Office: 9 Melbourne Street,
Postal: PO Box 6 Triabunna 7190
Phone: 6256 4777 Fax: 6256 4774
Email: planning@freycinet.tas.gov.au
Web: www.gsbc.tas.gov.au
ABN: 95 641 533 778

Application for Planning Approval

OFFICE USE ONLY	
DATE RECEIVED:	PID:
FEE	RECEIPT No:
DA:	PROPERTY FILE:

Advice:

Use this form for all no permit required, permitted and discretionary planning applications including subdivision, planning scheme amendment & minor amendments to permits.

For visitor accommodation in the General Residential, Low Density Residential, Rural Living, Environmental Living or Village Zone use the sharing economy form available on the Council website.

Completing this form in full will help ensure that all necessary information is provided and avoid any delay. The planning scheme provides details of what other information may be required at clause 8.1 and in each applicable Code.

Please provide the relevant details in each applicable section by providing the information or circling Yes or No as appropriate. If relevant details are provided on plans or documents please refer to the drawing number or other documents in this form.

Often, it is beneficial to provide a separate written submission explaining in general terms what is proposed and why and to justify the proposal against any applicable performance criteria.

If you have any queries with the application form or what information is required please contact the office.

Details of Applicant & Owner

Applicant:	Jennifer Binns				
Contact person: (if different from applicant)					
Address:	Level 1 48 Cecilia Street			Phone	
	St Helens	TAS	7216	Fax:	
Email:	jenniferbinns@bigpond.com			Mobile:	0439 765 452
Do you wish for all correspondence to be sent solely by email?				Yes ☒	No ☐

Owner: (if different from applicant)	Matthew + Lauren Youd				
Address:	126 Abbott Street			Phone:	
	Newstead	TAS	7250	Fax:	
Email:	mjyoud@gmail.com			Mobile:	0457036850

Application for Planning Approval

Details of Site and Application

Please note, if your application is discretionary the following will be placed on public exhibition.

Site Details

Address / Location of Proposal: 29 Oyster Bay Court			
		Suburb Coles Bay Post Code 7215	
Size of site	1556 m^2	or	Ha
Certificate of Title(s):	52469/48		

Current use of site:	Vacant

General Application Details

Complete for All Applications

☒	New Dwelling	☐	Change of use
☐	Additions / Alterations to Dwelling	☐	Intensification or modification of use
☐	New Outbuilding or Addition	☐	Subdivision or boundary adjustment
☐	New Agricultural Building	☐	Minor amendment to existing permit DA …… / …..
☐	Commercial / Industrial Building	☐	Planning Scheme Amendment

Estimated value of works (design & construction)	$ 600,000

Describe the order and timing of any staged works:	N/A or N/A

General Background Information

Please state the name of any Council officers that you have discussed this proposal with:	Officer's name : or N/A	
Is the site listed on the Tasmanian Heritage Register?	Yes ☐	No ☒
Have any potentially contaminating activities ever occurred on the site? *If yes, please provide a separate written description of those activities.*	Yes ☐	No ☒
Is the proposal consistent with any restrictive covenants or Part 5 agreements that apply to the site?	Yes ☐	No ☐

Does the proposal involve any of the following?		
Type of development		**Brief written description if not clearly shown on the plans:**
Partial or full demolition	☐ **Yes** ☒ **No**	
Fencing	☐ **Yes** ☒ **No**	
New or upgraded vehicle / pedestrian access	☐ **Yes** ☒ **No**	
New or modified water, sewer, electrical or telecommunications connection	☒ **Yes** ☐ **No**	
Retaining walls	☐ **Yes** ☒ **No**	
Cut or fill	☐ **Yes** ☒ **No**	
Signage	☐ **Yes** ☒ **No**	
New car parking	☒ **Yes** ☐ **No**	
Vegetation removal	☒ **Yes** ☐ **No**	

Existing floor area 0. m^2	Proposed floor area 369.6.m^2

Number of existing car parking on site 0	Number of proposed car parking on site 4

Describe the width & surfacing of vehicular access (existing or proposed) and how drainage/runoff is collected and discharged:	existing concrete kerb + gravel crossover
If vehicular access is from a road sign-posted at more than 60 km/hr, please state the sight distance in both directions:	N/A or N/A

Please note, if a gravel driveway is proposed from a sealed public road please address the following clause (E6.7.6 P1):

Parking spaces and vehicle circulation roadways must not unreasonably detract from the amenity of users, adjoining occupiers or the quality of the environment through dust or mud generation or sediment transport, having regard to all of the following:

(i) the suitability of the surface treatment;
(ii) the characteristics of the use or development;
(iii) measures to mitigate mud or dust generation or sediment transport.

Will stormwater from buildings and hardstand areas be managed by: (details should be clearly shown / noted on plans)	Discharge to a main: …….....	Yes / ☒ N/A ☐
	Discharge to kerb & gutter: ……..…	Yes ☐ / N/A ☐
	Discharge to roadside table drain:...	Yes ☐/ N/A ☐
	Discharge to natural watercourse: ..	Yes ☐/ N/A ☐

	Retained on site: ……..	Yes ☐ / N/A ☐

Materials				
External building material	Walls:	FC cladding	Roof:	colorbond
External building colours	Walls:	grey	Roof:	grey
Fencing materials:	n/a	Retailing wall materials:		n/a

For all outbuildings

Describe for what purpose the building is to be used:	
Describe any intended toilet, shower, cooking or heating to be installed:	
If the building is to be used wholly or partly as a domestic workshop, what type of tools and machines will be used?	

For all non-residential applications

Hours of Operation						
Current hours of operation	Monday to Friday:		Saturday:		Sunday & Public holidays:	
Proposed hours of operation	Monday to Friday:		Saturday:		Sunday & Public holidays:	

Number of Employees			
Current Employees Total:		Maximum at any one time:	
Proposed Employees Total:		Maximum at any one time:	

Describe any delivery of goods to and from the site, including the types of vehicles used and the estimated average weekly frequency:	or N/A
Describe current traffic movements into the site, including the type & timing of heavy vehicle movements & any proposed change:	or N/A
Describe any hazardous materials to be used or stored on site:	or N/A
Describe the type & location of any large plant or machinery used (refrigeration, generators)	or N/A
Describe any retail and/or storage of goods or equipment in outdoor areas:	or N/A
Describe any external lighting proposed:	or N/A

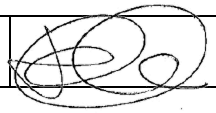
Personal Information Protection Statement:

The personal information that Council is collecting form you is deemed personal information for the purposes of the *Personal Information Protection Act 2004*. The intended recipients of personal information collected by Council may include its officers, agents or contractors or data service providers. The supply of the information by you is voluntary. If you cannot provide or do not wish to provide the information sought, Council may be unable to process your application. Council is collecting this personal information from you for the purposes of managing, addressing, advising upon and determining the application and other related Council matters.

Declaration:

I/we hereby apply for planning approval to carry out the use or development described in this application and the accompanying documents and declare that: -

- The information in this application is true and correct.
- In relation to this application, I/we agree to allow Council employees or consultants to enter the site in order to assess the application.
- I/we confirm that I/we are the copyright holder or have the authority to sign on behalf of any person with copyright for documents to this application and authorities Council to provide a copy of this application to any person for assessment or statutory consultation.
- I/we authorise Council to provide a copy of any documents relating to this application to any person for the purpose of assessment or public consultation and agree to arrange for the permission of the copyright owner of any part of this application to be obtained.
- I acknowledge that if the application is discretionary that the application will be exhibited in the Council offices and on the Council website.
- I/We declare that the Owner has been notified of the intention to make this application in accordance with section 52(1) of the *Land Use Planning and Approvals Act 1993*.

Signature:		Date:	03.10.18

If application is not the owner

If the applicant is not the owner, please list all persons who were notified of this application pursuant to section 52 of the *Land Use Planning and Approvals Act 1993*.

Name:	Method of notification:	Date of notification:
Matthew Youd	email	03.10.18

If application is on or affect Council or Crown owned or administered land

If land affected by this application is owned or administered by the Crown or Council then the written permission of the relevant Minister (or their delegate) and/or the General Manager must provided and that person must also sign this application form below:

I . being responsible for the administration of land at declare that I have given permission for the making of this application by for use and/or development involving

Signature: Date:

It is the applicant's responsibility to obtain any such consent prior to lodgement. Written requests for consent of the Council must be sent to General Manager. Request for Ministerial consent should be directed to the relevant department.

CHECKLIST OF APPLICATION DOCUMENTS
Taken from Section 8 of the Planning Scheme

An application must include:

(a) details of the location of the proposed use or development;
(b) a copy of the current certificate of title for the site to which the permit sought is to relate, including the title plan and any schedule of easements;
(c) a full description of the proposed use or development; and
(d) a description of the manner in which the proposed use or development will operate.

In addition to the above Council may, in order to enable it to consider an application, request such further or additional information as considered necessary or desirable to satisfy Council that the proposal will comply with any relevant standards, including:

(a) a site analysis and site plan at an acceptable scale showing:
    (i) the existing and proposed use(s) on the site;
    (ii) the boundaries and dimensions of the site;
    (iii) topography including contours showing AHD levels and major site features;
    (iv) natural drainage lines, watercourses and wetlands on or adjacent to the site;
    (v) soil type;
    (vi) vegetation types and distribution, and trees and vegetation to be removed;
    (vii) the location and capacity of any existing services or easements on the site or connected to the site;
    (viii) existing pedestrian and vehicle access to the site;
    (ix) the location of existing and proposed buildings on the site;
    (x) the location of existing adjoining properties, adjacent buildings and their uses;
    (xi) any natural hazards that may affect use or development on the site;
    (xii) proposed roads, driveways, car parking areas and footpaths within the site;
    (xiii) any proposed open space, communal space, or facilities on the site;
    (xiv) main utility service connection points and easements;
    (xv) proposed subdivision lot boundaries, where applicable.
(b) where it is proposed to erect buildings, a detailed layout plan of the proposed buildings with dimensions at a scale of 1:100 or 1:200 showing:
    (i) the internal layout of each building on the site;
    (ii) the private open space for each dwelling;
    (iii) external storage spaces;
    (iv) car parking space location and layout;
    (v) major elevations of every building to be erected;
    (vi) the relationship of the elevations to natural ground level, showing any proposed cut or fill;
    (vii) shadow diagrams of the proposed buildings and adjacent structures demonstrating the extent of shading of adjacent private open spaces and external windows of buildings on adjacent sites;
    (viii) materials and colours to be used on roofs and external walls.
(c) where it is proposed to erect buildings, a plan of the proposed landscaping:
    (i) planting concept;
    (ii) paving materials and drainage treatments and lighting for vehicle areas and footpaths; and
    (iii) plantings proposed for screening from adjacent sites or public places.

GUIDELINES FOR DEVELOPMENT IN AREAS WITHIN THE GLAMORGAN SPRING BAY COUNCIL (GSBC) BIODIVERSITY PROTECTION AREA OR IN AREAS CONTAINING NATIVE VEGETATION

Who should read these guidelines?

If you are planning to build or undertake a development on a property within the GSBC 'Biodiversity Protection Area' (see below for definition) or land containing **any** native vegetation, AND your development requires the clearing of **any** native vegetation (including for driveways and outbuildings), then these guidelines are for you.

What is the GSBC Biodiversity Protection Area?

The GSBC Biodiversity Protection Area (BPA) incorporates land that is also zoned for a variety of uses, for example, 'rural living' and 'rural resource'. The BPA contains native vegetation and consequently supports 'biodiversity' (or 'natural') values. These values can be classified as high priority, medium priority or low priority depending on the type of vegetation or the species of plants and animals and their habitat that occur on the land.

