see profile summaries).

Profile Summaries

Hole 1 Depth (m)	Hole 2 Depth (m) Wastewater	Horizon	Description
0.0 – 0.40	0 – 0.40	A1	Dark Grey SAND (SW) , single grain, dry, loose consistency, common fine roots, clear boundary to
0.40 – 0.60	0.40 – 0.60	A2	Light Grey SAND (SW) , single grain, slightly moist medium dense consistency, trace of quartz gravels, clear boundary to
0.60 – 1.5+	0.60 – 1.5+	B1	Greyish Brown SAND (SW) , slightly moist, medium dense consistency, approx. 5 - 10% quartz gravels, lower boundary undefined.

Soil Profile Notes

The soils are derived from Quaternary sand deposits overlying granite and consists of deep sandy horizons. The soil has a high permeability but low nutrient retention capability for onsite wastewater disposal.

Site Classification

According to AS2870-2011 for construction the natural soil is classified as **Class A** which is a non-reactive site. Design and construction should be made in accordance with this classification.

Wind Classification

The AS 4055-2012 Wind load for housing classification of the site is:

Region: **A**
 Terrain category: **TC2.5**
 Shielding Classification: **PS**
 Topographic Classification: **T1**
 Wind Classification: **N2**
 Design Wind Gust Speed ($V_{h,u}$) **40 m/sec**

Wastewater Classification and Recommendations

According to AS1547-2012 for on-site wastewater management the soil on the property is classified as **SAND (category 1)** with a Design Loading Rate (DLR) of 40L/m²/day for secondary treated effluent.

The proposal is to construct a four bedroom dwelling and s shed with sink. The proposed four-bedroom dwelling will have a calculated maximum wastewater output of 900L/day. This is based on a mains water supply and a maximum occupancy of 6 people (150L/day/person).

Using the DLR for secondary treated effluent of 40L/m²/day, an absorption area of 23m² will be required. This may be installed as an Eljen bed 12.5m x 1.80m x 0.6m with two rows of ten Eljen units within a bed of specified sand. The geotextile sand filter (Eljen) bed will be connected to the dwelling via dual purpose septic tank (min 3000L). The bed should be covered with sandy loam and planted with deep-rooted grass species to increase the evapotranspiration rate. High and low vents will be required for this system and a cut-off diversion drain will need to be installed upslope of the absorption area. The absorption area should be excluded from traffic or any future building works and a 100% reserve area should be set aside for future wastewater requirements. For further detail please refer to the attached plan and Trench summary reports.

The sink in the garage may be serviced by a grease trap and absorption trench. The shed will have an average wastewater loading of 40L/day. This is based on an average use of 2 persons (20L/person/day). Using the DLR for primary treated effluent of 25L/m²/day, an absorption area of 1.6m² will be required. This may be installed as one 2m x 1m x 0.6m absorption trench and connected to the shed via a grease trap (min 18L).

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

Upslope or level buildings:	3m
Downslope buildings:	3.5m
Upslope or level boundaries:	1.5m
Downslope boundaries:	5m

Downslope surface water: 100m

Compliance with Building Act 2016 Guidelines for On-site Wastewater Management Systems is outlined in the attached table. A risk analysis has been conducted for the downslope boundary setback for the site (see highlighted sections attached) and the wastewater design has been deemed to be low risk due to:

- >100m setback from surface water
- > 1000m² site area

Construction Recommendations

The natural soil is classified as **Class A**, which is a non-reactive soil. Consideration should be given to drainage and sediment control on site during and after construction to minimise loss of the sandy materials on site.

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

A handwritten signature in blue ink, consisting of a stylized 'J' and 'C' followed by a horizontal line.

Dr John Paul Cumming B.Agr.Sc (hons) PhD CPSS GAICD
Environmental and Engineering Soil Scientist

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	Mcullagh Building	Assess. Date	3-Dec-18
		Ref. No.	
Assessed site(s)	Lot 1, 95 Esplanade, Coles Bay	Site(s) inspected	19-Nov-18
Local authority	Glamorgan Spring Bay	Assessed by	JP Cumming

This report summarises wastewater volumes, climatic inputs for the site, soil characteristics and system 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 = 900 (using the 'No. of bedrooms in a dwelling' method)
 Septic tank wastewater volume (L/day) = 300
 Sullage volume (L/day) = 600
 Total nitrogen (kg/year) generated by wastewater = 2.7
 Total phosphorus (kg/year) generated by wastewater = 1.9

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)	41	39	41	45	42	39	56	57	58	51	44	56
Adopted rainfall (R, mm)	41	39	41	45	42	39	56	57	58	51	44	56
Retained rain (Rr, mm)	34	33	35	38	36	33	48	48	49	43	37	48
Max. daily temp. (deg. C)												
Evapotrans (ET, mm)	130	110	91	63	42	29	32	42	63	84	105	126
Evapotr. less rain (mm)	96	77	56	25	6	-4	-16	-6	14	41	68	78
Annual evapotranspiration less retained rain (mm) =												434

Soil characteristics

Texture = Sand Category = 1 Thick. (m) = 1.5
 Adopted permeability (m/day) = 1.5 Adopted LTAR (L/sq m/day) = 40 Min depth (m) to water = 3

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 dual purpose septic tank(s)
 The preferred method of on-site secondary treatment: In-ground
 The preferred type of in-ground secondary treatment: Evapotranspiration bed(s)
 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) = 13
 Width (m) = 1.8
 Depth (m) = 0.6
 Total disposal area (sq m) required = 23
 comprising a Primary Area (sq m) of: 23
 and a Secondary (backup) Area (sq m) of:

Sufficient area is available on site

To enter comments, click on the line below 'Comments'. (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

Using the DLR for secondary treated effluent of 40L/m²/day, an absorption area of 23m² is required.

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 Mcullagh Building

Assess. Date 3-Dec-18

Ref. No.

Assessed site(s) Lot 1, 95 Esplanade, Coles Bay

Site(s) inspected 19-Nov-18

Local authority Glamorgan Spring Bay

Assessed by JP 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	100	V. high	Very high	Moderate	Other factors lessen impact
A	Density of disposal systems	/sq km	30	Mod.	High		
	Slope angle	degrees	6	High	Low		
	Slope form	Straight simple		High	Low		
	Surface drainage	Good		High	Very low		
	Flood potential	Site floods <1:100 yrs		High	Very low		
	Heavy rain events	Infrequent		High	Moderate		
A	Aspect (Southern hemi.)	Faces SE or SW		V. high	High		
	Frequency of strong winds	Common		High	Low		
	Wastewater volume	L/day	900	High	High	Moderate	Other factors lessen impact
	SAR of septic tank effluent		1.7	High	Low		
	SAR of sullage		2.6	High	Moderate		
	Soil thickness	m	1.5	V. high	Very low		
	Depth to bedrock	m	10.0	V. high	Very low		
	Surface rock outcrop	%	0	V. high	Very low		
	Cobbles in soil	%	0	V. high	Very low		
	Soil pH		5.5	High	Low		
	Soil bulk density	gm/cub. cm	1.4	High	Very low		
	Soil dispersion	Emerson No.	8	V. high	Very low		
	Adopted permeability	m/day	1.5	Mod.	High	Moderate	Other factors lessen impact
	Long Term Accept. Rate	L/day/sq m	40	High	Very high	Moderate	Other factors lessen impact

To enter comments, click on the line below 'Comments' . (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

The site is limited by the area available for wastewater disposal.

GES P/L

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 Mcullagh Building

Assess. Date 3-Dec-18

Ref. No.

Assessed site(s) Lot 1, 95 Esplanade, Coles Bay

Site(s) inspected 19-Nov-18

Local authority Glamorgan Spring Bay

Assessed by JP 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		Remarks
					Trench	Amended	
AA	Cation exchange capacity	mmol/100g	20	High	Very high		
A	Phos. adsorp. capacity	kg/cub m	0.3	High	High		
	Annual rainfall excess	mm	-434	High	Very low		
	Min. depth to water table	m	3	High	Very low		
	Annual nutrient load	kg	4.6	High	Very low		
A	G'water environ. value	Recreational		V. high	High		
	Min. separation dist. required	m	3	High	Very low		
	Risk to adjacent bores	Very low		V. high	Very low		
A	Surf. water env. value	Recreational		V. high	High		
A	Dist. to nearest surface water	m	120	V. high	High		
	Dist. to nearest other feature	m	20	V. high	High	Moderate	Other factors lessen impact
	Risk of slope instability	Low		V. high	Low		
	Distance to landslide	m	186	V. high	Low		

To enter comments, click on the line below 'Comments'. (This yellow-shaded box and the buttons on this page will not be printed.)

The site has a low CEC for the retention of nutrients. The planting of deep rooted grasses is recommended to encourage nutrient uptake.

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

Acceptable Solutions	Performance Criteria	Compliance
<p>A1</p> <p>Horizontal separation distance from a building to a land application area must comply with one of the following:</p> <ul style="list-style-type: none"> a) be no less than 6m; or b) be no less than: <ul style="list-style-type: none"> (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. 	<p>P1</p> <ul style="list-style-type: none"> a) The land application area is located so that <ul style="list-style-type: none"> (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 	<p>Complies with A1 (b) (i)</p> <p>Land application area will be located with a minimum separation distance of 3m from an upslope or level building.</p>
<p>A2</p> <p>Horizontal separation distance from downslope surface water to a land application area must comply with (a) or (b)</p> <ul style="list-style-type: none"> (a) be no less than 100m; or (b) be no less than the following: <ul style="list-style-type: none"> (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. 	<p>P2</p> <p>Horizontal separation distance from downslope surface water to a land application area must comply with all of the following:</p> <ul style="list-style-type: none"> 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. 	<p>Complies with A2 (a)</p> <p>Land application area located > 100m from downslope surface water</p>

<p>A3</p> <p>Horizontal separation distance from a property boundary to a land application area must comply with either of the following:</p> <p>(a) be no less than 40m from a property boundary; or</p> <p>(b) be no less than:</p> <ul style="list-style-type: none"> (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. 	<p>P3</p> <p>Horizontal separation distance from a property boundary to a land application area must comply with all of the following:</p> <p>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and</p> <p>(b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.</p>	<p>Complies with A3 (b) (i)</p> <p>Land application area will be located with a minimum separation distance of 1.5m from an upslope or level property boundary</p> <p>Land application area will be located with a minimum separation distance of 5m of downslope property boundary</p> <p>See risk assessment</p>
<p>A4</p> <p>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.</p>	<p>P4</p> <p>Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must comply with all of the following:</p> <p>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and</p> <p>(b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 demonstrates that the risk is acceptable</p>	<p>Complies with A4</p> <p>No bore or well identified within 50m</p>

<p>A5</p> <p>Vertical separation distance between groundwater and a land application area must be no less than:</p> <p>(a) 1.5m if primary treated effluent; or</p> <p>(b) 0.6m if secondary treated effluent</p>	<p>P5</p> <p>Vertical separation distance between groundwater and a land application area must comply with the following:</p> <p>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and</p> <p>(b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 that demonstrates that the risk is acceptable</p>	<p>Complies with A5 (a)</p> <p>No groundwater encountered</p>
<p>A6</p> <p>Vertical separation distance between a limiting layer and a land application area must be no less than:</p> <p>(a) 1.5m if primary treated effluent; or</p> <p>(b) 0.5m if secondary treated effluent</p>	<p>P6</p> <p>Vertical setback must be consistent with AS/NZS1547 Appendix R.</p>	<p>Complies with A6 (a)</p> <p>No limiting layer identified</p>
<p>A7</p> <p>nil</p>	<p>P7</p> <p>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</p>	<p>Complies</p>

ASSESSMENT OF HORIZONTAL AND VERTICAL SETBACK DISTANCES

(adapted from Table R1 in AS1547 - to be used in conjunction with Site Constraint Table)

