## PP49/2019-1

## 1 Skenes Creek Valley Road SKENES CREEK

Lot: 2 PS: 513330 V/F: 11008/969

**Construction of Dwelling** 

A M Sherman & G D Sherman

Officer - Bernadette McGovan

# EXHIBITION FILE

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Submissions to this planning application will be accepted until a decision is made on the application.

If you would like to make a submission relating to a planning permit application, you must do so in writing to the Planning Department

16 April 2019

Planning Department
Colac Otway Planning Department
PO Box 283
COLAC VIC 3250

Dear Sir/Madam

SUBJECT SITE: 1 SKENES CREEK VALLEY ROAD, SKENES CREEK

APPLICATION: CONSTRUCTION OF A DWELLING

We refer to the further information request by Council dated 4 April 2019.

Please find the following in response.

 SLO2 - An assessment against the provisions of Schedule 2 to the Significant Landscape Overlay; addressing in particular the visual impact of the dwelling from the Great Ocean Road and advising if fencing is proposed. The submitted planning report lists the landscape character objectives but provides no response/assessment.

Response: Please note no fencing is proposed.

Permit requirement

A permit is required to construct a fence, other than: a post and wire fence that is less than 1.2 metres in height if on the front boundary a post and wire fence that is less than 1.5m in height if on any other boundary.

For the purpose of this clause a post and wire fences includes wire strands, wire mesh ('ringlock'), chainmesh and similar open rural style fencing.

A permit is required to remove, destroy or lop a tree.

This does not apply to: A tree having a single trunk circumference less than 0.5 metre at a height of one metre above the ground level. The pruning of a tree for regeneration or ornamental shaping. A tree which is dead or dying.

Response: There are no fences proposed as part of this application and no vegetation removal is proposed as part of this application.

Decision guidelines

Before deciding on an application the responsible authority must consider, as appropriate: Buildings and Works

The impact of the development on the nationally significant Great Ocean Road Region landscape.

## coastal planning

RESPONSE: The site sites amongst existing built form and will sit down low into the urban backdrop. Please refer to the photos below showing indicative icons on where the dwelling will be sited. The area is a Township Zone and urban development controlled through relevant overlay is anticipated. The land opposite the site is Crown land and includes existing vegetation and trees. This landscape setting will be retained, and the dwelling will not be visible rom the GOR aside from potentially the rooftop.



Image 1 - indicative location of dwelling.



Image 2 - indicative location of dwelling.

Whether the landscaping plan accompanying the application, details existing vegetation, vegetation to be removed, new plantings incorporating native and indigenous species and avoids the use of exotic species.

RESPONSE: The site does not benefit from any existing vegetation. A landscape plan can be provided subject to a planning permit condition to complement the design response.

Whether the vehicle access and storage proposed has been designed to minimise excavation, loss of vegetation and dominance of car storage facilities.

RESPONSE: No vegetation will be lost through excavation and the proposed car storage sits down low on the ground level taking up only a small part of the building façade frontage.

The impact of the proposed development on the conservation of trees.

RESPONSE: The site does not include any existing trees and will not impact upon any conservation values.

The impact of the proposed development on natural ground levels and drainage patterns which may have a detrimental impact on the health and viability of surrounding trees.

RESPONSE: There are no known adverse impacts to the drainage patterns of the site due to the topography of the land and open drains along Skenes Creek Road and impermeable surfaces such as the dirt road Skenes Creek Valley Road.

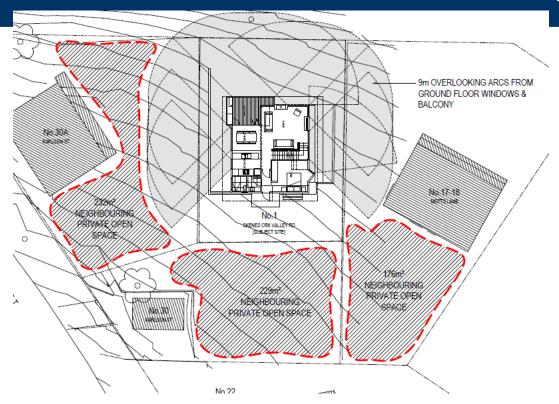
Whether there is an adequate buffer strip along roads and between private gardens.