The purpose of these guidelines

The purpose of these guidelines is to provide advice in order to save you any unexpected delays in your development – and probably save you time and money in the long run. These guidelines should be considered prior to submitting any Development Application to Council.

Background

The GSB Municipality is renowned for its unique biodiversity (short for biological diversity) and within it there are many 'hotspots' for threatened species, or in other words, those species that are at risk of extinction. Threatened species include both plants and animals (or flora and fauna). The Municipality also contains a number of vegetation types (or vegetation communities) that are also threatened with risk of extinction. Threatened flora, threatened fauna (including their 'core' habitat) and threatened vegetation communities are protected under various State and/or National legislation.

Requirements for a Development Application

If your property contains, or is likely to contain, any threatened species or communities that may be impacted by your development, or if you want to clear a substantial area of non-threatened native vegetation, then you are likely to be required to submit to Council a 'Natural Values Survey Report' (also known as an 'Ecological Assessment' or 'Flora and Fauna Report') along with your Development Application.
However, just because your property contains threatened species or communities, or you wish to clear any native vegetation, this does **not** necessarily mean that you cannot undertake the development.
The purpose of a 'Natural Values Survey Report' is to determine the species and communities present in relation to the location of your proposed development and to provide recommendations including:

- How any potential impacts on natural values can be avoided, minimised or remedied on site,
- If the above is not feasible, then how potential impacts can be mitigated and how any residual impacts can be offset,
- Advises whether you will require permits under various legislation.

Determining if you need a 'Natural Values Survey Report'

Step 1:

Contact the Natural Resource Management (NRM) Department at GSBC, providing your PID (Property Identification Number) and a broad description of your proposed development.
The NRM Department will make a determination as to whether or not a 'Natural Values Survey Report' will be required. This decision will in no way be an arbitrary decision but will be based on the best current scientific knowledge available through various Government databases. This knowledge is also available to the general public such as through the following links:

www.naturalvaluesatlas.tas.gov.au
www.thelist.tas.gov.au
www.threatenedspecieslink.tas.gov.au

If a 'Natural Values Survey Report' is not required then proceed with your Development Application.

Step 2:

If a 'Natural Values Survey Report' is required then contact a reputable environmental consultant to undertake a survey and provide you with a report.
Any reputable consultant will know that they are required to provide a report that is consistent with DPIPWE's 'Guidelines for Natural Values Surveys – Terrestrial Development Proposals', which can be found at:

http://dpipwe.tas.gov.au/Documents/Guidelines%20for%20Natural%20Values%20Surveys%20related%20to%20Development%20Proposals.pdf

Appropriate consultants are listed in the yellow pages under Environmental Consultants or can be found on the web. It is advisable to ask for quotes from two or more consultants.

Step 3:

Fill out your Development Application with consideration to the recommendations provided in your 'Natural Values Survey Report'.

Step 4:

Submit your Development Application together with your 'Natural Values Survey Report' to Council.

Relevant legislation

Threatened species are protected under one or both of the following pieces of legislation:

- Tasmanian *Threatened Species Protection Act 1995*.
- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

Threatened vegetation communities are protected under the:

- Tasmanian Nature Conservation Act 2002.

Other legislation relevant to the protection and management of native forest:

- Tasmanian Forest Practices Act 1985.

Legislation relating to noxious weeds and their impact on native vegetation:

- Tasmanian Weed Management Act 1999.

For questions relating to any other aspect of the Development Application process contact the Council's Planning Department on 6256 4777

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
52469	48
EDITION	DATE OF ISSUE
5	31-Jul-2018

SEARCH DATE : 03-Oct-2018
SEARCH TIME : 11.38 AM

DESCRIPTION OF LAND

Parish of MEREDITH, Land District of GLAMORGAN
Lot 48 on Sealed Plan 52469
Derivation : Part of 655 Acres Gtd to S.W. Roberts
Prior CT 4851/59

SCHEDULE 1

M704507 TRANSFER to MATTHEW JOSEPH YOUD and LAUREN LOUISE YOUD Registered 31-Jul-2018 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP 52469 EASEMENTS in Schedule of Easements
SP 52469 COVENANTS in Schedule of Easements
SP 52469 FENCING COVENANT in Schedule of Easements
SP 6472 FENCING PROVISION in Schedule of Easements
E145145 MORTGAGE to Australia and New Zealand Banking Group Limited Registered 31-Jul-2018 at 12.01 PM

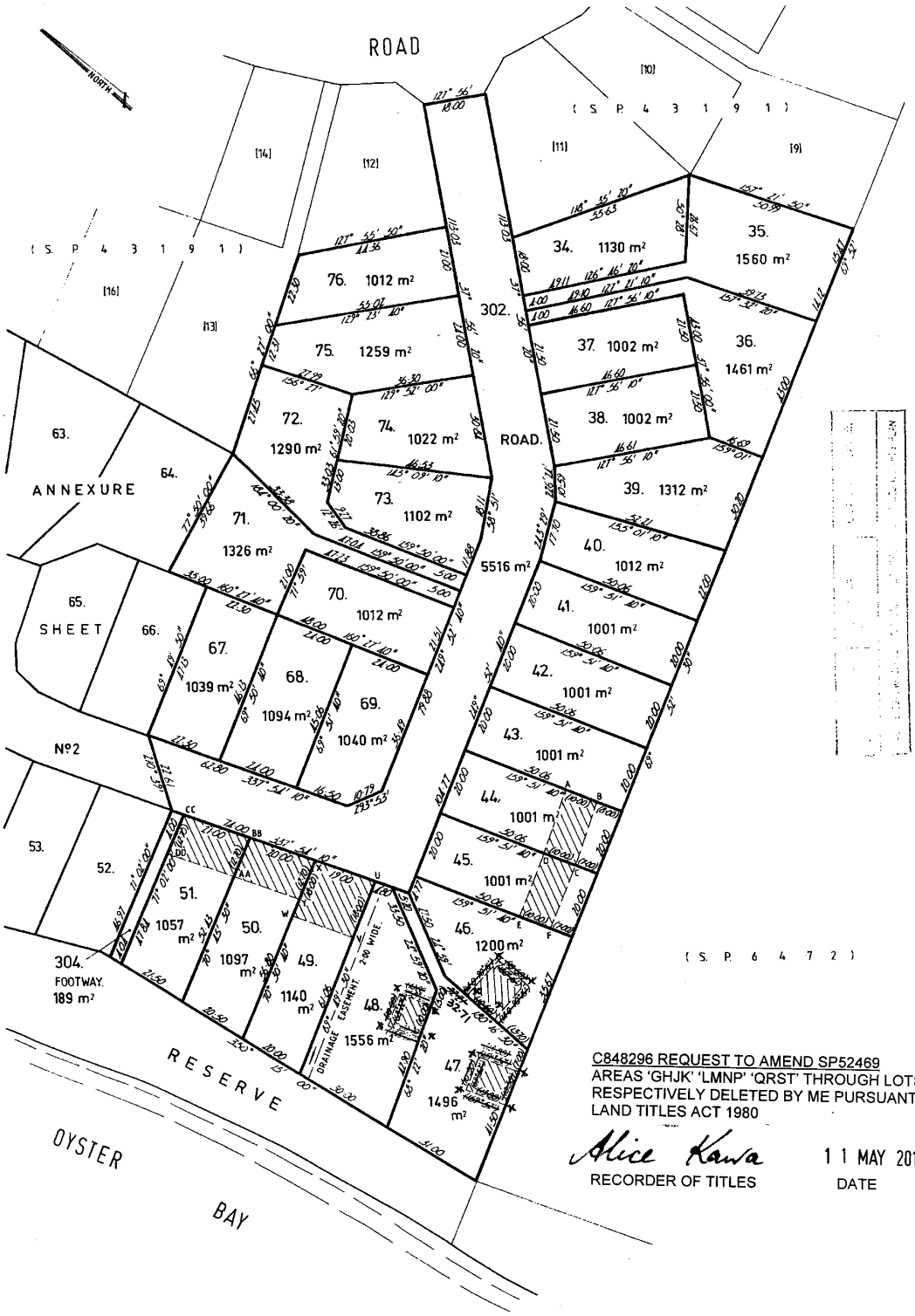
UNREGISTERED DEALINGS AND NOTATIONS

NOTICE: This folio is affected as to amended covenants pursuant to Request to Amend No. C848296 made under Section 103 of the Local Government (Building and Miscellaneous Provisions) Act 1993. Search Sealed Plan No. 52469 Lodged by DOUGLAS & COLLINS on 18-Mar-2010 BP: C848296

Owner: *Areasa Holdings Proprietary Limited*	**PLAN OF SURVEY** by Surveyor G.J.WALKEM — G.J.WALKEM & CO.P/L. of land situated in the LAUNCESTON.	Registered Number: **SP52469**
Title Reference: *C.T. 4651-2.*	LAND DISTRICT OF GLAMORGAN PARISH OF MEREDITH	~~Approved~~ Effective from: 22 JAN 1992 Recorder of Titles
Grantee: *Part of 655 Acres Gtd. to Samual Walls Roberts & Peter Johnstone Sinclair.*	SCALE 1:1500. MEASUREMENTS IN METRES	

16 238/9

ANNEXURE SHEET No.1 (of 2 annexures) to plan by Surveyor	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated ? and that certificate extends to the detail shown on this sheet.	Registered Number: SP52469
Signed for the purposes of identification	Surveyor G.J. WALKEM	Scale 1:1000
Council Clerk	Owner: Areasa Holdings Proprietary Limited.	Measurements in Metres
	Title Reference: C.T. 4651-2.	