Site feature	Setback distance range (m)	Site constraint items of specific concern (from Site Constraint Table)	Assessment	Adopted setback distance (m)
	Horizontal setback distance (m)			
Property boundary	1.5 – 50	A, D, J	3m min downslope setback from Trench Model	5m downslope boundary
Buildings/houses	2.0 – > 6	A, D, J	3	3m
Surface water	15 – 100	A, B, D, E, F, G, J	>100	>100
Bore, well	15 – 50	A, C, H, J	N/A	N/A
Recreational areas (Children's play areas, swimming pools and so on)	3 – 15	A, E, J	N/A	N/A
In-ground water tank	4 – 15	A, E, J	N/A	N/A
Retaining wall and Embankments, escarpments, cuttings	3.0 m or 45° angle from toe of wall (whichever is greatest)	D, G, H	N/A	N/A
	Vertical setback distance (m)			
Groundwater	0.6 – > 1.5	A, C, F, H, I, J	0.6	N/A
Hardpan or bedrock	0.5 – \geq 1.5	A, C, J	0.6	0.6

SITE CONSTRAINT RATING

(adapted from Table R2 in AS1547 - used as a guide in determining appropriate setback distances)

Item	Site/system feature	Constraint scale (see Note 1) LOWER ← → HIGHER Examples of constraint factors (see Note 2)		Sensitive features	Comment	Constraint Rating
A	Microbial quality of effluent	Effluent quality consistently producing ≤ 10 cfu/100 mL <i>E. coli</i> (secondary treated effluent with disinfection)	Effluent quality consistently ⁶ <i>E. coli</i> (for example, primary treated effluent)	Groundwater and surface pollution hazard, public health hazard	Secondary treated effluent	Low due to no groundwater or surface pollution hazard
B	Surface water	Category 1 to 3 soils, no surface water down gradient within > 100 m, low rainfall area	Category 4 to 6 soils, permanent surface water <50 m down gradient, high rainfall area, high resource/environmental value	Surface water pollution hazard for low permeable soils, low lying or poorly draining areas	Downslope surface water >100m	Low
C	Groundwater	Category 5 and 6 soils, low resource/environmental value	Category 1 and 2 soils, gravel aquifers, high resource/environmental value	Groundwater pollution hazard	Category 1 soil No groundwater encountered	Low
D	Slope	0 – 6% (surface effluent application) 0 – 10% (subsurface effluent application)	> 10% (surface effluent application), > 30% subsurface effluent application	Off-site export of effluent, erosion	Approx. 10% slope, subsurface effluent	Complies with Acceptable Solutions
E	Position of land application area in landscape.	Downgradient of surface water, property boundary, recreational area	Upgradient of surface water, property boundary, recreational area	Surface water pollution hazard, off-site export of effluent	Downslope boundary minimum 5m	Low
F	Drainage	Category 1 and 2 soils, gently sloping area	Category 6 soils, sites with visible seepage, moisture tolerant vegetation, low lying area	Groundwater pollution hazard	Category 1 soil No visible seepage or moisture tolerant sp	Complies with Acceptable Solutions
G	Flood potential	Above 1 in 20 year flood contour	Below 1 in 20 year flood contour	Off-site export of effluent, system failure, mechanical faults	Above 1:20 year flood contour	Complies with Acceptable Solutions

SITE CONSTRAINT RATING (cont)

Item	Site/system feature	Constraint scale (see Note 1) LOWER ← → HIGHER Examples of constraint factors (see Note 2)		Sensitive features	Comment	Constraint Rating
H	Geology and soils	Category 3 and 4 soils, low porous regolith, deep, uniform soils	Category 1 and 6 soils, fractured rock, gravel aquifers, highly porous regolith	Groundwater pollution hazard for porous regolith and permeable soils	Category 1 Soil moderate permeability	Complies with Acceptable Solutions
I	Landform	Hill crests, convex side slopes, and plains	Drainage plains and incise channels	Groundwater pollution hazard, resurfacing hazard	side slope	Complies with Acceptable Solutions
J	Application method	Drip irrigation or subsurface application of effluent	Surface/above ground application of effluent	Off-site export of effluent, surface water pollution	Subsurface application	Low

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Owner /Agent
 Address
 Suburb/postcode

Qualified person details:

Qualified person:
Address: Phone No:
 Fax No:
Licence No: Email address:

Qualifications and Insurance details: (description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)

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

Details of work:

Address: Lot No:
 Certificate of title No:
The assessable item related to this certificate: (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: (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 AS1726-1993 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:	Date:
		3784	3/12/2018



A handwritten signature in black ink, appearing to be 'John Paul Cumming', written over a light blue horizontal line.

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form **35**

To: McCullagh Building
31 Penquite Road
Newstead 7250

Owner name
Address
Suburb/postcode

Designer details:

Name: John-Paul Cumming
Business name: Geo-Environmental Solutions
Business address: 29 Kirksway Place
Battery Point 7004
Licence No: CC774A
Email address: office@geosolutions.net.au

Category: Bld. Svcs. Dsgnr. - Hydraulic
Phone No: 03 6223 1839
Fax No: N/A

Details of the proposed work:

Owner/Applicant: McCullagh Building
Address: Lot 1, 95 Esplanade
Coles Bay 7250

Designer's project reference No: 3784
Lot No: 1

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
	<input type="checkbox"/> Building design	Architect or Building Designer
	<input type="checkbox"/> Structural design	Engineer or Civil Designer
	<input type="checkbox"/> Fire Safety design	Fire Engineer
	<input type="checkbox"/> Civil design	Civil Engineer or Civil Designer
	<input checked="" type="checkbox"/> Hydraulic design	Building Services Designer
	<input type="checkbox"/> Fire service design	Building Services Designer
	<input type="checkbox"/> Electrical design	Building Services Designer
	<input type="checkbox"/> Mechanical design	Building Service Designer
	<input type="checkbox"/> Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	<input type="checkbox"/> Other (specify)	

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

Other details:

Septic tank and Eljen Bed

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by: Geo-Environmental Solutions	Date: Dec-18
Schedules:	Prepared by:	Date:
Specifications:	Prepared by: Geo-Environmental Solutions	Date: Dec-18
Computations:	Prepared by:	Date:
Performance solution proposals:	Prepared by: Geo-Environmental Solutions	Date: Dec-18
Test reports:	Prepared by: Geo-Environmental Solutions	Date: Dec-18

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:

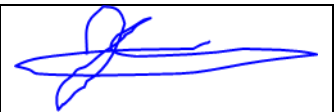
Geo-Environmental Assessment – Lot 1, 95 Esplanade, Coles Bay – Dec18 - GES

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.

	<i>Name: (print)</i>	<i>Signed</i>	<i>Date</i>
Designer:	John-Paul Cumming		3/12/2018
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:

- ☒ The works will not increase the demand for water supplied by TasWater
- ☒ 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
- ☒ The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- ☒ The works will not damage or interfere with TasWater's works
- ☒ The works will not adversely affect TasWater's operations
- ☒ The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- ☒ I have checked the LISTMap to confirm the location of TasWater infrastructure
- ☒ 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		3/12/2018

Wastewater system: Shed

Grease trap (min 18L)

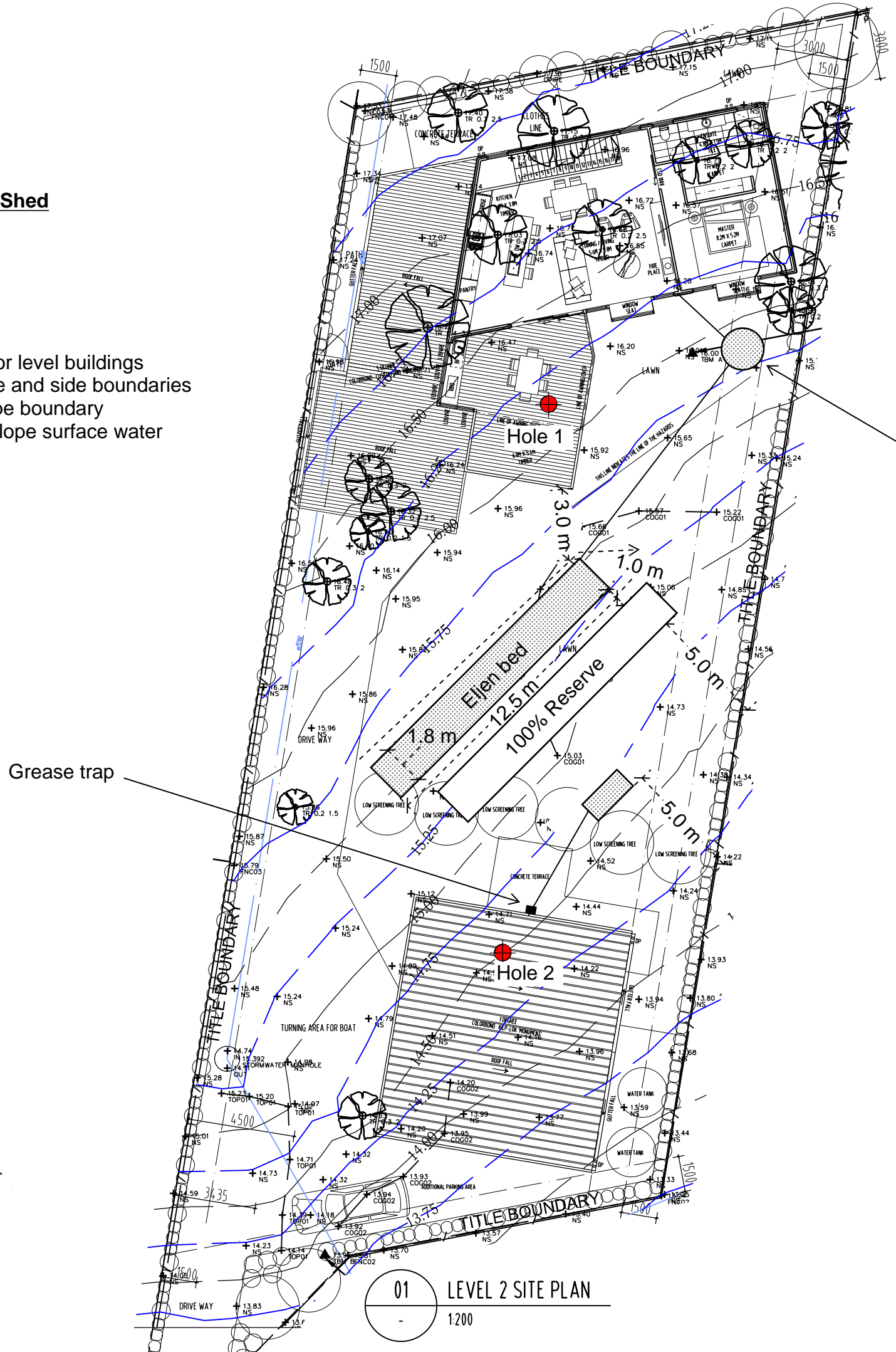
Absorption trench
1x 2m x 1m x 0.6m

- Min 3m from upslope or level buildings
- Min 1.5m from upslope and side boundaries
- Min 5m from downslope boundary
- Min 100m from downslope surface water

Refer to GES report

Dr. John Paul Cumming
Building Services Designer-
Hydraulic
CCC774A

3/12/2018



Septic tank

Grease trap

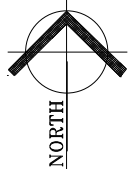
Wastewater system: House

Dual purpose septic tank (min 3000L) with outlet filter

Eljen bed
12.50m x 1.8m x 0.6m
Two rows of 10 Eljen Units (20 in total) within a bed of specified sand.

- Min 3m from upslope or level buildings
- Min 1.5m from upslope and side boundaries
- Min 5m from downslope boundary
- Min 100m from downslope surface water

Refer to GES report



REVISION			
No	DATE	DESCRIPTION	BY CHECK
A	09/11/18	CONCEPT DESIGN PRESENTATION	mb mb

NOTE:

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CONFIRM ALL SIZES AND HEIGHTS ON SITE.