RESPONSE: The private gardens are in fact open shared spaces with no formal fencing. There is no buffer between private gardens, however if Council are of the view this is required, a permit condition for a landscape plan could consider this as a requirement. Based upon the existing vegetation around the site on both Council and Crown land, the vegetated buffer is satisfactory. Council will beable to put this response into context when a site inspection is undertaken.

2. NCO1/Clause 54 – Details of the measures proposed to address overlooking within 9m of the private open space and habitable room windows of the existing dwellings adjoining to the north and south to comply with Clause 54.04-6.

Response: Please refer to **attached** Overlooking Plan by Mark Gratwick dated February 2019. This plan shows the adjoining private open space areas/opportunities. It is noted there are no formal SPOS areas so difficult to respond directly to SPOS controls. The POS areas can be essentially anywhere on the sites as the entire urban landscape is open an informal.

Also, updated plans (12 sheets dated February 2019) **attached** show windows on south elevation TP09 to include a 2.1m high screen from the top window to assist with overlooking. The roof top viewing area is to view the ocean and coast. We seek this set of plans goes to public notice.



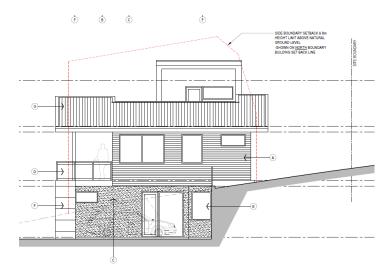
3. EMO1 – A geotechnical assessment/landslip risk assessment must be submitted in accordance with this overlay. Please also provide justification for the extensive site cut which appears to be up to 6m deep.

Response: Please see **attached** LRA by St Quentin dated April 2019 demonstrating landslide risk to be 'low' on this site.

4. BMO2 – A bushfire management plan is required to comply with Clause 3.0 to BMO2. The planning report makes reference to BMO1, BAL-12.5 and includes an illegible extract only from a BMP.

Response: Please find attached the BMP in response to BMO2 showing a BAL29 by Beacon Ecological.

5. The roof top door area provides access to the roof top. This space will be used for informal recreational. The height is not more than 8m and complies with the NCO1. See TP08 showing the proposed height within the 8m limitation.



## coastal planning

If you require any further particulars in relation to the above please do not hesitate to contact us at your convenience.

Kind Regards

Shelly Fanning Planning Consultant

#### Attachments:

- Overlooking Plan dated 12.04.2019 prepared by Mark Gratwick Architects
- Revised Development Plans dated February 2019
- Copy of Land Slip Assessment
- Copy of BMO2 Bushfire Mng Plan prepared by Beacon Ecological

## coastal planning

COLAC OTWAY

SHIRE

8 MAR 2019

RECEIVED DESTROY

27 February 2019

Planning Department
Colac Otway Planning Department
PO Box 283
COLAC VIC 3250

Dear Sir/Madam

SUBJECT SITE: 1 SKENES CREEK VALLEY ROAD, SKENES CREEK

APPLICATION: USE AND CONSTRUCTION OF A DWELLING

Please find attached the following:

- Current title search

- Application form
- Planning Report
- Fees

If you require any further particulars in relation to the above please do not hesitate to contact us at your convenience.

Kind Regards

Shelly Fanning Planning Consultant



Office Use Only			
VicSmart?	YES		NO
Specify class of VicSmart application:			
Application No.:	Date Lodged:	1	/

Planning Enquiries
Phone: (03) 5232 9400
Email: inq@colacotway.vic.gov.au
Web: www.colacotway.vic.gov.au

## Application for a Planning Permit

If you need help to complete this form, read MORE INFORMATION at the back of this form.

Any material submitted with this application, including plans and personal information, will be made available for public viewing, including electronically, and copies may be made for interested parties for the purpose of enabling consideration and review as part of a planning process under the *Planning and Environment Act 1987*. If you have any concerns, please contact Council's planning department.

A Questions marked with an asterisk (\*) must be completed.

If the space provided on the form is insufficient, attach a separate sheet.

Click for further information.