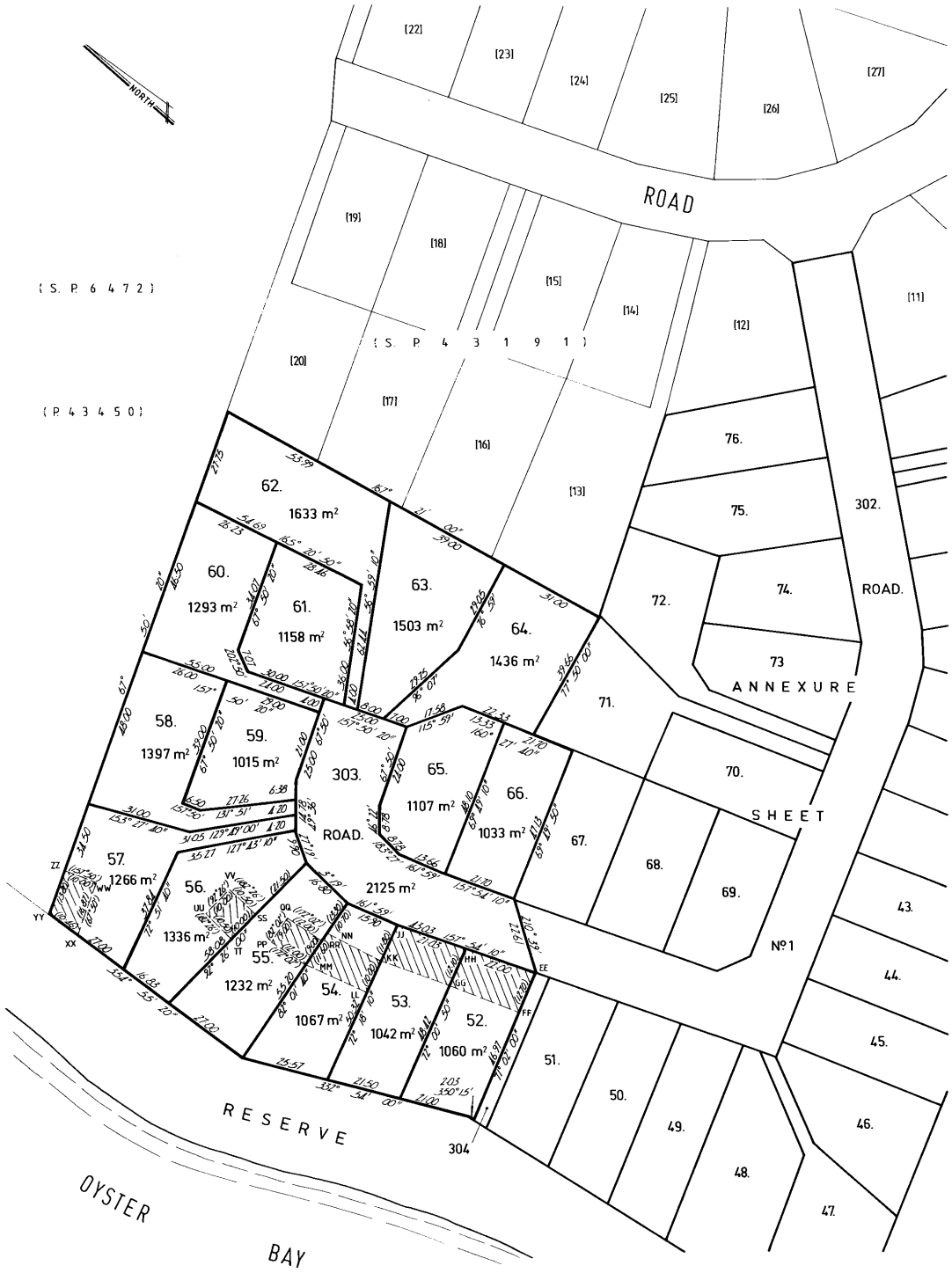


C848296 REQUEST TO AMEND SP52469
AREAS 'GHJK' 'LMNP' 'QRST' THROUGH LOTS 46,47 & 48
RESPECTIVELY DELETED BY ME PURSUANT TO SEC.103
LAND TITLES ACT 1980

Alice Kawa
RECORDER OF TITLES

11 MAY 2010
DATE

ANNEXURE SHEET No. 2 (of 2 annexures) to plan by Surveyor	This sheet contains detailed drawings of parcels shown on the index plan to which it is attached, which plan is verified by my certificate dated and that certificate extends to the detail shown on this sheet.	Registered Number: SP52469
Signed for the purposes of identification	Surveyor G. J. WALKEM	Scale 1:1000
Council Clerk	Owner: Arcase Holdings Proprietary Limited.	Measurements in Metres
	Title Reference: C.T. 4651-2.	



SCHEDULE OF EASEMENTS

PLAN NO. SP52469

NOTE:—The Town Clerk or Council Clerk must sign the certificate on the back page for the purpose of identification.

The Schedule must be signed by the owners and mortgagees of the land affected. Signatures should be attested.

EASEMENTS AND PROFITS

Each lot on the plan is together with:—

(1) such rights of drainage over the drainage easements shewn on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and

(2) any easements or profits à prendre described hereunder.

Each lot on the plan is subject to:—

(1) such rights of drainage over the drainage easements shewn on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and

(2) any easements or profits à prendre described hereunder.

The direction of the flow of water through the drainage easements shewn on the plan is indicated by arrows.

Lot 48 is subject to a right of drainage over the DRAINAGE EASEMENT 2.00 WIDE marked on the plan for the benefit of lots 34 - 47 (inclusive) 49 - 76 (inclusive) 302 & 304.

A. COVENANTS

The owner of each lot covenants with Areese Holdings Pty. Ltd. ("the Vendor") and the owners for the time being of every lot shown on the plan to the intent that the burden of this covenant may run with and bind the Covenantor's lot and every part thereof and that the benefit thereof shall be annexed to and devolve with each and every part of every other lot shown on the plan to observe the following stipulations:

1. Not to erect on such lot any dwelling house smaller than 70 square metres excluding outbuildings usually appurtenant thereto.

2. That no structure or building or outbuilding shall be erected placed or suffered on lot 44 within the area marked ABCD on the plan save and except a boundary fence.

3. That no structure or building or outbuilding shall be erected placed or suffered on lot 45 within the area marked CDEF on the plan save and except a boundary fence.

~~4. That no structure or building or outbuilding shall be erected placed or suffered on lot 46 within the area marked GHJK on the plan save and except a boundary fence.~~

4. Not to install any waste water disposal system on Lot 46 other than an aerated water treatment system approved by the Glamorgan Spring Bay Council.

5. Not to replace any waste water disposal system on Lot 47 with any system other than an aerated water treatment system approved by the Glamorgan Spring Bay Council.

6. Not to install any waste water disposal system on Lot 48 other than an aerated water treatment system approved by the Glamorgan Spring Bay Council.

~~5. That no structure or building or outbuilding shall be erected placed or suffered on lot 47 within the area marked LMNP on the plan save and except a boundary fence.~~

~~6. That no structure or building or outbuilding shall be erected placed or suffered on lot 48 within the area marked QRST on the plan save and except a boundary fence.~~

7. That no structure or building or outbuilding shall be erected placed or suffered on lot 49 within the area marked UVWX on the plan save and except a boundary fence.

8. That no structure or building or outbuilding shall be erected placed or suffered on lot 50 within the area marked XYAABB on the plan save and except a boundary fence.

9. That no structure or building or outbuilding shall be erected placed or suffered on lot 51 within the area marked AABBCCDD on the plan save and except a boundary fence.

10. That no structure or building or outbuilding shall be erected placed or suffered on lot 52 within the area marked EEFFGGHH on the plan save and except a boundary fence.

11. That no structure or building or outbuilding shall be erected placed or suffered on lot 53 within the area marked HHGGKKJJ on the plan save and except a boundary fence.

12. That no structure or building or outbuilding shall be erected placed or suffered on lot 54 within the area marked ~~MMPPQQRR~~ on the plan save and except a boundary fence.

13. That no structure or building or outbuilding shall be erected placed or suffered on lot 55 within the area marked MMNNQQPP on the plan save and except a boundary fence.

14. That no structure or building or outbuilding shall be erected placed or suffered on lot 56 within the area marked SSTTUUVV on the plan save and except a boundary fence.

15. That no structure or building or outbuilding shall be erected placed or suffered on lot 57 within the area marked WWXXYYZZ on the plan save and except a boundary fence.

16. That with regard to each of Lots 49 - 57 (inclusive) no structure or building including all outbuildings nor any projection being part of or attached to any such structure building or outbuilding shall be erected placed or suffered on any part of a lot so as to be of a height of more than five metres above the highest point of the natural ground level of such lot.

17. Not to remove any trees or vegetation from such lot or any part thereof except such as may be necessary for the construction of a

Covenants 4, 5 & 6 hereon amended by me pursuant to Request to Amend No. C848296 made under Section 103 of Local Government (Building & Miscellaneous Provisions) Act 1993

11/5/2010 Alice Kawa Recorder of Titles

road or driveway or for levelling or filling such lot or for the construction of any building without the consent in writing of the Municipality of Glamorgan first had and obtained.
The Vendor reserves the right for itself or assigns to sell lease or otherwise deal with any lot either subject to the above restrictive covenants or any of them or not and subject to such modification or amendments or full release thereof as the Vendor thinks fit and the exercise of the said right in relation to any lot shall not release the owner of any other lot from any of the conditions or covenants imposed upon such other lots or give the owner of any lot any right of action against the Vendor.

B. FENCING COVENANT

The Owner of each lot (except Lot 302) covenants with the Vendor that the Vendor shall not be required to fence.

THE COMMON SEAL of AREESE HOLDINGS PTY. LTD. as registered proprietor of the land comprised in Certificate of Title Volume 4651 Folio 2 was hereunto affixed by order of the Board of Directors in the presence of:

.....) DIRECTOR

.....) SECRETARY

COMMON SEAL
AREESE HOLDINGS PTY. LIMITED
A.C.N. 009 500 145

S 2469.

This is the schedule of easements attached to the plan of Arcese Holdings (*Insert Subdivider's Full Name*)

Pty. Ltd. affecting land in

C.T. 4651. 2 (*Insert Title Reference*)

Sealed by The Municipality of Glamorgan on 24th December 1991

Solicitor's Reference .....

Council Clerk/~~Town Clerk~~

OS-K 3134

GEO-ENVIRONMENTAL ASSESSMENT

29 Oyster Bay Court

Coles Bay

September 2018

GEO-ENVIRONMENTAL

SOLUTIONS

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

Introduction

Client: Matt Youd
Date of inspection: 08/03/2018
Location: 29 Oyster Bay Court, Coles Bay
Land description: Approx. 1548m^2 residential lot
Building type: Proposed new units x2
Investigation: GeoProbe540UD
Inspected by: G. McDonald

Background information

Map: Mineral Resources Tasmania – SE Sheet 1:250 000
Rock type: Jurassic Dolerite
Soil depth: ~0.60-0.90m
Planning overlay: Biodiversity Protection area. Waterway and Coastal Protection Area.
Local meteorology: Annual rainfall approx. 600 mm
Local services: Tank water, with on-site waste water disposal

Site conditions

Slope and aspect: Approx. 15-20% slope to the West, 15% in wastewater area
Site drainage: Imperfect drainage
Vegetation: Mixed pasture and native species
Weather conditions: Cloudy, <5mm rainfall received in preceding 7 days.
Ground surface: Slightly moist sandy surface, disturbed appearance

Investigation

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

Profile Summaries

Hole 1 Depth (m)	Hole 2 Depth (m)	Horizon	Description
0 – 0.20	0 – 0.30	A1	Dark Grey **SAND (SW)**, trace of clay, single grain, slightly moist, loose consistency, ~10% stones and gravels, disturbed appearance, abundant fine roots, clear boundary to
0.20 – 0.90	0.30 – 0.60	B1	Brown **CLAY (CL)**, moderate polyhedral structure, slightly moist, stiff consistency, medium plasticity, ~10% gravels, refusal on rock
0.90	0.60	C	Rock

Soil Profile Notes

The soil has developed over Jurassic dolerite and consists of sands overlying moderately plastic clays. The soil is likely to exhibit only slight ground surface movement with moisture fluctuations due to the shallow depth to bedrock. It is recommended footings are placed onto rock where possible.

Site Classification

According to AS2870-2011 for construction the natural soil is classified as **Class M**, that is a moderately reactive site. Design and construction must adhere to 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:	**NS**
Topographic Classification:	**T2**
Wind Classification:	**N3**
Design Wind Gust Speed ($V_{h,u}$)	**50 m/sec**

Wastewater Classification & Recommendations

According to AS1547-2012 for on-site wastewater management the soil on the property is classified as **Light Clay (category 5)** with a Design Loading Rate (DLR) for secondary treated effluent of 12L/m^2/day. Due to the shallow depth to bedrock and limited area available for wastewater disposal, the site is not suitable for a traditional septic tank and absorption trenches and a secondary treatment system (e.g. AWTS and absorption bed) will need to be installed.