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NOTE: THESE DRAWINGS ARE FOR CLIENT REVIEW



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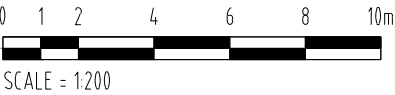
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PROJECT NAME:
PRIVATE RESIDENCE
LOT 1 / 95 ESPLANADE
COLES BAY

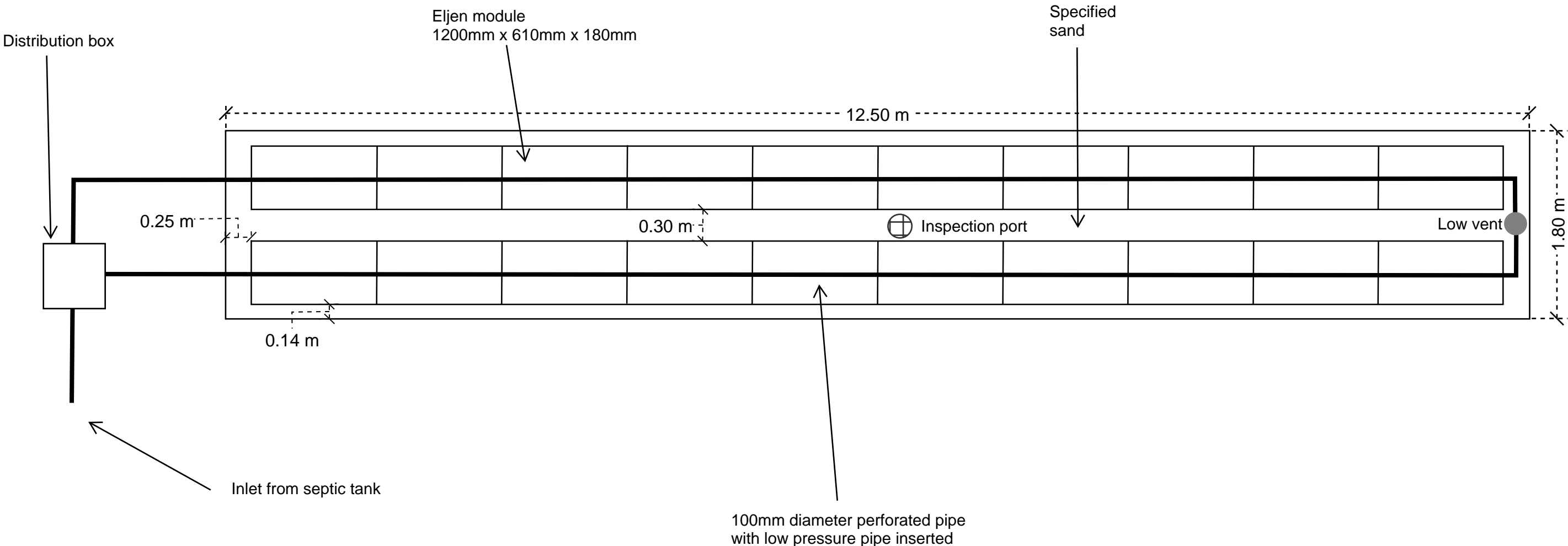
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LEVEL 2
SITE PLAN

DRAWN: MB
CHECKED: MB

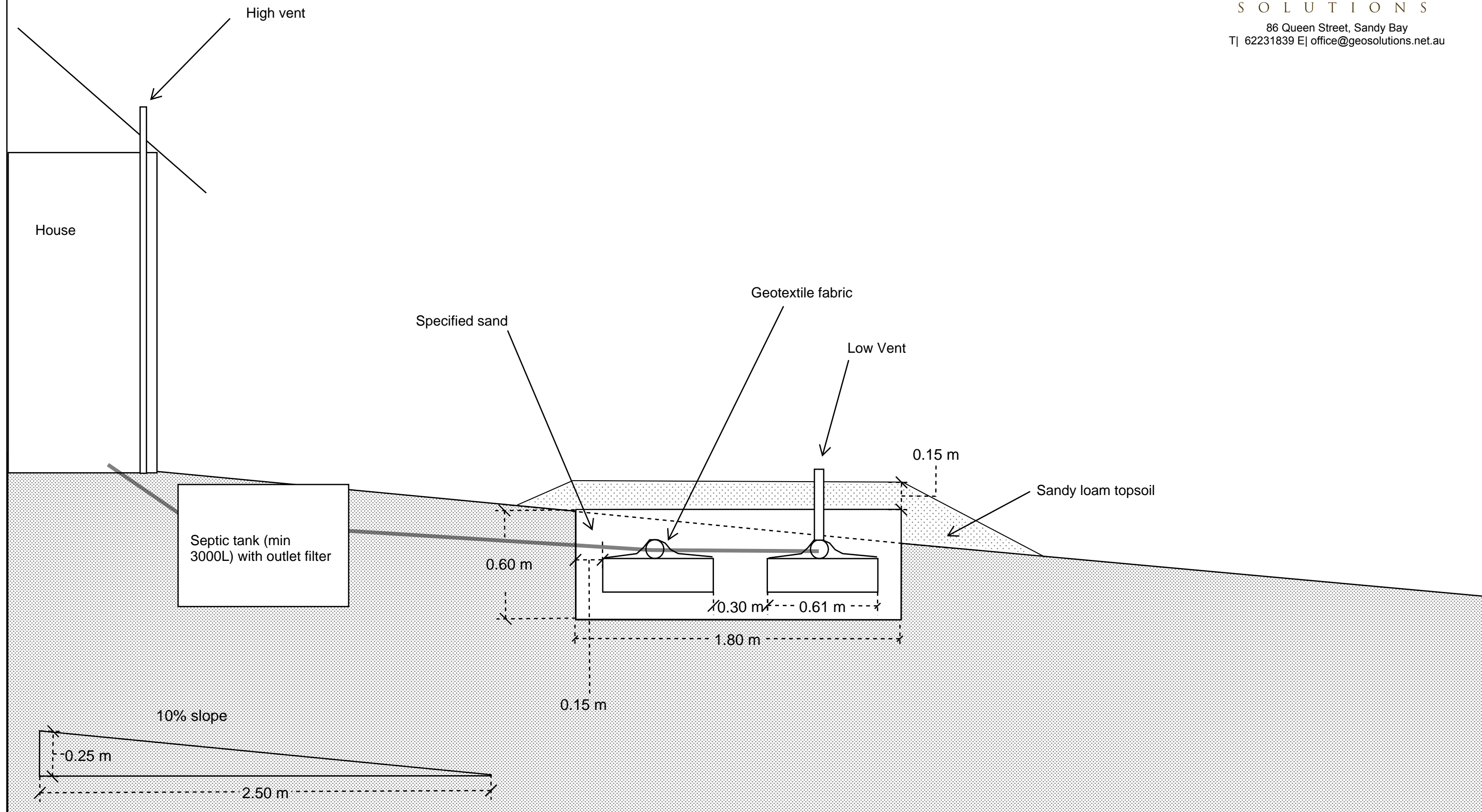
SCALE: 1:200 @ A3
DATE: OCTOBER_2018
PROJECT NO. 1840
DRAWING NO. A-CD-20 A



Eljen Bed Plan 2 rows of 10 units



High vent upslope
- can be remotely
located if required



Do not scale from these drawings.
Dimensions to take precedence
over scale.

Eljen bed section plan
Two rows 10 of Eljen units 10% slope

Date: Dec 2018

Drawing Number:

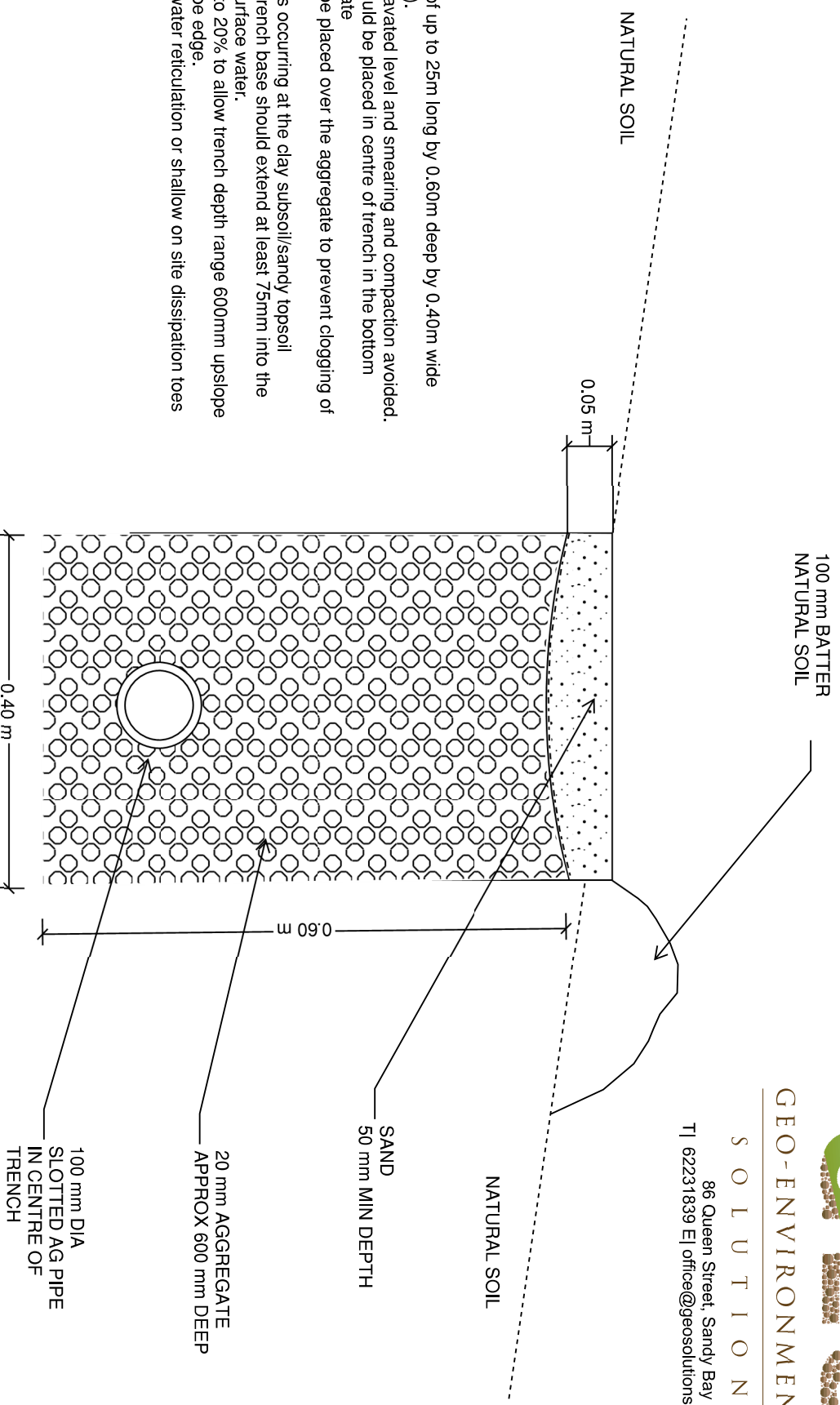
Sheet 1 of 1
Prepared by: PL



GEO-ENVIRONMENTAL

S O L U T I O N S

86 Queen Street, Sandy Bay
Tf 62231839 E| office@geosolutions.net.au



Design notes:

1. Cut-off trench dimensions of up to 25m long by 0.60m deep by 0.40m wide (depths and widths minimum).
2. Base of trenches to be excavated level and smearing and compaction avoided.
3. 100mm slotted ag-pipe should be placed in centre of trench in the bottom 100mm of the 20mm aggregate
4. Geotextile or filter cloth to be placed over the aggregate to prevent clogging of the pipes and aggregate
5. If shallow subsurface flow is occurring at the clay subsoil/sandy topsoil boundary (duplex soils), the trench base should extend at least 75mm into the subsoil clay to capture sub-surface water.
6. Construction on slopes up to 20% to allow trench depth range 600mm upslope edge to 400mm on down slope edge.
7. Trench discharge to stormwater reticulation or shallow on site dissipation toes across the contour.

Do not scale from these drawings.
Dimensions to take precedence
over scale.

Geo-Environmental Solutions

Date: 01/05/2017

Cut-Off Drain Detail

Sheet 1 of 1



Knowledge Environmental Protection and Solutions Since 1990

Eljen GSF System Design Program

RESET FORM

Date:	3-Dec-18	Client Name:	McCullagh Building		
Site Address:	Lot 1, 95 Esplanade, Coles Bay		Council Area:	Glamorgan-Spring Bay	
Designer:	JP. Cumming, P. Lucas	Designer Phone Number:	62231839	Is this new construction Y or N:	Y
Plumber:	Eljen Pacific	Plumber Phone Number:	407782308	Plumber License Number:	1110675

Note: This design program is a guide only. All design constraints and limitations must be addressed by the designer prior to design and installation.