Clear Form

Application 7	Гуре
---------------	------

Is this a VicSmart application?\*

No Yes

If yes, please specify which

VicSmart class or classes:

If the application falls into one of the classes listed under Clause 92 or the schedule to Clause 94, it is a VicSmart application.

## Pre-application Meeting

Has there been a pre-application meeting with a Council planning officer?

O No Yes	If 'Yes', with whom?:				
	Date:	day / month / year			
	HER THE RESERVE OF THE PERSON				

#### The Land

Address of the land. Complete the Street Address and one of the Formal Land Descriptions.

Street Address \*

Formal Land Description \*
Complete either A or B.

This information can be found on the certificate of title

If this application relates to more than one address, attach a separate sheet setting out any additional property details.

Suburb/Locality: §	kenes Creek		Postco	de: 3233
Lot No.: 2	OLodged Plan	Title Plan	an of Subdivision	lo.: 513330T
	ent No.:		Section No.:	
Crown Allotm				



#### The Proposal

You must give full details of your proposal and attach the information required to assess the application. Insufficient or unclear information will delay your application

For what use, development or other matter do you require a permit?

Use and Construction of One (1) Dwelling

Machine Provide additional information about the proposal, including: plans and elevations; any information required by the planning scheme, requested by Council or outlined in a Council planning permit checklist; and if required, a description of the likely effect of the proposal

Estimated cost of any development for which the permit is required \*

Cost \$500,000

A You may be required to verify this estimate. Insert '0' if no development is proposed.

If the application is for land within metropolitan Melbourne (as defined in section 3 of the Planning and Environment Act 1987) and the estimated cost of the development exceeds \$1 million (adjusted annually by CPI) the Metropolitan Planning Levy must be paid to the State Revenue Office and a current levy certific e must be submitted with the application. Visit www.sro.vic.gov.au for information.

## Existing Conditions II

Describe how the land is used and developed now \*

For example, vacant, three dwellings, medical centre with two practitioners, licensed restaurant with 80 seats, grazing.

Vacant land.

Provide a plan of the existing conditions. Photos are also helpful.

#### Title Information II

Encumbrances on title \*

Does the proposal breach, in any way, an encumbrance on title such as a restrictrive covenant, section 173 agreement or other obligation such as an easement or building envelope?

- ) Yes (If 'yes' contact Council for advice on how to proceed before continuing with this application.)
- () No
- Not applicable (no such encumbrance applies).

Provide a full, current copy of the title for each individual parcel of land forming the subject site. The title includes: the covering 'register search statement', the title diagram and the associated title documents, known as 'instruments', for example, restrictive covenants.



## Applicant and Owner Details II

Provide details of the applicant and the owner of the land.

Applicant *	Name:						
The person who wants the permit.	Title:	First Name: Greg	& Anne	Su	rname: Sher	man	
	Organisation (if applicable): c/o Coastal Planning						
	Postal Address:				enter the details	here:	
	Unit No.:	St. No.: 28	St. Na	ame: Tai	ts Road		
	Suburb/Loca	ality: Barwon Heads		S	tate: Vic	Postcode: 3233	
Please provide at least one contact	Contact infor	mation for applicant OR	ontact perso	on below			
phone number *	Business phone: Em			Email:	mail: shelly@coastalplanning.com.au		
	Mobile phor	ne: 0408 734169		Fax:			
Where the preferred contact person for the application is different from	Contact person	on's details*				Same as applicant	
the applicant, provide the details of that person.	Title:	First Name: Shell	У	Su	ırname: Fanr	ning	
	Organisation	(if applicable): Coastal F	Planning				
	Postal Address:		If it is a F	P.O. Box, e	enter the details	here:	
	Unit No.:	St. No.: 28	St. Na	ame: Tai	its Road		
	Suburb/Loca	ality: Barwon Heads		S	tate: Vic	Postcode: 3233	
Owner *				74.F		Same as applicant	
The person or organisation	Name:					Same as applicant	
who owns the land	Title: First Name: Gregory		Su	Surname: Sherman			
Where the owner is different from the	Organisation (if applicable):						
applicant, provide the details of that person or organisation.	Postal Address:		If it is a f	P.O. Box, e	enter the details	here:	
,	Unit No.:	St. No.:	St. Na	ame:			
	Suburb/Loca	ality:		S	tate:	Postcode:	
	Owner's Sig	gnature (Optional):			Date:		
				150000000		day / month / year	
T. C							
		I's planning department t ng permit checklist.	o discuss the	e specifi	c requiremen	ts for his application and	
Is the required information provided?	O Yes O N	D					
Declaration							
This form must be signed by the a	pplicant *						
Remember it is against the law to provide false or misleading	I declare that	I am the applicant; and the owner (if not myself) h					
information, which could result in a heavy fine and cancellatio of the permit.	Signature:	4/7/	7			7/02/2019	
		110				day / month / year	