The proposal is to construct 1x two bedroom unit and 1x 3 bedroom unit and connect both units to a single wastewater system. The proposed units will have a calculated maximum wastewater loading of 1080L/day. This is based on tank water supply and a maximum occupancy of 4 people in the 2 bedroom unit (480L/day) 5 people in the 3 bedroom unit (600L/day) at 120L/day/person. Given a loading of 1080L/day, and a DLR for secondary treated effluent of 12L/m^2/day, then an absorption bed area of 90m^2 is required to accommodate the expected flows. This may be installed as one 20m x 4.5m x 0.4m raised absorption bed connected to an AWTS unit. Due to the shallow depth to bedrock, additional sandy loam (min 200mm) will need to be added to the absorption area and a retaining wall will need to be added to the

A cut-off diversion drain will be required upslope of the absorption area and the area excluded from traffic or any future building works. 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 following setback distances are required to comply with the Building Act 2016:

Upslope or level buildings:	3m
Downslope buildings:	4.5m
Upslope or level boundaries:	1.5m
Downslope boundaries:	3
Downslope surface water:	35m

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

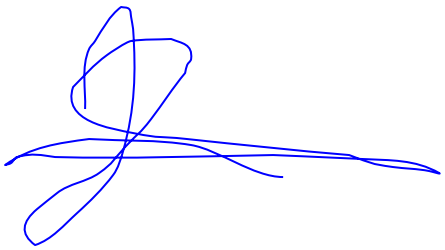
A risk analysis has been conducted for the downslope boundary setback on the site (see highlighted sections attached) and the wastewater design has been deemed to be low risk due to:

- >Subsurface application
- > 1500m^2 site area

Construction Recommendations

The natural soil onsite is classified according to AS2870-2011 as **Class S**, that is a slightly reactive sandy site with little estimated characteristic surface movement. It is recommended footings are placed onto bedrock where possible. Consideration should be given to drainage and sediment control on site during and after construction to minimise loss of the sandy materials on site

It is recommended that GES be notified of any major variation to the soil conditions or wastewater loading as predicted in this report.



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

GES

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	Matt Youd	Assess. Date	3-Sep-18
		Ref. No.	
Assessed site(s)	29 Oyster Bay Court, Coles Bay	Site(s) inspected	8-Mar-18
Local authority	Glamorgan-Spring Bay	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 = 1,080 (using a method independent of the no. of bedrooms)

Septic tank wastewater volume (L/day) = 360

Sullage volume (L/day) = 720

Total nitrogen (kg/year) generated by wastewater = 3.9

Total phosphorus (kg/year) generated by wastewater = 2.0

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	36	36	45	36	29	46	47	40	48	44	56
Adopted rainfall (R, mm)	43	39	39	48	38	33	49	52	44	51	47	56
Retained rain (Rr, mm)	34	31	31	38	30	26	39	42	35	41	38	45
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**	**79**	**60**	**25**	**12**	**3**	**-8**	**0**	**28**	**43**	**67**	**81**

Annual evapotranspiration less retained rain (mm) = 486

Soil characterisitics

Texture = Light Clay Category = 5 Thick. (m) = 0.9

Adopted permeability (m/day) = 0.24 Adopted LTAR (L/sq m/day) = 12 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:	Evapotranspiration bed(s)
The preferred type of above-ground secondary treatment:	None
Site modifications or specific designs:	Are needed

Suggested dimensions for on-site secondary treatment system

Total length (m) =	20
Width (m) =	4.5
Depth (m) =	0.4
Total disposal area (sq m) required =	90
comprising a Primary Area (sq m) of:	90
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 12L/m2/day an absorption bed area of 90m2 is required.

GES

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	Matt Youd	Assess. Date	3-Sep-18
		Ref. No.	
Assessed site(s)	29 Oyster Bay Court, Coles Bay	Site(s) inspected	8-Mar-18
Local authority	Glamorgan-Spring Bay	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 Trench	Limitation Amended	Remarks
AA	Expected design area	sq m	150	V. high	Very high		
AA	Density of disposal systems	/sq km	50	Mod.	Very high		
	Slope angle	degrees	9	High	Moderate		
	Slope form	Straight simple		High	Low		
	Surface drainage	Imperfect		High	Moderate		
	Flood potential	Site floods <1:100 yrs		High	Very low		
	Heavy rain events	Rare		High	Low		
	Aspect (Southern hemi.)	Faces E or W		V. high	Moderate		
	Frequency of strong winds	Common		High	Low		
A	Wastewater volume	L/day	1,080	High	High		
	SAR of septic tank effluent		1.2	High	Low		
	SAR of sullage		2.1	High	Moderate		
	Soil thickness	m	0.9	V. high	Low		
A	Depth to bedrock	m	0.9	Mod.	High		
	Surface rock outcrop	%	0	V. high	Very low		
	Cobbles in soil	%	0	V. high	Very low		
	Soil pH		7.0	High	Very low		
	Soil bulk density	gm/cub. cm	1.5	High	Low		
	Soil dispersion	Emerson No.	8	V. high	Very low		
	Adopted permeability	m/day	0.24	Mod.	Very low		
	Long Term Accept. Rate	L/day/sq m	12	High	Moderate		

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

Comments

Site capability for wastewater disposal is generally good, and is limited by the depth to bedrock. This can be managed by the installation of a raised absorption bed.

GES

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	Matt Youd	Assess. Date	3-Sep-18
		Ref. No.	
Assessed site(s)	29 Oyster Bay Court, Coles Bay	Site(s) inspected	8-Mar-18
Local authority	Glamorgan-Spring Bay	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		Remarks
					Trench	Amended	
	Cation exchange capacity	mmol/100g	100	High	Low		
	Phos. adsorp. capacity	kg/cub m	0.7	High	Moderate		
	Annual rainfall excess	mm	-486	High	Very low		
	Min. depth to water table	m	5	High	Very low		
	Annual nutrient load	kg	5.9	High	Low		
	G'water environ. value	Agric non-sensit		V. high	Low		
	Min. separation dist. required	m	5	High	Very low		
	Risk to adjacent bores		Very low	V. high	Very low		
	Surf. water env. value	Agric non-sensit		V. high	Low		
AA	Dist. to nearest surface water	m	38	V. high	Very high		
AA	Dist. to nearest other feature	m	5	V. high	Very high		
	Risk of slope instability		Low	V. high	Low		
AA	Distance to landslip	m	5	V. high	Very high		

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

Comments

There is a goos CEC onsite for the retention of nutrients. planting of deep rooted grasses to encourage nutrient uptake is recommended. Therefore there is a low environmental risk associated with wastewater disposal on site.

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

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.
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 38m of downslope surface water (35m required)

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 Land application area will be located with a minimum separation distance of 3m of downslope property boundary See risk assessment
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	Complies with A4 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	Complies with A5 (b) 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) Bed to be raised to ensure 0.5m vertical separation
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

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	3.5m downslope boundary
Buildings/houses	2.0 – > 6	A, D, J	3	>3m
Surface water	15 – 100	A, B, D, E, F, G, J	35	38
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 – ≥ 1.5	A, C, J	0.5	0.5

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 *E. coli* (secondary treated effluent with disinfection)	Effluent quality consistently [6] *E. coli* (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 38m	Moderate
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 5 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. 20% 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 3.5m	Moderate
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 5 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 5 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

GES
GEO-ENVIRONMENTAL
SOLUTIONS

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: 29 Oyster Bay Court, Coles Bay

System Capacity: 9 persons @ 120L/person/day

Summary of Design Criteria

DLR: 12L/m^2/day.

Absorption area: 90m^2

Reserve area location /use: 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 absorption 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 absorption area 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 QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

To: Youd, Matt *Owner /Agent*

29 Oyster Bay Court *Address*

Coles Bay 7215 *Suburb/postcode*

Form **55**

Qualified person details:

Qualified person: John-Paul Cumming

Address: 29 Kirksway Place

Phone No: 03 6223 1839

Battery Point 7004

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: 29 Oyster Bay Court

Lot No: 48

Coles Bay 7215

Certificate of title No: 52469/48

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 AS1726-1993 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.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		2365	11/09/2018

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form **35**

To: Youd, Matt *Owner name*
29 Oyster Bay Road *Address*
Coles Bay 7215 *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 Youd, Matt
Designer's project reference No. 2365
Address: 29 Oyster Bay Court
Lot No: 48
Coles Bay 7215

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 and absorption bed

Design documents provided:

The following documents are provided with this Certificate –

Document description:

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

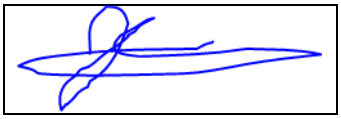
Geo-Environmental Assessment – 29 Oyster Bay Crt, Coles Bay – Sep 18 - GES

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.

	Name: (print)	*Signed*	*Date*
Designer:	John-Paul Cumming		11/09/2018
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.

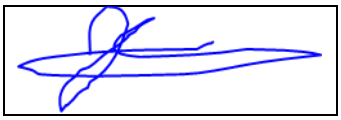
I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

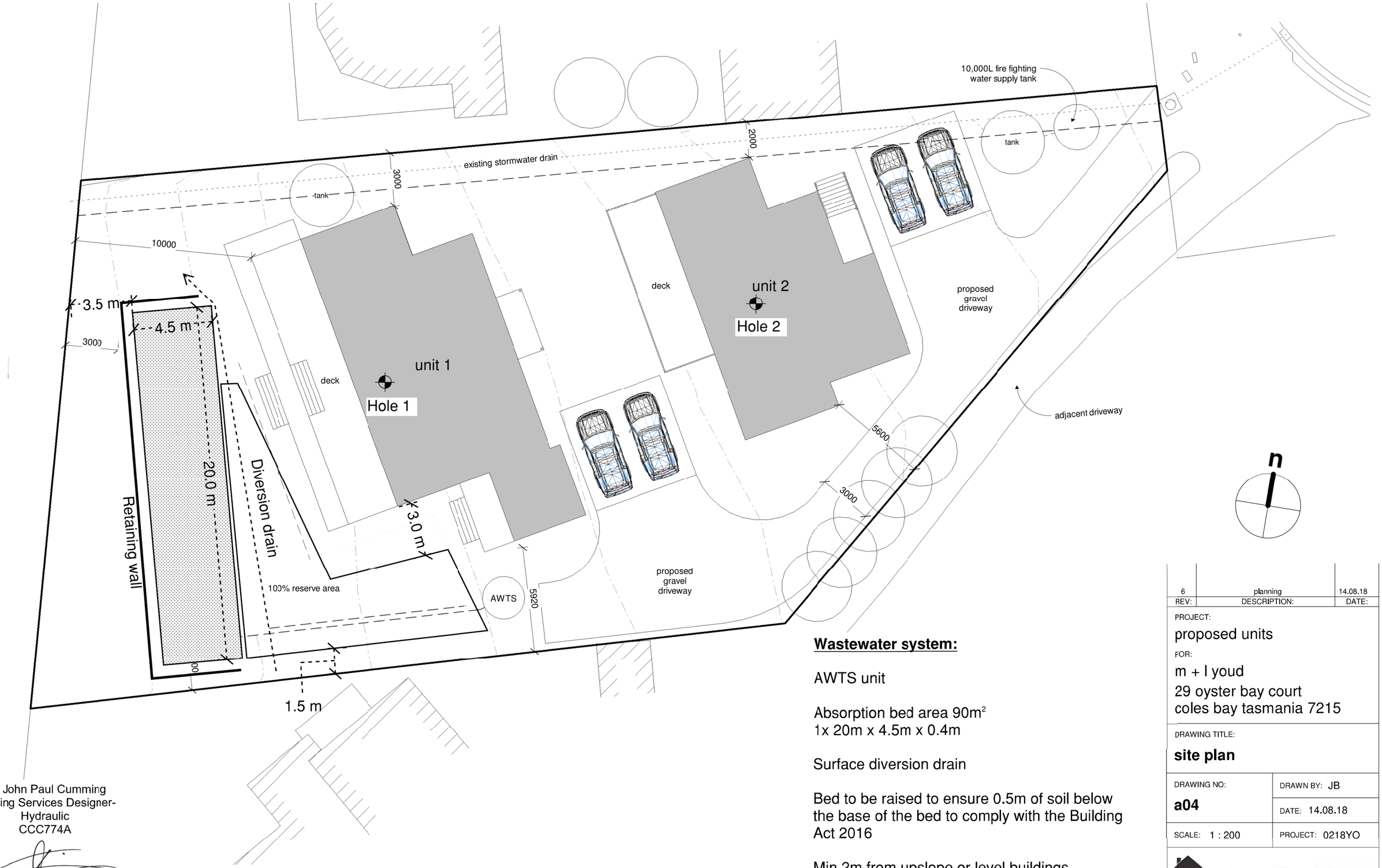
- [x] The works will not increase the demand for water supplied by TasWater
- [x] The works will not increase or decrease the amount of sewage or toxins that is to be removed by, or discharged into, TasWater's sewerage infrastructure
- [x] The works will not require a new connection, or a modification 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		11/09/2018