System Design Information		Design Notes and Comments	
Design Occupancy (Number of persons):	6	 3/12/2018	
Daily Design Flow (L/Person/Day):	150		
Total Daily Design Flow (L/Day):	900		
Trench or Bed	Bed		
Soil Category <i>(Note: Soil Categories 4-6 May Require additional design consideration. Please reference AS/1547 2012 when designing in these soil types.)</i>	1 - Gravels and Sands		
Site Design Loading Rate (L/mm/day):	40		
System Area Slope (%):	0%		
System Area Slope (converted from % slope to degrees slope):	0.00		
System Basal Area Bore Log Depth: <i>(Note: Must be greater than 600 mm)</i>	600		
Maximum System Length Based on Site Constraints:	13		
Desired Rows or Trenches in System	2		
Distribution Type	G		
(G = Gravity - P = Pump to Gravity - LPD = Low Pressure Distribution)			
System Dimensions			
Would you like to use a specific width?			
Specific Width (m)			
Treatment Zone		Dispersal Zone Extension	
Length (m)	12.50		
Width (m)	1.80		
Sand Height (m)	0.15		
Sand Area (m ²)	22.50		
System Capacity			
Total Daily Design Flow (L/Day):	900		
Minimum Number of A42 Units Required	20		
Units per Row	10		
Length of Rows with 0.15 m Sand Extension	12.5		
End to End Space Between Modules (TRENCH ONLY)			
Materials			
Minimum Number of A42 Units Required	20		
The system requires a high vent. Are using 50mm or 100mm pipe?		1 x 100mm vent	
Low vent		1	
Effluent Filter		1	
Inspection Ports		2	
Pipe Required (m)		25.00	
Estimate of System Sand Required (m ³)		9.68	

REVISION				
No	DATE	DESCRIPTION	BY CHECK	
A	29/01/19	DEVELOPMENT APPLICATION	mb	mb
B	13/02/19	RESPONSE TO RFI	mb	mb

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DEVELOPMENT APPLICATION
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TASMANIA 7250 Ph: 0417541646

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PROJECT NAME:

PRIVATE RESIDENCE
91 ESPLANADE
COLES BAY

DRAWING TITLE:

COVER SHEET

DRAWN: MB

CHECKED: MB

SCALE: NTS @ A3

DATE: OCTOBER_2018

PROJECT NO. 1840

DRAWING NO. A-DA-01 B

DEVELOPMENT APPLICATION FOR PRIVATE RESIDENCE 91 ESPLANADE COLES BAY, TASMANIA

NOTE:

ARCHITECT: MICHAEL BERNACKI (929)
ACCREDITATION NUMBER: CC6490
LAND TITLE REF NUMBER: 146590 / FOLIO 1
FLOOR AREA: TBCM2
SOIL CLASSIFICATION: H1
CLIMATE ZONE: 7
BAL: LOW
ALPINE AREA: N/A
CORROSION ENVIRONMENT: N/A
FLOODING: NO
LANDSLIP: NO
DISPERSIVE SOILS: UNKNOWN
SALINE SOILS: UNKNOWN
SAND DUNES: NO
MINE SUBSIDENCE: NO
LANDFILL: NO
GROUND LEVELS: REFER PLAN

DRAWING No.	DRAWING TITLE
A-DA-01	Cover Sheet
A-DA-02	Land Survey
A-DA-03	Residence – Level 1 Plan
A-DA-04	Residence – Level 2 Plan
A-DA-05	Residence – Roof Plan
A-DA-06	Residence – Northern Elevation
A-DA-07	Residence – Eastern Elevation
A-DA-08	Residence – Southern Elevation
A-DA-09	Residence – Western Elevation
A-DA-10	Shed – Level 1 & Roof Plan
A-DA-11	Shed – Northern & Eastern Elevations
A-DA-12	Shed – Southern & Western Elevations
A-DA-13	Level 1 Site Plan (Landscape Plan)
A-DA-14	Level 2 Site Plan
A-DA-15	Site Plan



REVISION				
No	DATE	DESCRIPTION	BY CHECK	
A	29/01/19	DEVELOPMENT APPLICATION	mb	mb
B	13/02/19	RESPONSE TO RFI	mb	mb

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DEVELOPMENT APPLICATION
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HONED ARCHITECTURE + DESIGN.

PROJECT NAME:

PRIVATE RESIDENCE
91 ESPLANADE
COLES BAY

DRAWING TITLE:

RESIDENCE
LEVEL 1 PLAN

DRAWN: MB

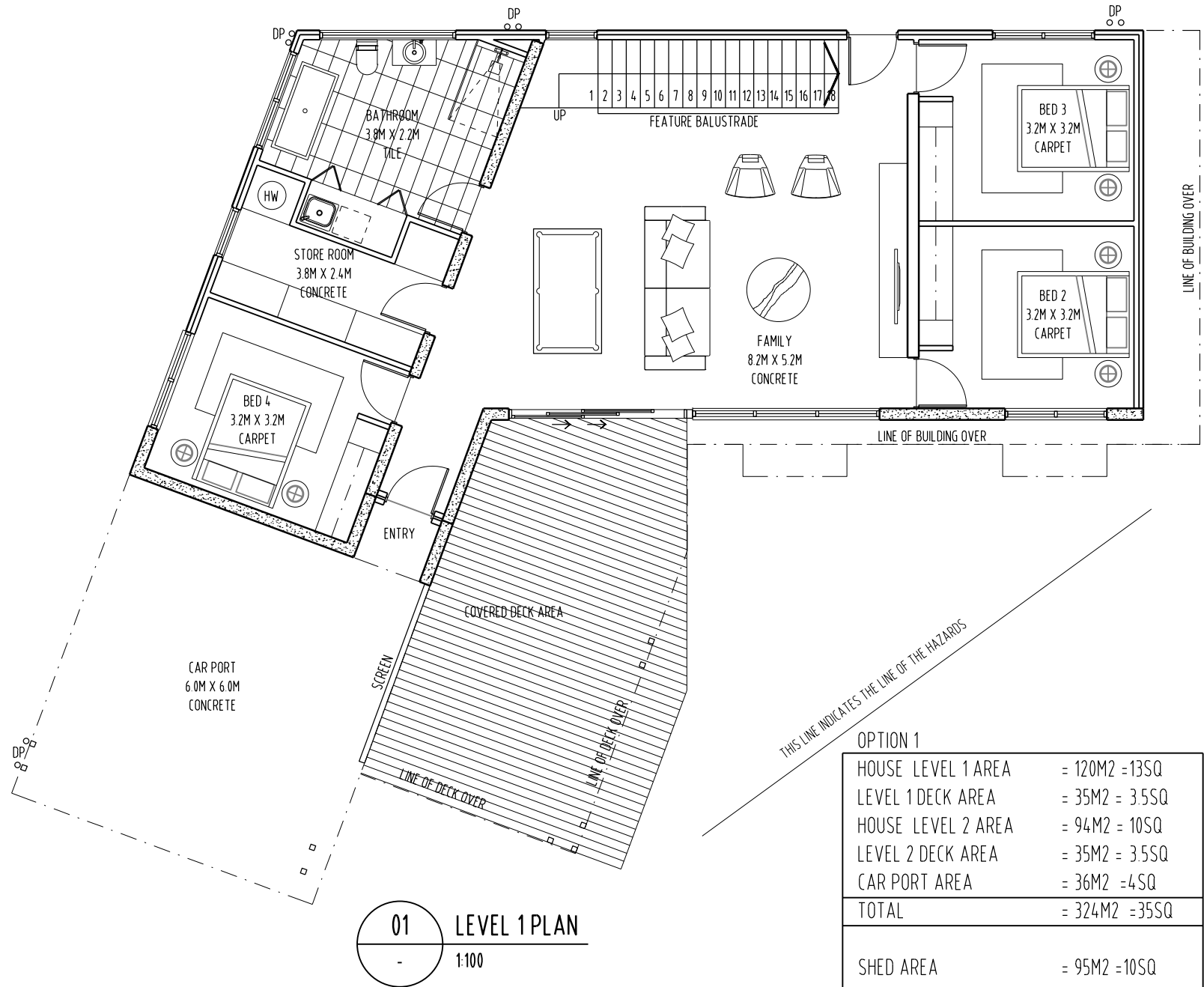
CHECKED: MB

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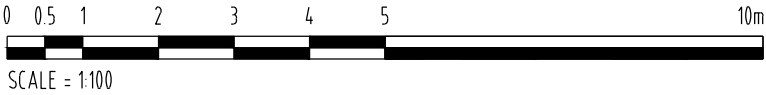
DATE: OCTOBER 2018

PROJECT NO. 1840

DRAWING NO. A-DA-03 B



OPTION 1		
HOUSE LEVEL 1 AREA	=	120M2 = 13SQ
LEVEL 1 DECK AREA	=	35M2 = 3.5SQ
HOUSE LEVEL 2 AREA	=	94M2 = 10SQ
LEVEL 2 DECK AREA	=	35M2 = 3.5SQ
CAR PORT AREA	=	36M2 = 4SQ
TOTAL	=	324M2 = 35SQ
SHED AREA	=	95M2 = 10SQ
TOTAL	=	415M2 = 45SQ
SITE AREA = 1211M2		
SITE COVER = 21%		





REVISION

No	DATE	DESCRIPTION	BY	CHECK
A	29/01/19	DEVELOPMENT APPLICATION	mb	mb
B	13/02/19	RESPONSE TO RFI	mb	mb

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PROJECT NAME:

PRIVATE RESIDENCE
91 ESPLANADE
COLES BAY

DRAWING TITLE:

RESIDENCE
LEVEL 2 PLAN

DRAWN: MB

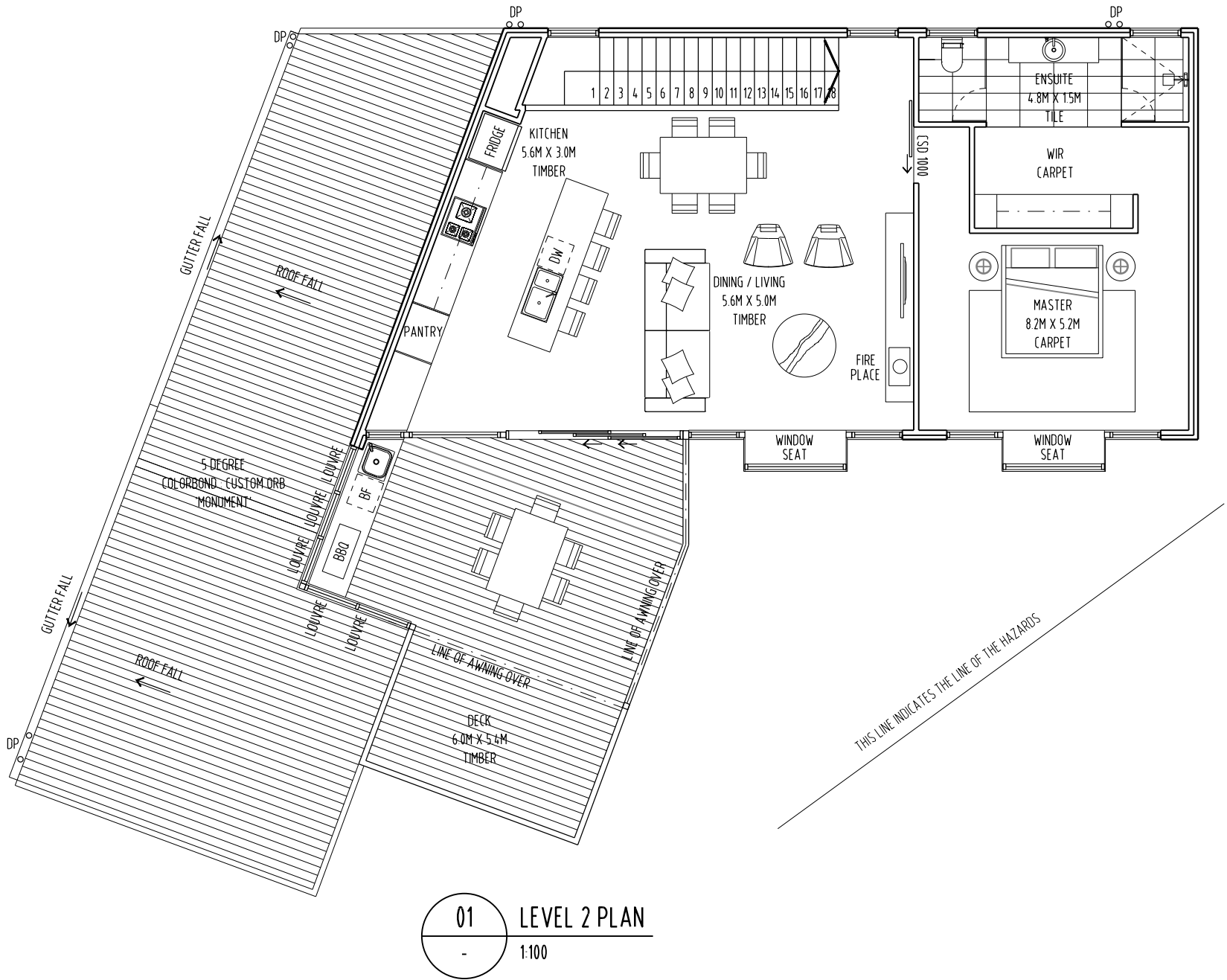
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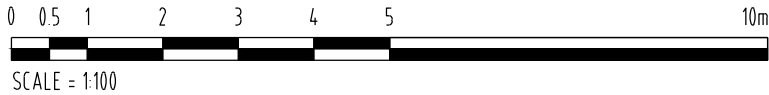
DATE: OCTOBER_2018