#### Checklist II

Have you:

✓	Paid or included the application fee?  Most applications require a fee to be paid. Contact Council to determine the appropriate fee.
0	Provided all necessary supporting information and documents?
	A full, current copy of title information for each individual parcel of land forming the subject site.
	A plan of existing conditions.
	Plans showing the layout and details of the proposal.
	Any information required by the planning scheme, requested by council or outlined in a council planning permit checklist.
	If required, a description of the likely effect of the proposal (for example, traffic, noise, environmental impacts)
	If applicable, a current Metropolitan Planning Levy certificate (a levy certificate expires 90 days after the day on which it issued by the State Revenue Office and then cannot be used). Failure to comply means the application is void
1	Completed the relevant council planning permit checklist?

## Need help with the Application?

If you need help to complete this form, read More Information at the end of this form.

For help with a VicSmart application see Applicant's Guide to Lodging a VicSmart Application at www.planning.vic.gov.au

General information about the planning process is available at www.planning.vic.gov.au

Assistance can also be obtained from Council's planning department.

## Lodgement II

Lodge the completed and signed form, the fee and all documents with:

Colac Otway Shire PO Box 283 Colac VIC 3250 2-6 Rae Street Colac VIC 3250

Contact information Phone: (03) 5232 9400

Email: inq@colacotway.vic.gov.au

Deliver application in person, by post or by electronic lodgement.



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## REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

Page 1 of 1

VOLUME 11852 FOLIO 369

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#### LAND DESCRIPTION

Lot 2 on Plan of Subdivision 513330T.

PARENT TITLE Volume 11008 Folio 969

Created by instrument AN532451N 07/02/2017

#### REGISTERED PROPRIETOR

Estate Fee Simple
Joint Proprietors
GREGORY DAVID SHERMAN
ANNE MAREE SHERMAN both of 11 MILL STREET BENDIGO VIC 3550
PS513330T 18/05/2007

#### ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE PS513330T FOR FURTHER DETAILS AND BOUNDARIES

#### ACTIVITY IN THE LAST 125 DAYS

Additional information: (not part of the Register Search Statement)