Dr. John Paul Cumming
Building Services Designer-
Hydraulic
CCC774A

11/09/2018

Wastewater system:

AWTS unit

Absorption bed area 90m²
1x 20m x 4.5m x 0.4m

Surface diversion drain

Bed to be raised to ensure 0.5m of soil below the base of the bed to comply with the Building Act 2016

Min 2m from upslope or level buildings
Min 3m from upslope and side boundaries
Min 3.5m from downslope boundary
Min 35m from downslope surface water

Refer to GES report

REV:	DESCRIPTION:	DATE:
6	planning	14.08.18

PROJECT:
proposed units
FOR:
m + l youd
29 oyster bay court
coles bay tasmania 7215

DRAWING TITLE:
site plan

DRAWING NO:	DRAWN BY: JB
a04	DATE: 14.08.18
SCALE: 1 : 200	PROJECT: 0218YO

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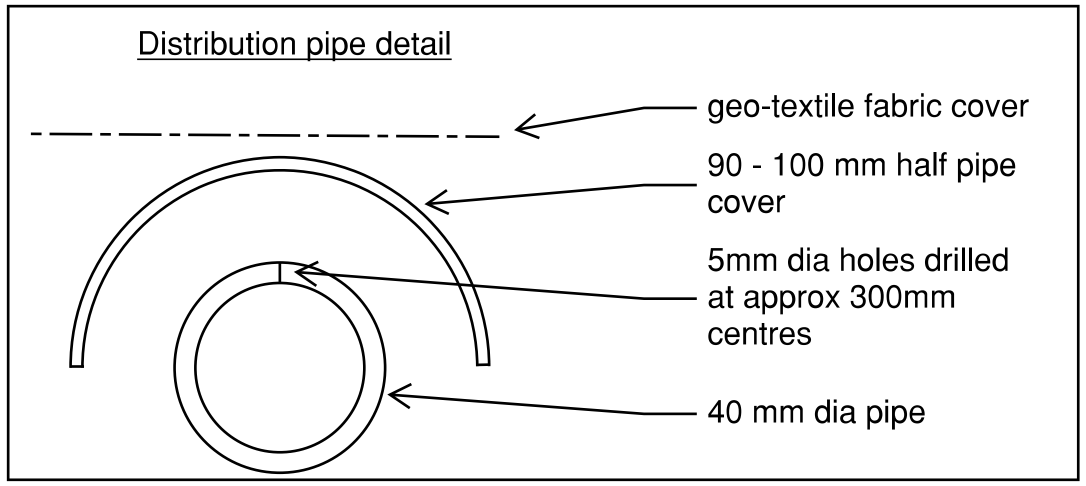
ACCREDITATION NO: CC 1269L



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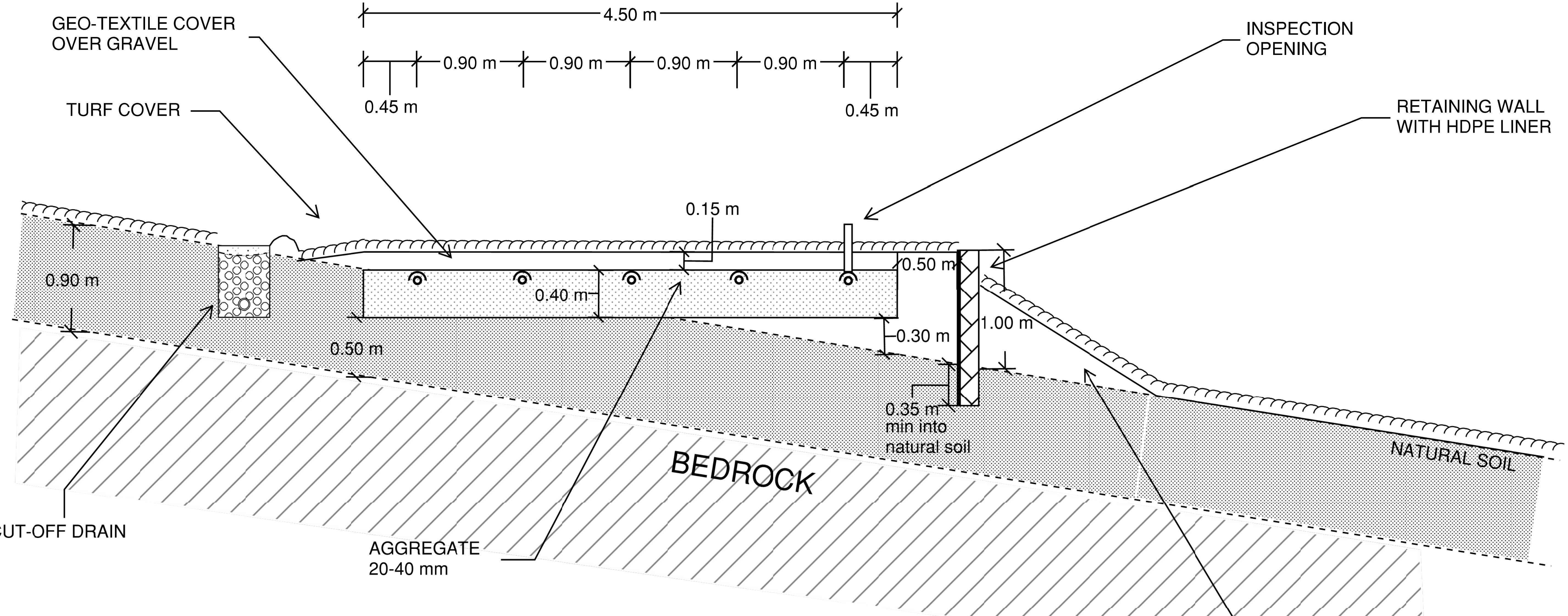
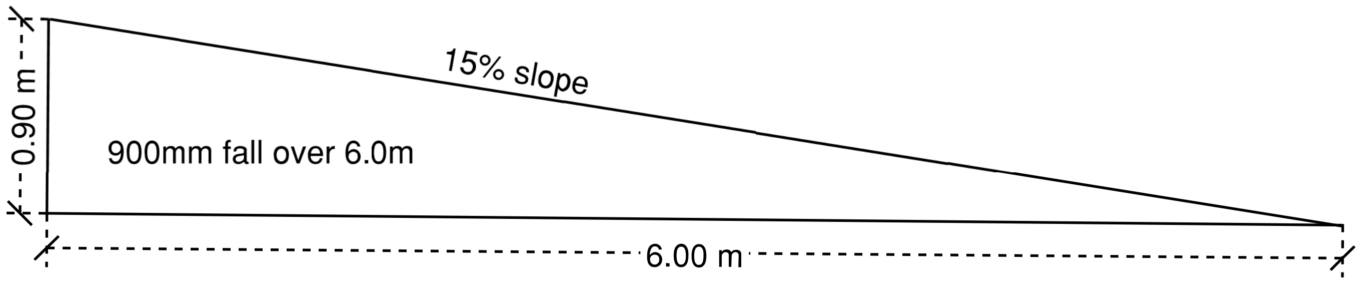
Note: min 0.5m required between end of absorption bed and retaining wall





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

Date: Aug 2018

On-site Wastewater Cross-Section

Sheet 1 of 2

Design notes:

1.Absorption bed dimensions of up to 20m long by 0.40m deep by 4.5m wide.

2. Base of bed to be excavated level max 400mm into natural soils and smearing and compaction avoided.

3. Bed to be filled with 20-40mm aggregate and drilled 40mm distribution pipes packed into upper 100mm.

4. 40mm distribution pipes drilled with sufficient 5mm holes in the top of the pipe (approx spacing 300mm) to distribute the effluent and half circle 90-100mm UPVC pipe, un-perforated, laid over each 40mm perforated lateral to direct water jet downwards.

5. One 5 mm hole at centre of invert of each pipe to allow for drainage between pump cycles.

6. Geotextile or filter cloth to be placed over the distribution pipes to prevent clogging of the pipes and aggregate - the sides of the bed should also be lined.

7. Final finished surface with sandy loam to be a minimum of 150 mm above aggregate with turf cover or mulched with appropriate vegetation (eg native grasses and small shrubs at 1 plant per 1 m2)

8. The turf or vegetation is an essential component of the system and must be maintained with regular mowing and or trimming as appropriate

9. The distribution pipe grid must be absolutely level to allow even distribution of effluent around the absorption area – it is recommended that the level be verified by running water into the system before backfilling and commissioning the trench

10.All works on site to comply with AS3500 and Tasmanian Plumbing code.

The pump must be capable of delivering the total flow rate required for all laterals whilst providing a 1.5m residual head (ie squirt height) at the highest orifice (with no more than 15% variation in squirt height across the whole bed).

For beds with individual laterals, no more than 15m long, it is acceptable to adopt a flow rate of 4-5L/min/lineal metre. Total dynamic head (including friction loss) will need to be determined on a site-specific basis.

Individual flush points must be installed for each lateral. This may be a screw cap fitting on a 90 degree elbow level with the bed surface or a pressure controlled flush valve inside an irrigation control box.

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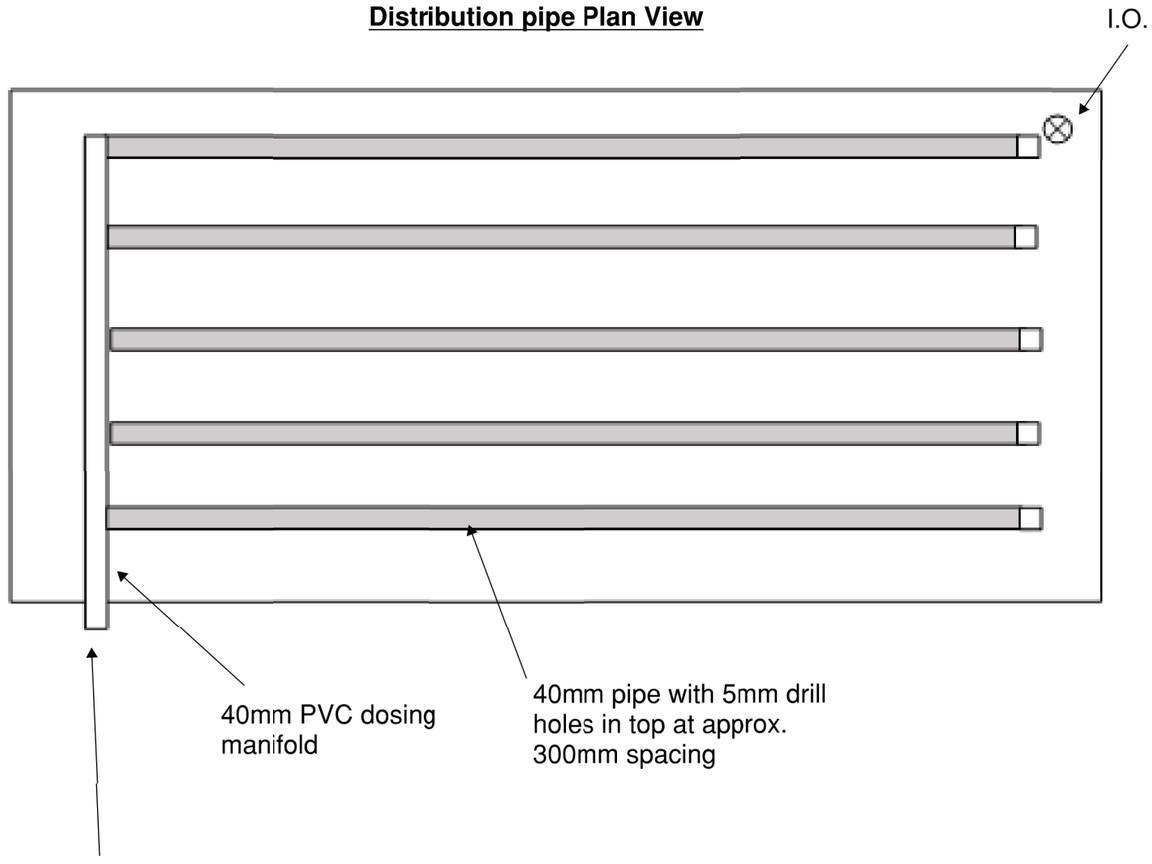
Distribution pipe Plan View