PROJECT NO. 1840

DRAWING NO. A-DA-04 B



01 LEVEL 2 PLAN
- 1:100





REVISION			
No	DATE	DESCRIPTION	BY CHECK
A	29/01/19	DEVELOPMENT APPLICATION	mb mb
B	13/02/19	RESPONSE TO RFI	mb mb

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PROJECT NAME:
PRIVATE RESIDENCE
91 ESPLANADE
COLES BAY

DRAWING TITLE:
RESIDENCE
ROOF PLAN

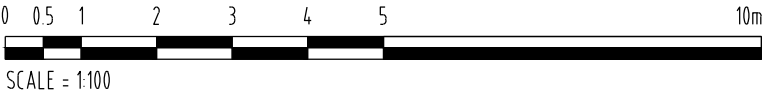
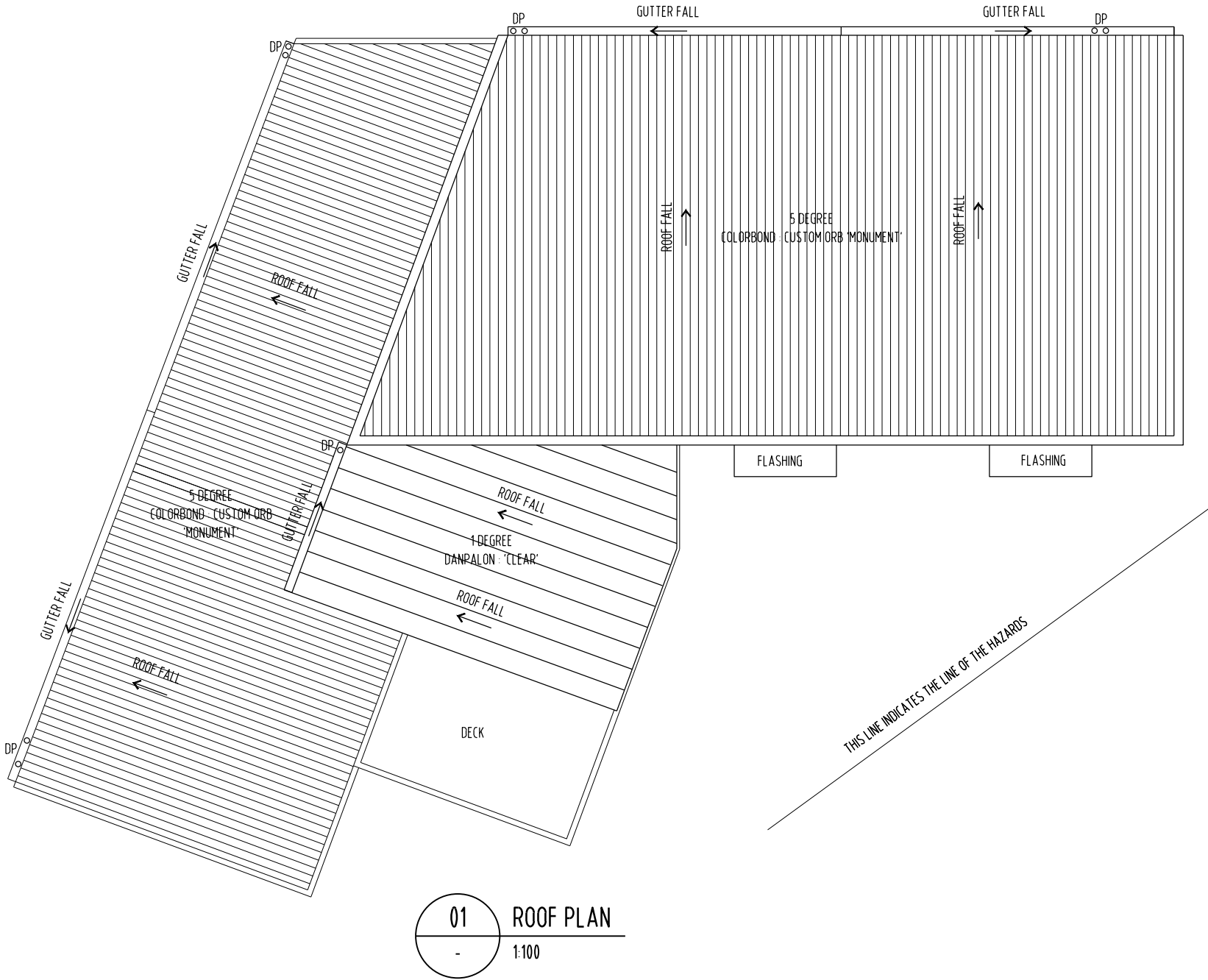
DRAWN: MB
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SCALE: 1:100 @ A3

DATE: OCTOBER_2018

PROJECT NO. 1840

DRAWING NO. A-DA-05 B



REVISION			
No	DATE	DESCRIPTION	BY CHECK
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B	13/02/19	RESPONSE TO RFI	mb mb

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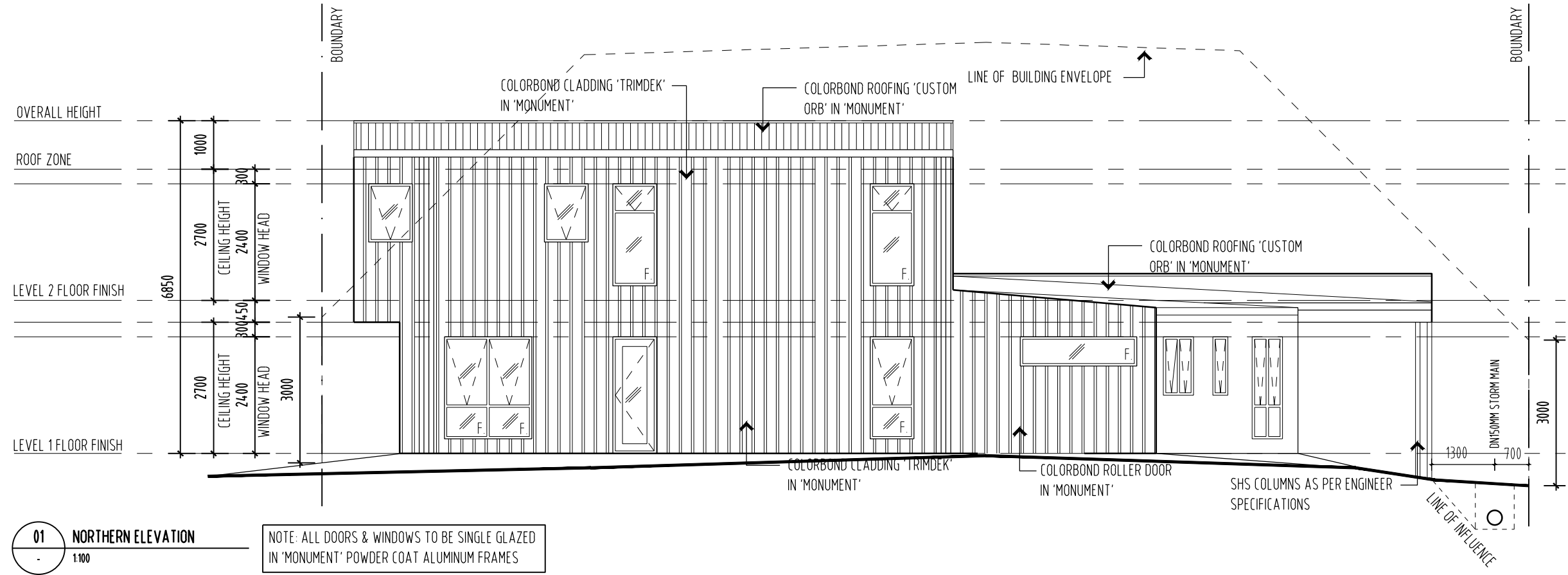
PROJECT NAME:

PRIVATE RESIDENCE
91 ESPLANADE
COLES BAY

DRAWING TITLE:

RESIDENCE
NORTHERN ELEVATION

DRAWN:	MB
CHECKED:	MB
SCALE:	1:100 @ A3
DATE:	OCTOBER 2018
PROJECT NO.	1840
DRAWING NO.	A-DA-06 B



01 NORTHERN ELEVATION
1:100

REVISION				
No	DATE	DESCRIPTION	BY CHECK	
A	29/01/19	DEVELOPMENT APPLICATION	mb	mb
B	13/02/19	RESPONSE TO RFI	mb	mb

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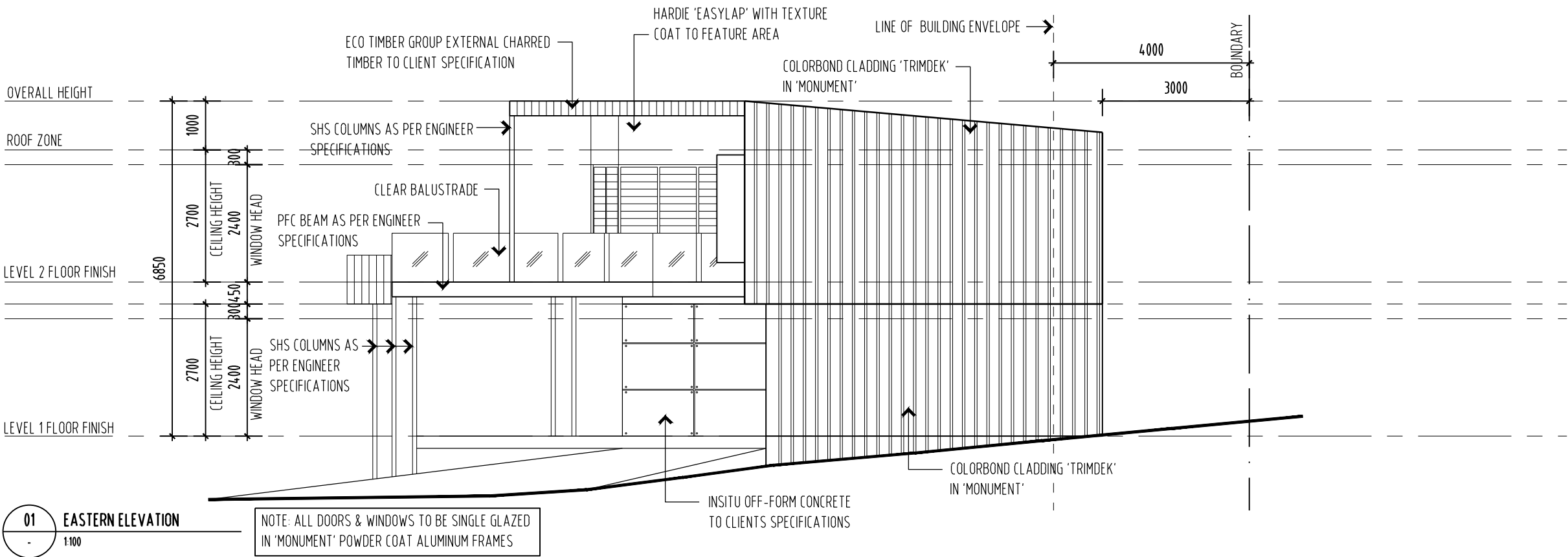
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COLES BAY