Street Address: 1 SKENES CREEK VALLEY ROAD SKENES CREEK VIC 3233

DOCUMENT END

NIL

Title 11852/369 Page 1 of 1



## **Imaged Document Cover Sheet**

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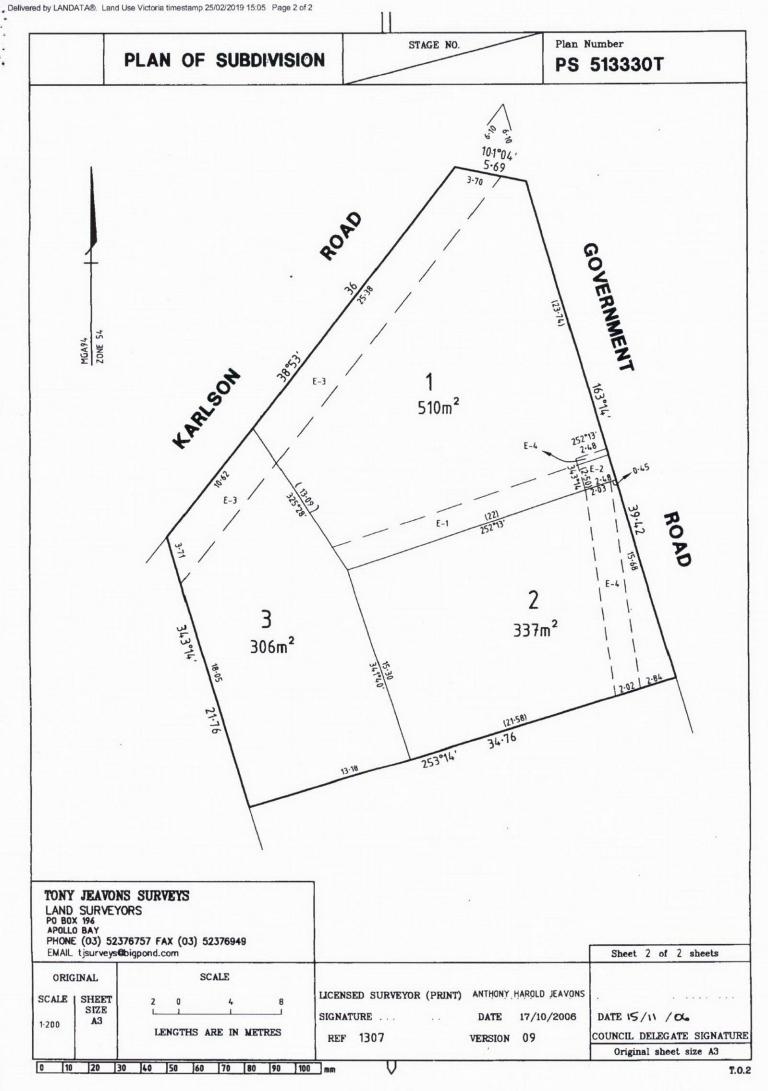
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STAGE NO. Plan Number LR use only PLAN OF SUBDIVISION PS 513330T **EDITION** Location of Land Council Certification and Endorsement Ref. 5125 05 Council Name: COLAC OTWAY SHIRE COUNCIL Parish: KRAMBRUK This plan is certified under section 6 of the Subdivision Act 1988. Township: This plan is certified under section 11(7) of the Subdivision Section: of original certification Crown Allotments: 11 (PART) This is a statement of compliance issued under section 21 of the Subdivision Act 1988. 3. Crown Portion: OPEN SPACE A requirement for public open space under section 18 of the Subdivision Act 1988—has/has not been made. Title Reference: VOL 8464 FOL 036 & (i) VOL 8464 FOL 037 The requirement has been satisfied (ii) Last Plan Reference: LOTS 1 & 2 ON LP 62670 (iii) The requirement is to be satisfied in Stage Postal Address: 30 KARLSON STREET & 1 SKENES CREEK VALLEY ROAD (at time of subdivision) Council Delegate SKENES CREEK Council Seal E 735 580 Date 15/11/06 MGA Co-ordinates: Zone: 54 Re-certified under section 11(7) of the Subdivision Act 1988 N 5 710 400 (of approx. centre of land in plan) Council Delegate -Council Soal Vesting of Roads and/or Reserves Date Identifier Council/Body/Person Notations NIL NIL This plan is/is not a staged subdivision Staging Planning Permit No. 210/03 DOES NOT APPLY Depth Limitation This plan is/is not based on survey Survey This survey has been connected to permanent marks no(s) 43 & 75 In Proclaimed Survey Area No. 123 **Easement Information** LR use only Legend: A - Appurtenant Easement E - Encumbering Easement R - Encumbering Easement(Road) Statement of Compliance/ Exemption Statement Received Easement Width Purpose Origin Land Benefited/In Favour Of Reference (Metres Date 17/5/07 LOTS ON THIS PLAN E-1 & E-2 DRAINAGE 2 THIS PLAN E-1 BARWON WATER SEWERAGE 2 THIS PLAN LR use only E-2 & E-4 SEWERAGE SEE DIAG THIS PLAN BARWON WATER E-3 POWERLINE SEE DIAG THIS PLAN & PLAN REGISTERED POWERCOR AUSTRALIA LIMITED SECTION 88 OF 2:59 PM TIME THE ELCTRICITY INDUSTRY ACT DATE 18 /5/07 2000 Assistant Registrar of Titles Sheet 1 of 2 sheets TONY JEAVONS SURVEYS LAND SURVEYORS PO BOX 196 APOLLO BAY LICENSED SURVEYOR (PRINT) ANTHONY HAROLD JEAVONS DATE 15/11 / 06 SIGNATURE DATE 17/10/2006 PHONE (03) 52376757 FAX (03) 52376949 EMAIL tjsurveys@bigpond.com 1307 09 COUNCIL DELEGATE SIGNATURE REF VERSION Original sheet size A3 10 20 30 40 50 60 70 80 90 100 mm