Do not scale from these drawings. Dimensions to take precedence over scale.				On-site Wastewater Design Notes	Sheet 2 of 2

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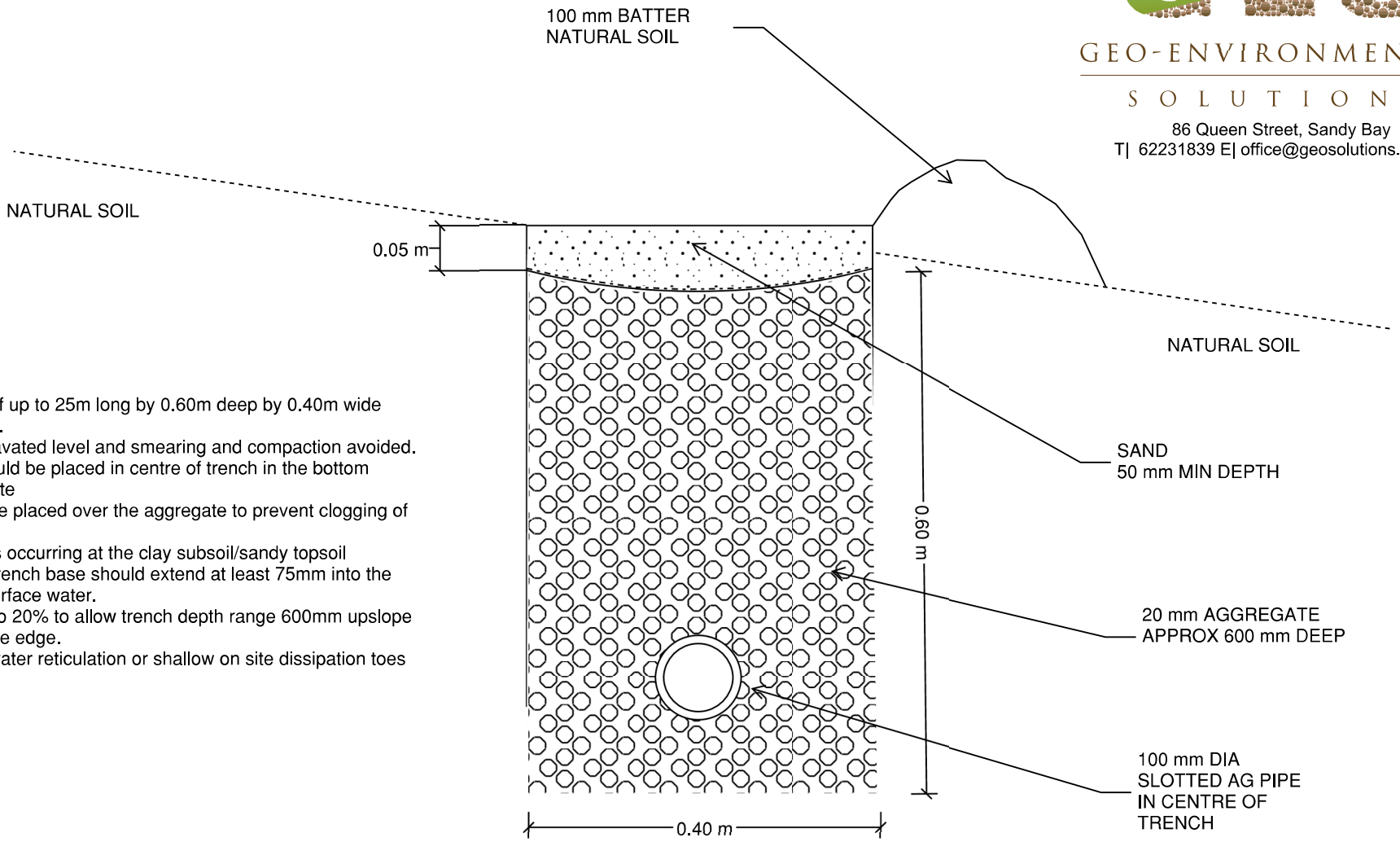

Design notes:

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

proposed units

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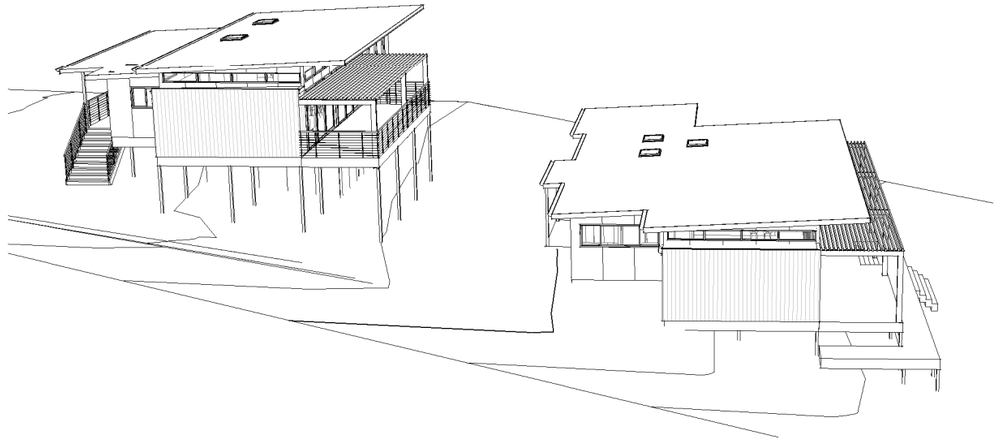

planning application

Building Areas

unit 1	153.93
unit 1 deck 1	48.76
unit 1 deck 2	7.65
unit 2	124.68
unit 2 deck 1	29.43
unit 2 deck 2	5.17
	369.62

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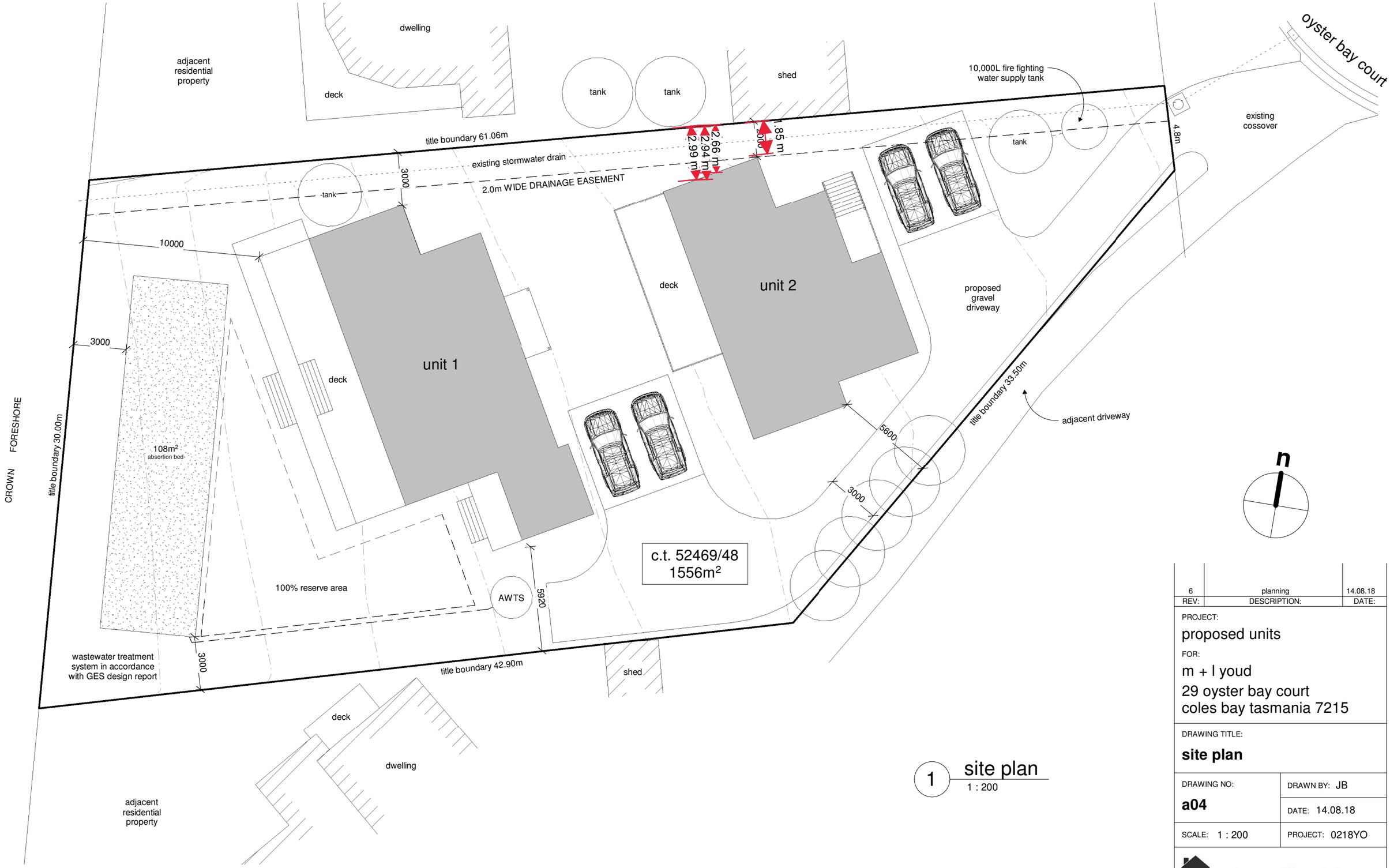