DRAWING TITLE:
RESIDENCE
EASTERN ELEVATION

DRAWN:	MB
CHECKED:	MB
SCALE:	1:100 @ A3
DATE:	OCTOBER_2018
PROJECT NO.	1840
DRAWING NO.	A-DA-07 B



01 EASTERN ELEVATION
1:100

REVISION				
No	DATE	DESCRIPTION	BY CHECK	
A	29/01/19	DEVELOPMENT APPLICATION	mb	mb
B	13/02/19	RESPONSE TO RFI	mb	mb

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PROJECT NAME:
PRIVATE RESIDENCE
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COLES BAY

DRAWING TITLE:
RESIDENCE
SOUTHERN ELEVATION

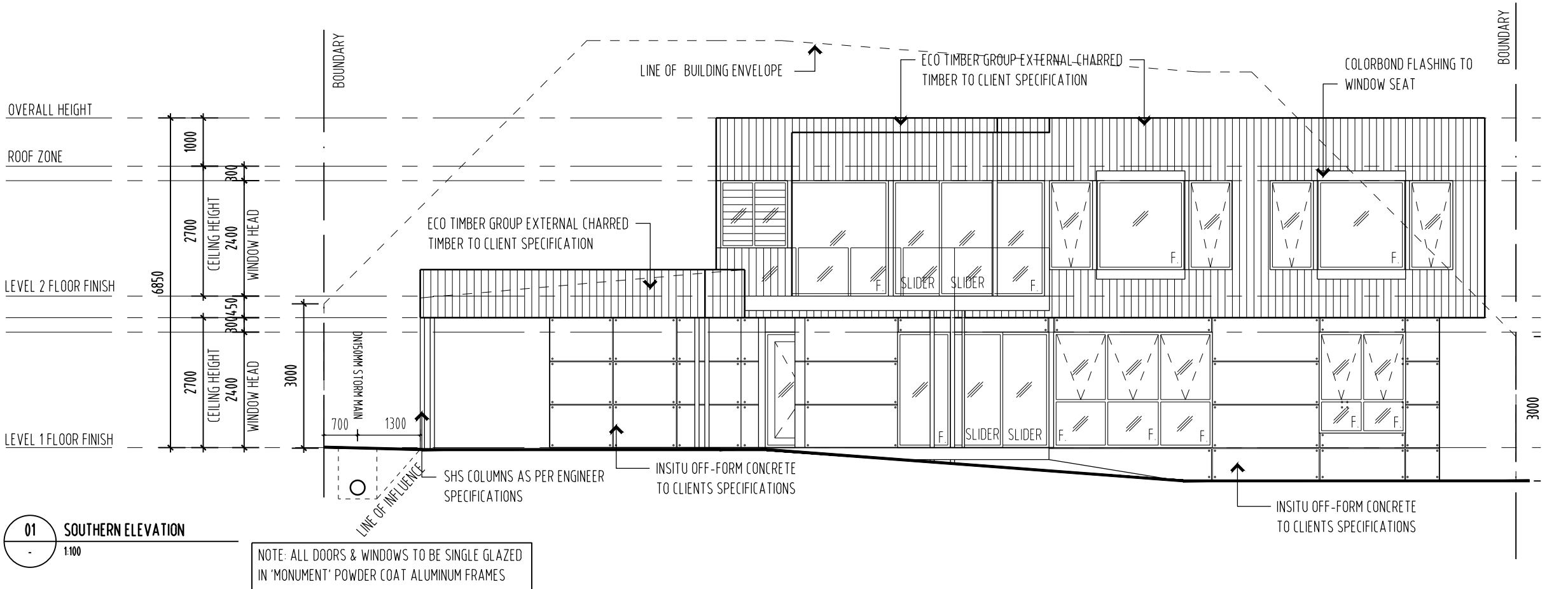
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CHECKED: MB

SCALE: 1:100 @ A3

DATE: OCTOBER 2018

PROJECT NO. 1840

DRAWING NO. A-DA-08 B



01 SOUTHERN ELEVATION
1:100

REVISION				
No	DATE	DESCRIPTION	BY	CHECK
A	29/01/19	DEVELOPMENT APPLICATION	mb	mb
B	13/02/19	RESPONSE TO RFI	mb	mb

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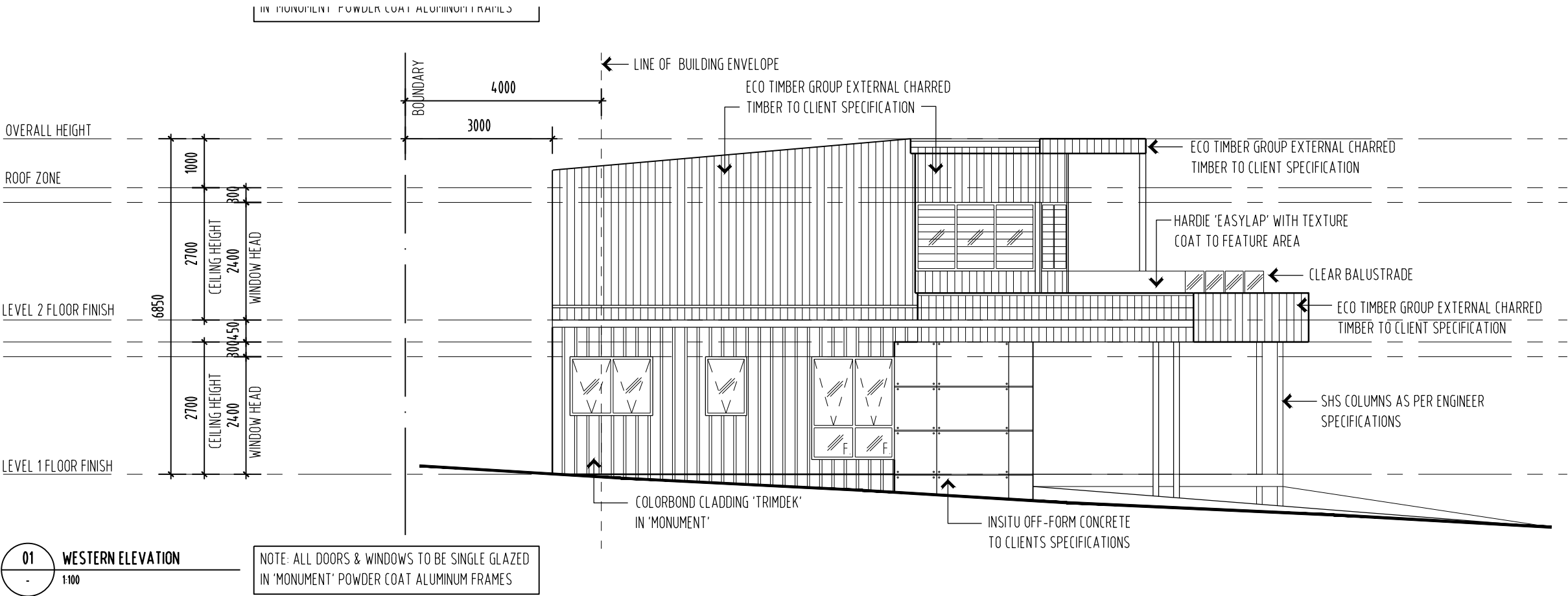
PROJECT NAME:

PRIVATE RESIDENCE
91 ESPLANADE
COLES BAY

DRAWING TITLE:

RESIDENCE
WESTERN ELEVATION

DRAWN:	MB
CHECKED:	MB
SCALE:	1:100 @ A3
DATE:	OCTOBER_2018
PROJECT NO.	1840
DRAWING NO.	A-DA-09 B



01 WESTERN ELEVATION
1:100



REVISION				
No	DATE	DESCRIPTION	BY CHECK	
A	29/01/19	DEVELOPMENT APPLICATION	mb	mb
B	13/02/19	RESPONSE TO RFI	mb	mb

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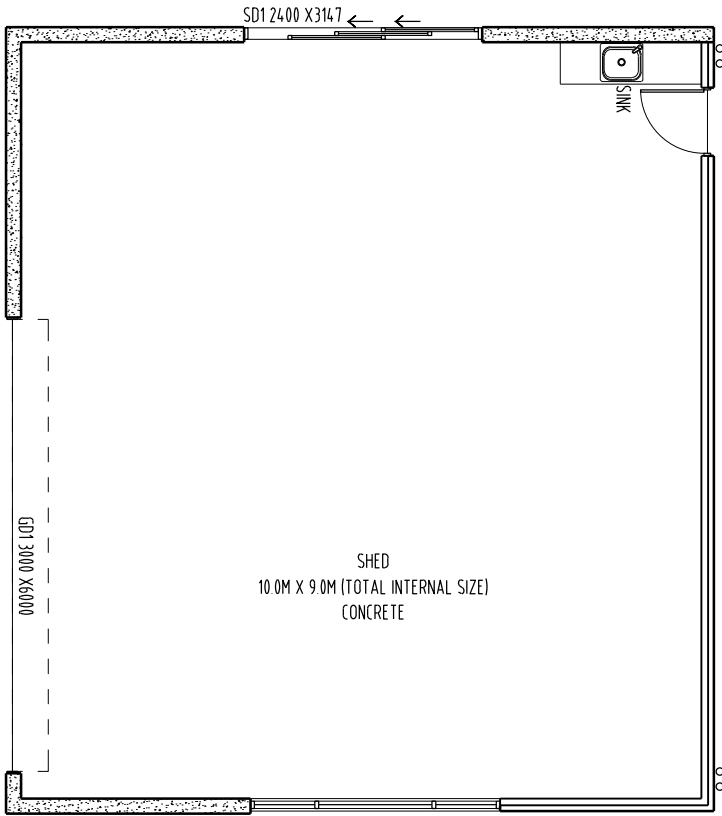
PROJECT NAME:

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91 ESPLANADE
COLES BAY

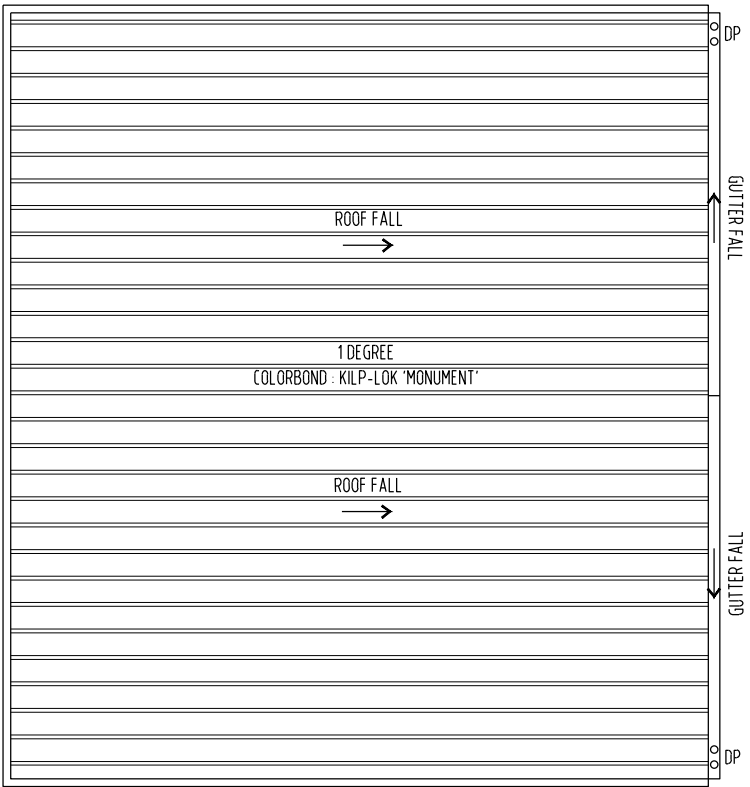
DRAWING TITLE:

SHED
LEVEL 1 & ROOF PLAN

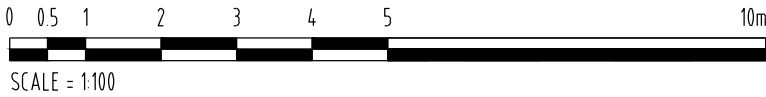
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DATE:	OCTOBER _2018
PROJECT NO.	1840
DRAWING NO.	A-DA-10 B

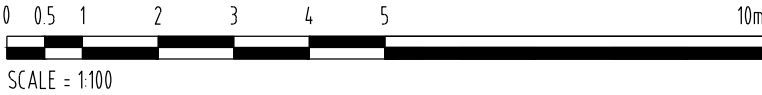
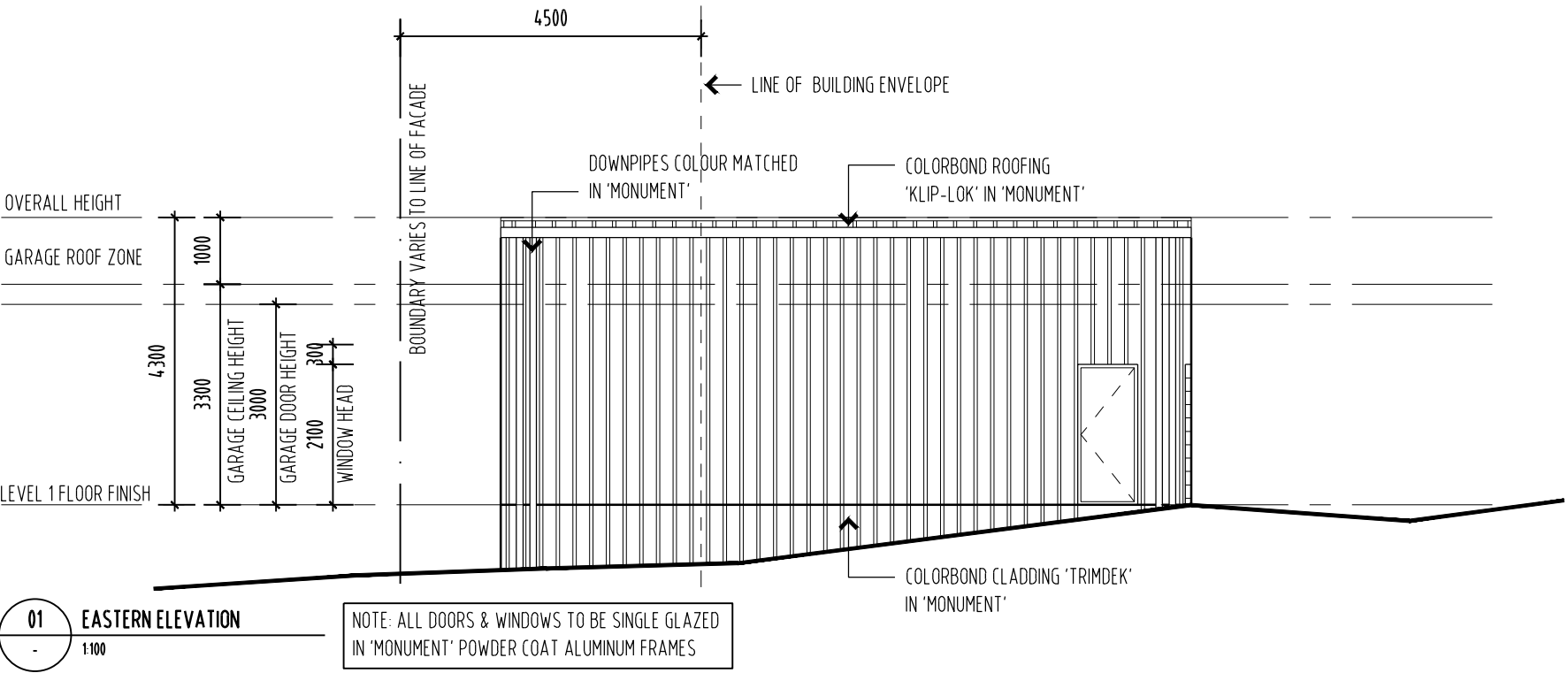
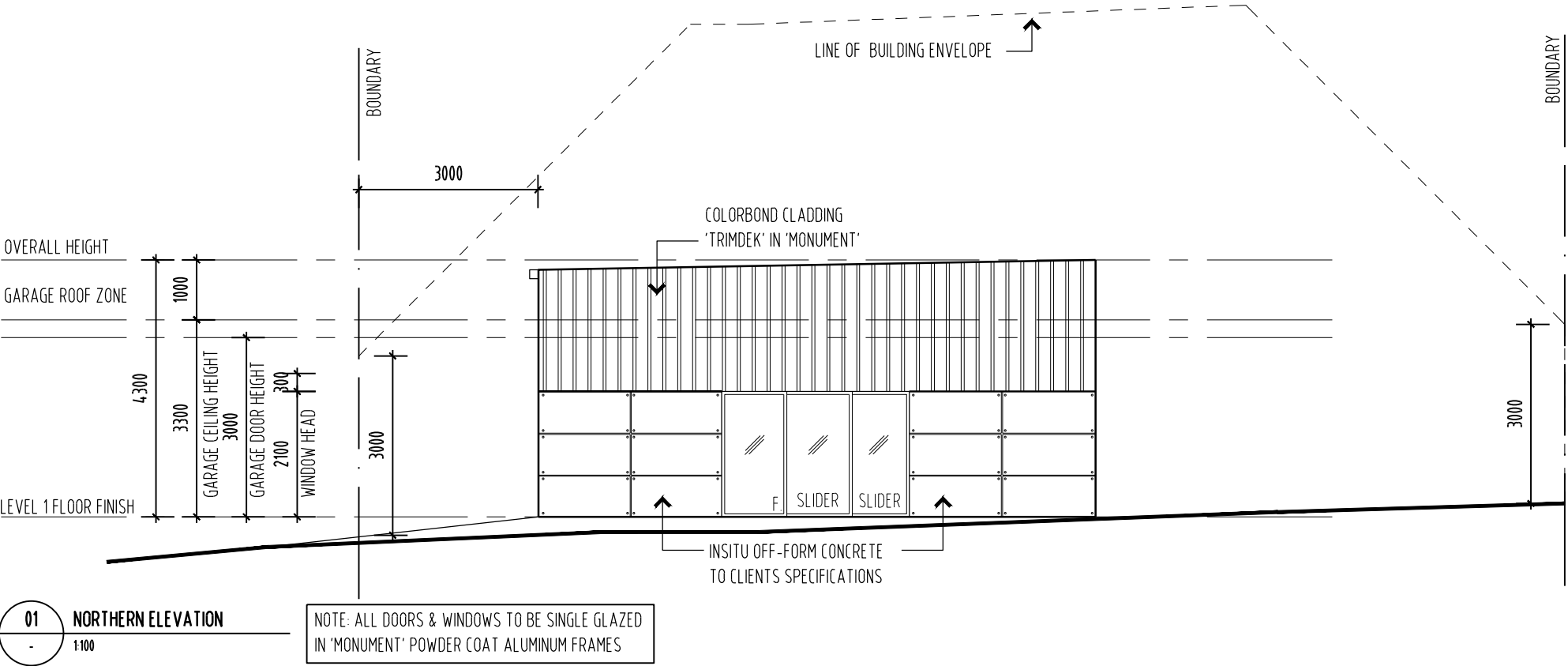


01 SHED - LEVEL 1 PLAN
- 1:100



01 SHED - ROOF PLAN
- 1:100





REVISION			
No	DATE	DESCRIPTION	BY CHECK
A	29/01/19	DEVELOPMENT APPLICATION	mb mb
B	13/02/19	RESPONSE TO RFI	mb mb

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DRAWING TITLE:

SHED
NORTHERN & EASTERN
ELEVATIONS

DRAWN: MB

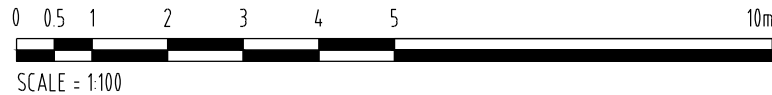
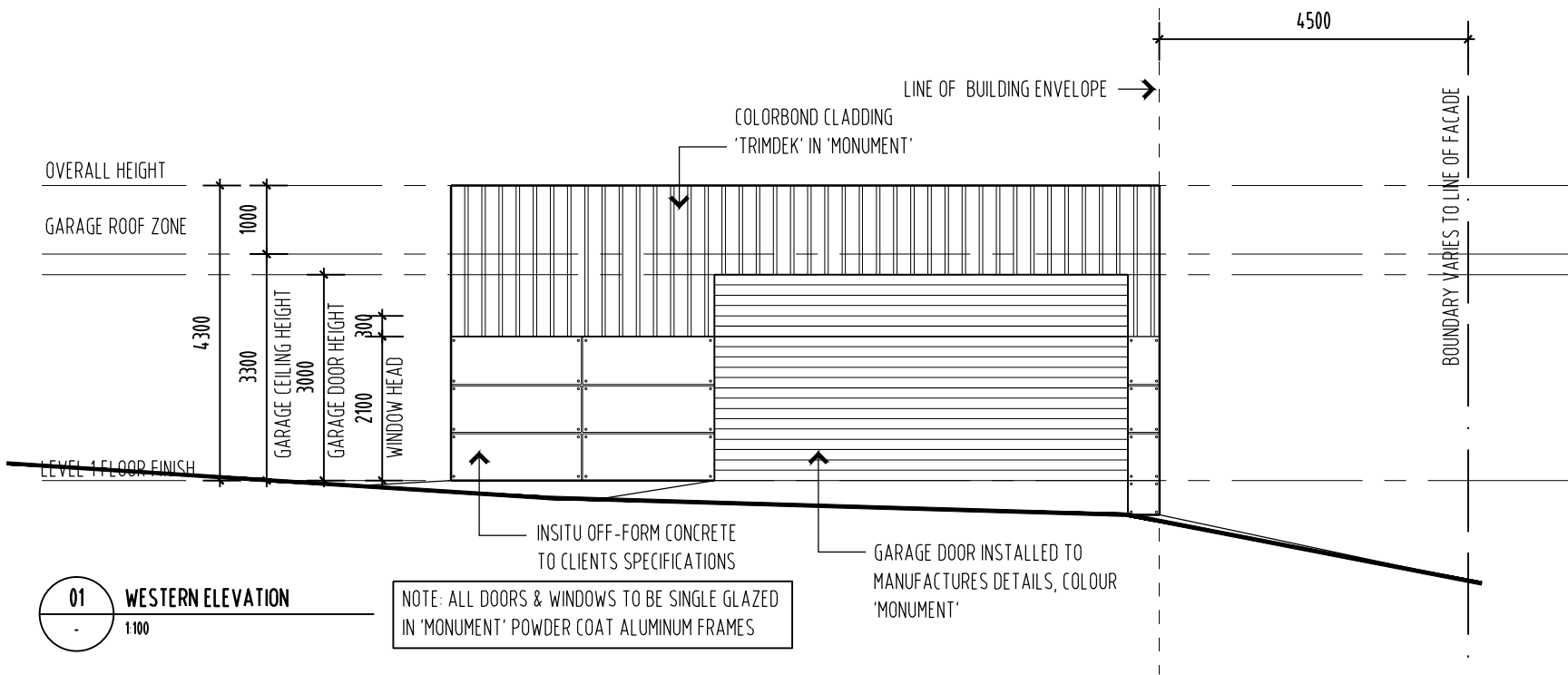
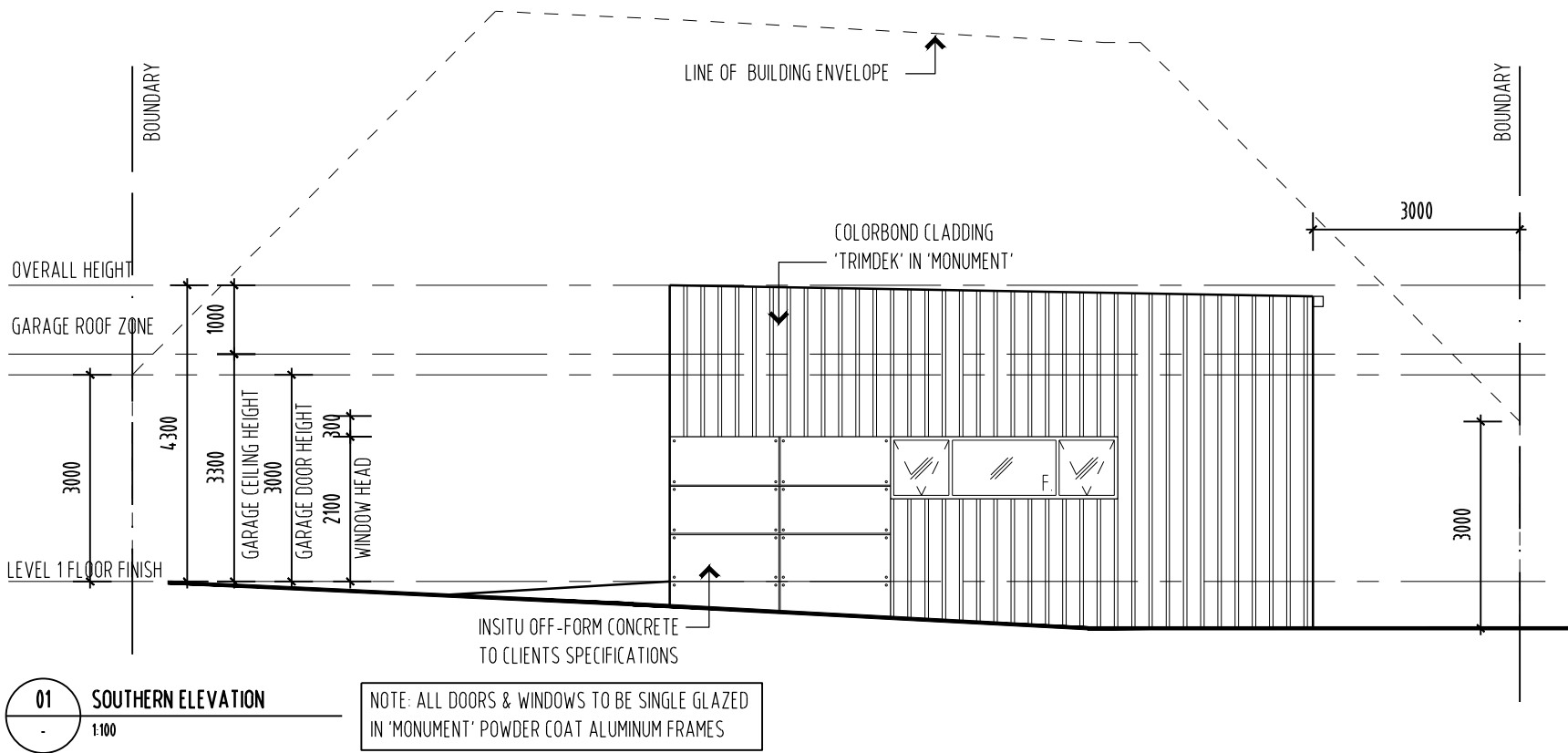
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PROJECT NO. 1840