1 site plan
1 : 200

REV:	DESCRIPTION:	DATE:
6	planning	14.08.18

PROJECT:

proposed units

FOR:

m + l youd

29 oyster bay court
coles bay tasmania 7215

DRAWING TITLE:

site plan

DRAWING NO:	DRAWN BY: JB
a04	DATE: 14.08.18
SCALE: 1 : 200	PROJECT: 0218YO

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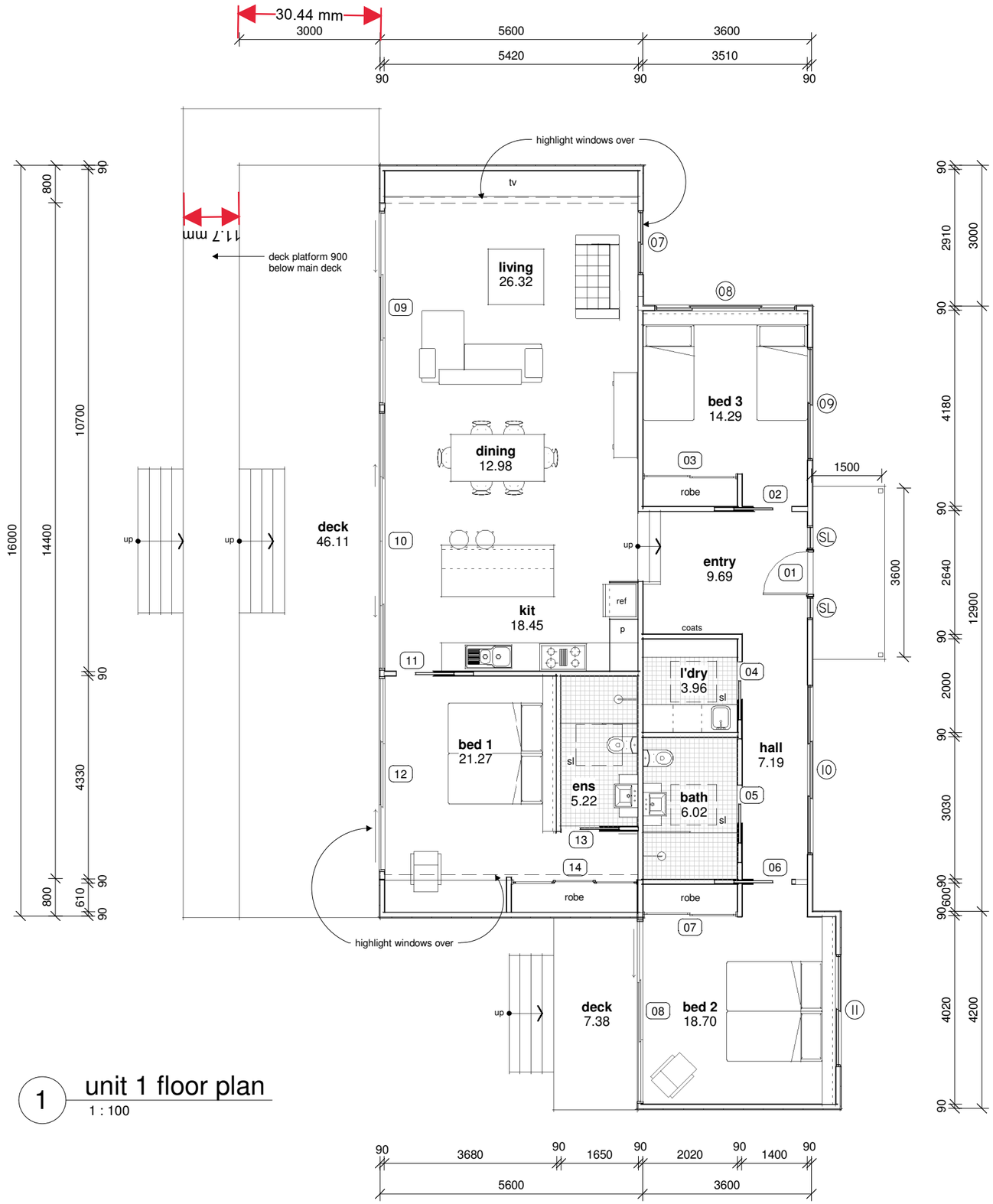

1 unit 1 floor plan

1 : 100

REV:	DESCRIPTION:	DATE:
6	planning	14.08.18

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proposed units

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DRAWING TITLE:

unit 1 floor plan

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a05	DATE: 14.08.18
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ACCREDITATION NO:
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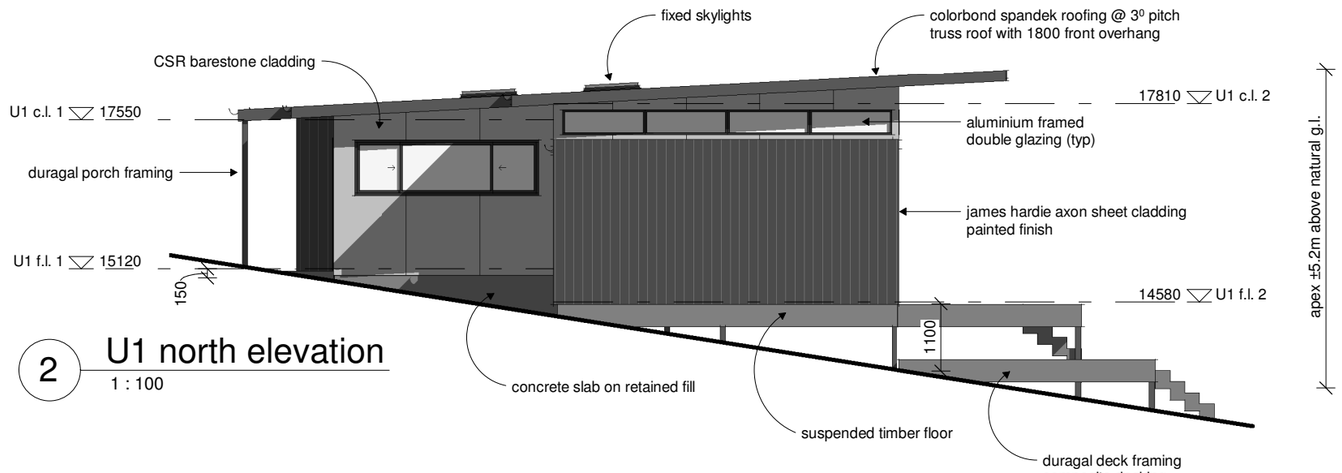
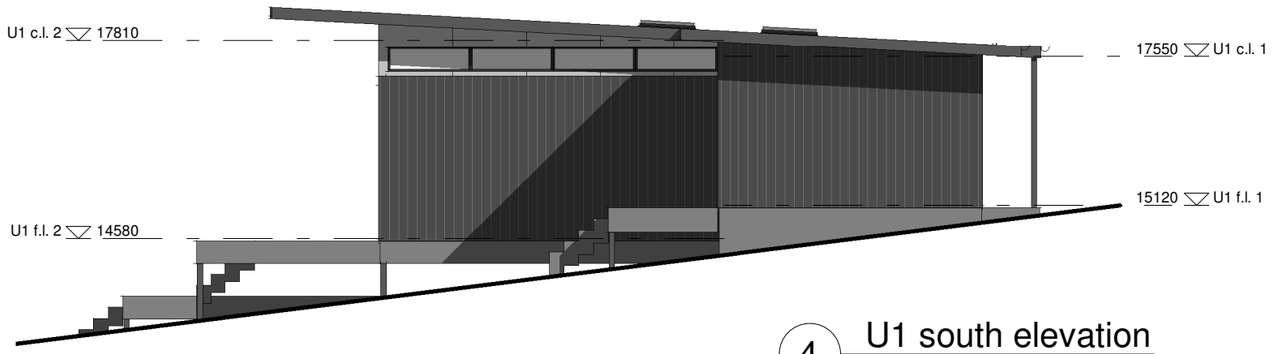
1 U1 east elevation
1 : 100



2 U1 north elevation
1 : 100

3 U1 west elevation
1 : 100



4 U1 south elevation
1 : 100

REV:	DESCRIPTION:	DATE:
6	planning	14.08.18

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proposed units

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DRAWING TITLE:
unit 1 elevations

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a06	DATE: 14.08.18
SCALE: 1 : 100	PROJECT: 0218YO

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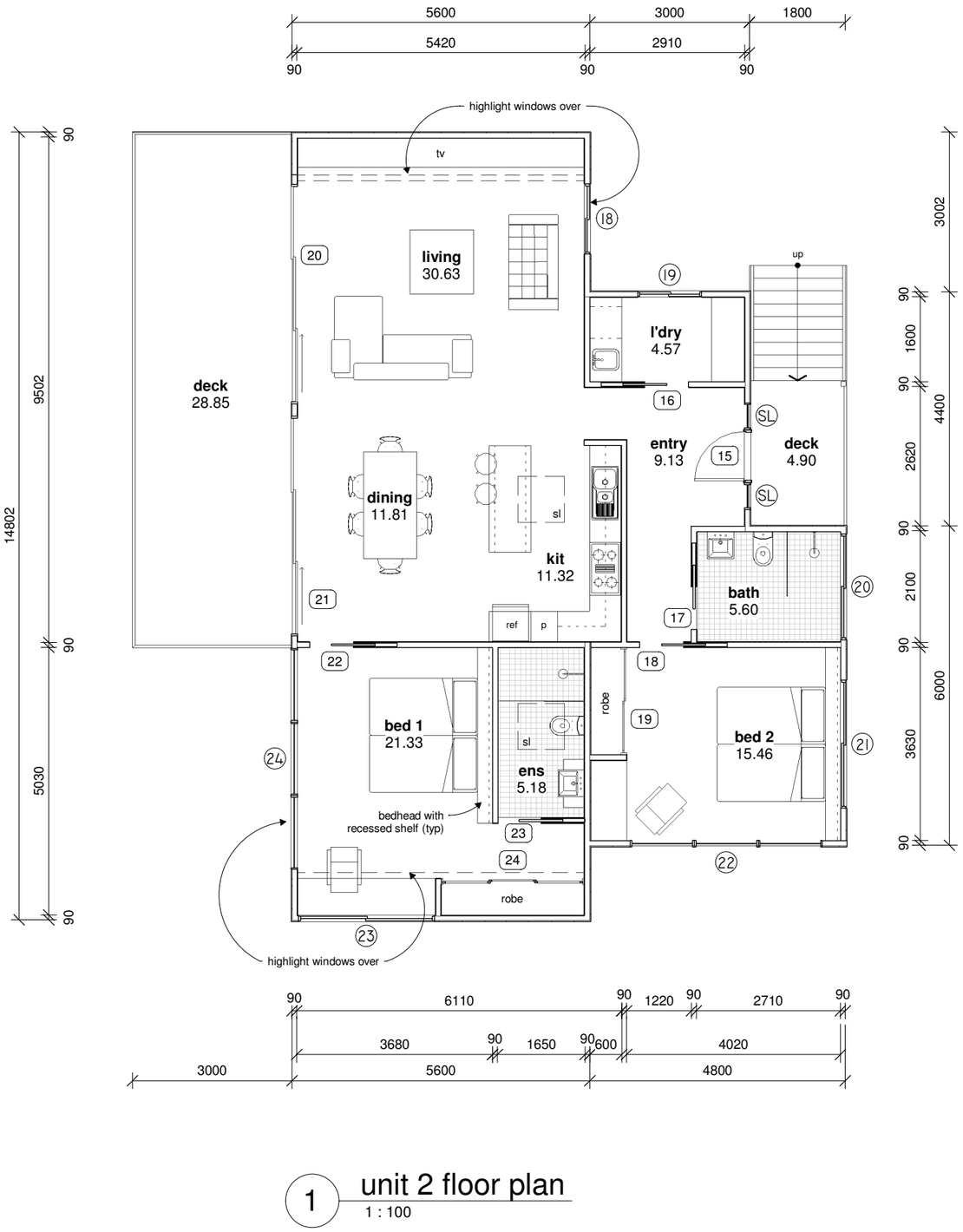

1 unit 2 floor plan
1 : 100

REV:	DESCRIPTION:	DATE:
6	planning	14.08.18

PROJECT:

proposed units

FOR:

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DRAWING TITLE:

unit 2 floor plan

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a07	DATE: 14.08.18
SCALE: 1 : 100	PROJECT: 0218YO

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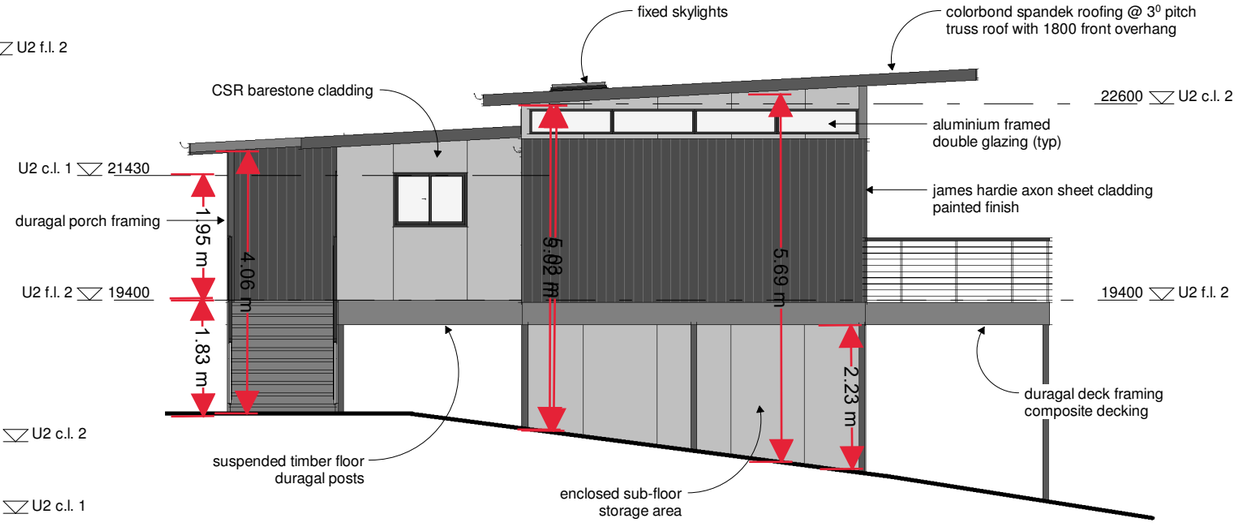
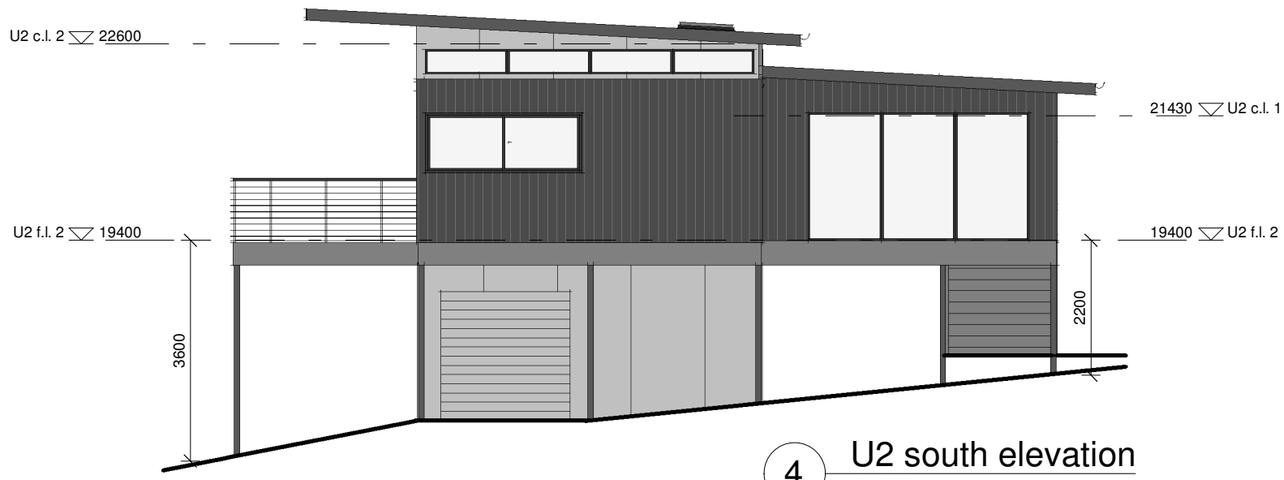
ACCREDITATION NO:
CC 1269L

1 U2 east elevation
1 : 100

3 U2 west elevation
1 : 100



2 U2 north elevation
1 : 100



4 U2 south elevation
1 : 100

REV:	DESCRIPTION:	DATE:
6	planning	14.08.18

PROJECT:
proposed units

FOR:
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DRAWING TITLE:
unit 2 elevations

DRAWING NO:	DRAWN BY: JB
a08	DATE: 14.08.18
SCALE: 1 : 100	PROJECT: 0218YO

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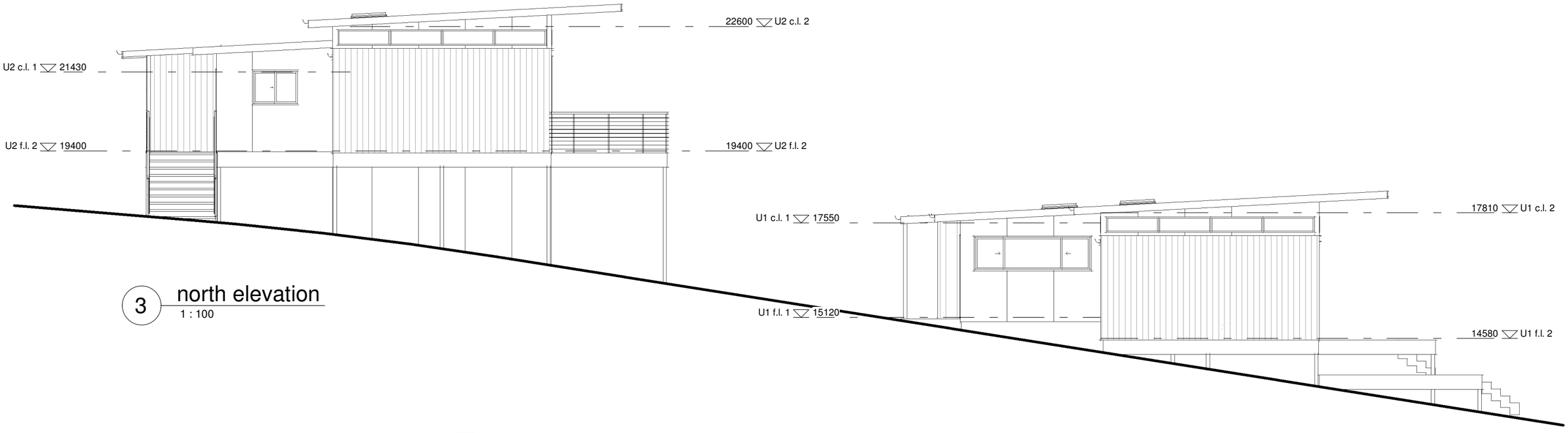
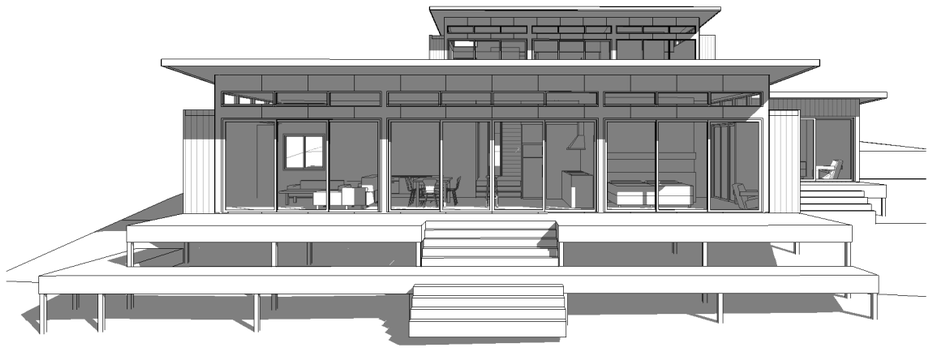


3 north elevation
1 : 100



1 west visual

2 east visual

REV:	DESCRIPTION:	DATE:
6	planning	14.08.18

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proposed units

FOR:
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coles bay tasmania 7215

DRAWING TITLE:
visuals

DRAWING NO:	DRAWN BY: JB
a09	DATE: 14.08.18
SCALE: 1 : 100	PROJECT: 0218YO

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Window Schedule

No.	Location	Height	Width	Style	Frame	Glazing
01	U1 living	400 5360	1380	fixed	aluminium	double clear
02	U1 living	400 4060	1340	fixed	aluminium	double clear
03	U1 living	400 5440	1380	fixed	aluminium	double clear
04	U1 living	400 4060	1380	fixed	aluminium	double clear
05	U1 bed 1	400 5360	1380	fixed	aluminium	double clear
06	U1 bed 1	400	1340	fixed	aluminium	double clear
07	U1 living	1200	1380	sliding	aluminium	double clear
08	U1 bed 3	900	3010	sliding	aluminium	double clear
09	U1 bed 3	500	2400	sliding	aluminium	double obscure
10	U1 hall	500	3600	sliding	aluminium	double obscure
11	U1 bed 2	500	2400	sliding	aluminium	double obscure
12	U2 living	400	1380	fixed	aluminium	double clear
13	U2 living	400	1340	fixed	aluminium	double clear
14	U2 living	400	1380	fixed	aluminium	double clear
15	U2 living	400	1380	fixed	aluminium	double clear
16	U2 bed 1	400	1380	fixed	aluminium	double clear
17	U2 bed 1	400	1340	fixed	aluminium	double clear
18	U2 living	1200	1340	sliding	aluminium	double clear
19	U2 l'dry	900	1200	sliding	aluminium	double clear
20	U2 bath	500	2000	sliding	aluminium	double obscure
21	U2 bed 2	500	2400	sliding	aluminium	double obscure
22	U2 bed 2	2100	1200	fixed	aluminium	double clear
23	U2 bed 1	1000	2550	sliding	aluminium	double clear
24	U2 bed 1	2400	1380	fixed	aluminium	double clear
RW	roof	870	870	fixed skylight	aluminium	double clear
SL	entry sidelight	2100	500	fixed	aluminium	double clear

Door Schedule

No.	Location	Height	Width	Style	Frame	Glazing
01	U1 entry	2040	920	selected entry	aluminium	-
02	U1 bed 3	2040	820	internal cavity slider	timber	-
03	U1 bed 3	2400	2000	2 panel sliding robe	aluminium	-
04	U1 l'dry	2040	820	internal cavity slider	timber	-
05	U1 bath	2040	820	internal cavity slider	timber	-
06	U1 bed 2	2040	820	internal cavity slider	timber	-
07	U1 bed 2	2400	2000	2 panel sliding robe	aluminium	-
08	U1 bed 2	2100	3840	3 panel glazed sliding	aluminium	double clear
09	U1 living	2400	4060	3 panel glazed sliding	aluminium	double clear
10	U1 living	2400	5440	4 anel glazed sliding	aluminium	double clear
11	U1 bed 1	2040	820	internal cavity slider	timber	-
12	U1 bed 1	2400	4060	3 panel glazed sliding	aluminium	double clear
13	U1 bed 1	2040	820	internal cavity slider	timber	-
14	U1 bed 1	2400	2700	3 panel sliding robe	timber	-
15	U2 entry	2040	920	selected entry	aluminium	-
16	U2 l'dry	2040	820	internal cavity slider	timber	-
17	U2 bath	2040	820	internal cavity slider	timber	-
18	U2 bed 2	2040	820	internal cavity slider	timber	-
19	U2 bed 2	2400	2000	2 panel sliding robe	aluminium	-
20	U2 living	2400	4060	3 panel glazed sliding	aluminium	double clear
21	U2 living	2400	4060	3 panel glazed sliding	aluminium	double clear
22	U2 bed 1	2040	820	internal cavity slider	timber	-
23	U2 bed 1	2040	820	internal cavity slider	timber	-
24	U2 bed 1	2400	2700	3 panel sliding robe	aluminium	-
25		2100	2100			

REV:	DESCRIPTION:	DATE:
6	planning	14.08.18

PROJECT:

proposed units

FOR:

m + l youd

29 oyster bay court
coles bay tasmania 7215

DRAWING TITLE:

schedules

DRAWING NO: **a10**

DRAWN BY: JB

DATE: 14.08.18

SCALE:

PROJECT: 0218YO

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