DRAWING NO. A-DA-11 B



REVISION			
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DRAWING TITLE:

SHED
SOUTHERN & WESTERN
ELEVATIONS

DRAWN: MB

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PROJECT NO. 1840

DRAWING NO. A-DA-12 B

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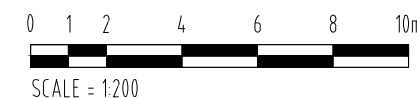
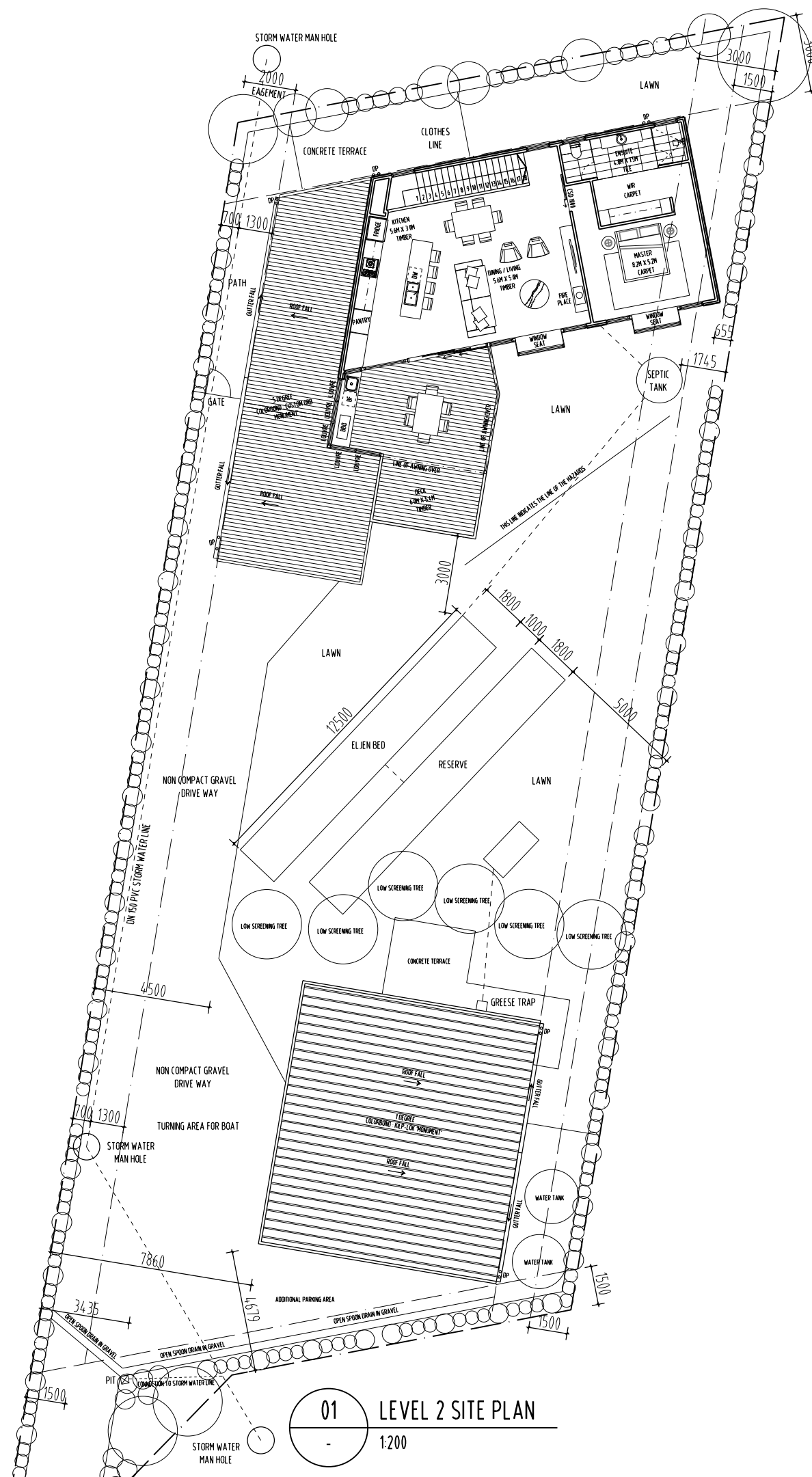


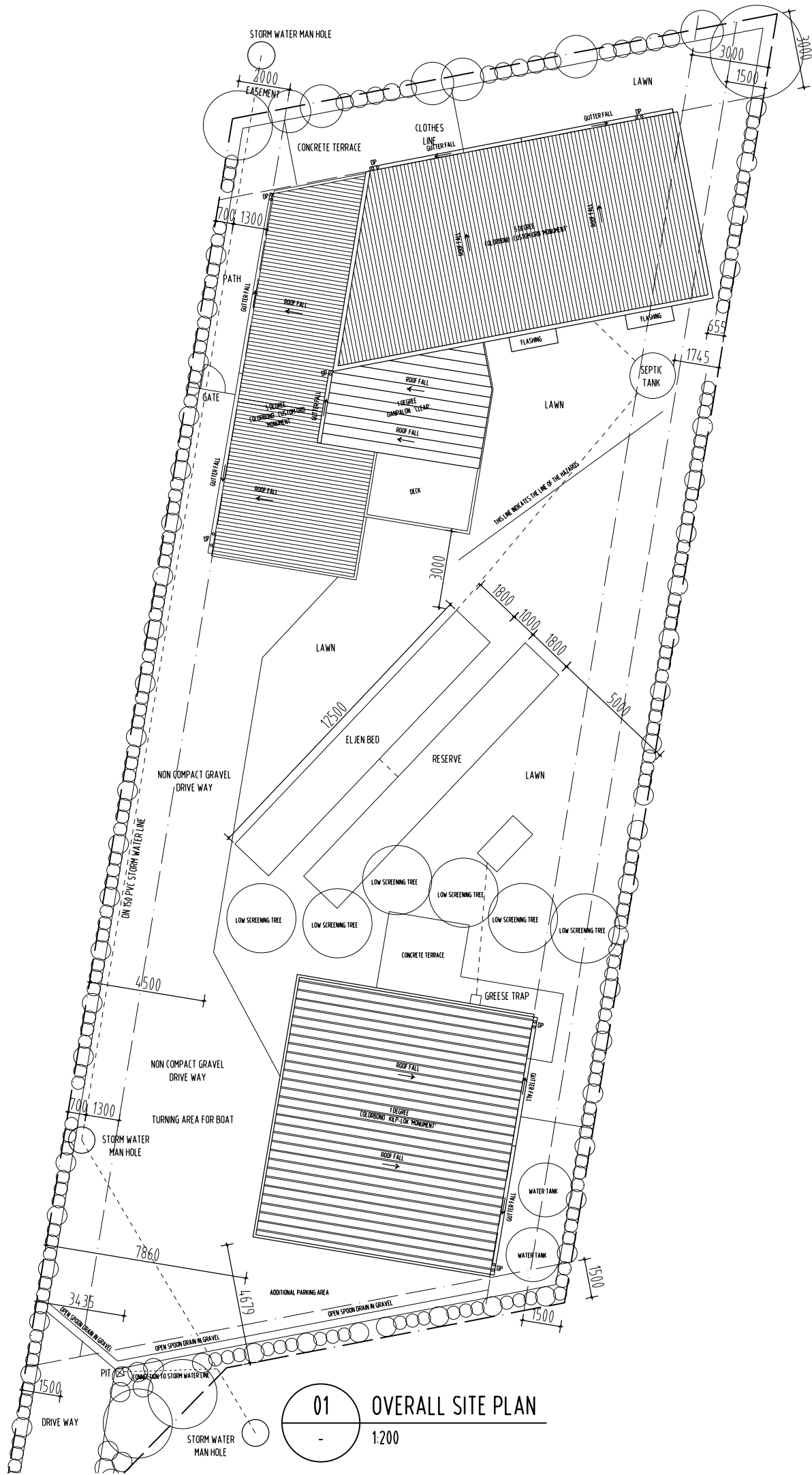
PROJECT NAME:
PRIVATE RESIDENCE
91 ESPLANADE
COLES BAY

DRAWING TITLE:

LEVEL 2
SITE PLAN

SCALE:	1:200 @ A3
DATE:	OCTOBER_2018
PROJECT NO.	1840
DRAWING NO.	A-DA-14





REVISION

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B	13/02/19	RESPONSE TO RFI	mb	mb

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COLES BAY

DRAWING TITLE:

OVERALL
SITE PLAN

DRAWN:

MB

CHECKED:

MB

SCALE:

1:200 @ A3

DATE:

OCTOBER 2018

PROJECT NO.

1840

DRAWING NO.

A-DA-15

B