T.O.1



## **Use and Construction of a Dwelling**

1 Skenes Creek Valley Road, Skenes Creek described as Lot 2 on PS513330



Permit Applicant:

Anne and Greg Sherman

Prepared by:

**Coastal Planning** 

Date: February 2019

Reference: SF550

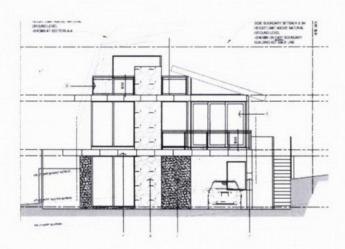
#### **CONTACT DETAILS**

Coastal Planning

M 0408 734 169

E shelly@coastalplanning.com.au

W www.coastalplanning.com.au



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	2.2 Pro 3.1 Dev 4.1 4.2 4.3 4.4 4.5	Characteristics of the Site and Surrounding Area.  2.1 Description of the Site

## 1 Introduction

This planning report has been prepared for Anne and Greg Sherman, the permit applicant of the works described within the table below. The purpose of this planning report is to provide a town planning assessment under the provisions of the Colac Otway Planning Scheme in response to the controls of the day.

The following information provides an overview of the site, proposal, and the planning framework applicable to the development.

**Table 1.1 APPLICATION DETAILS** 

Subject Site	1 Skenes Creek Valley Road, Skenes Creek
Site Area	337m²
Title Description	Lot 2 on PS513330
Vol/Folio	11852/369
Encumbrances	Easement 4
Applicant	Anne and Greg Sherman c/o Coastal Planning
Owner	Gregory David Sherman
Zoning	Township Zone
Assessment Level	Use and Buildings and Works provisions Clause 65
	Zoning and Overlay provisions
Approval Sought	Use and Construction of a Dwelling
Planning Scheme	Colac Otway Planning Scheme
Overlays	Bushfire Management Plan (BMO)
	Design and Development Overlay (DDO4)
	Erosion Management Overlay (EMO)
	Neighbourhood Character Overlay (NCO1)
	Significant Landscape Overlay – Schedule 2

## 2 Characteristics of the Site and Surrounding Area

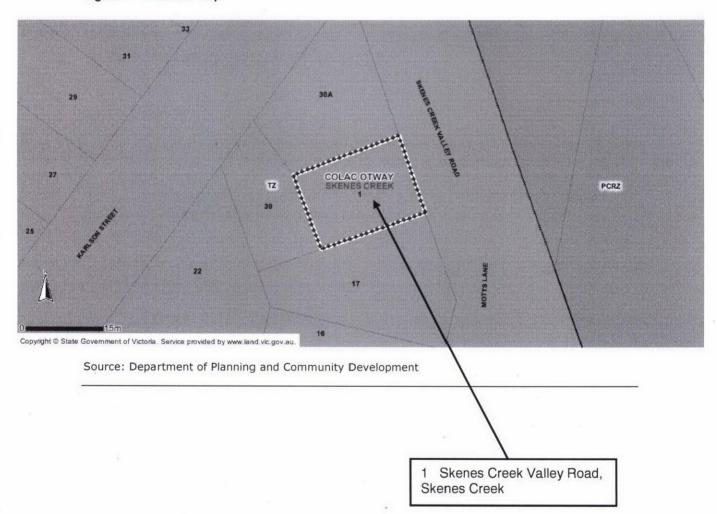
## 2.1 Description of the Site

#### 2.1.1 Location

The site is located within an existing residential area of Skenes Creek. The site includes a small residential allotment within a Township Zone.

A locality plan is provided within **Figure 1** of this report identifying the site within the surrounding area of Skenes Creek.

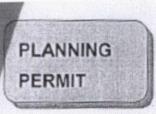
Figure 1 - Location Map



## 2.1.2 Land Use Designation & History

The site is contained' within the Township Zone under the provisions of the Colac Otway Planning Scheme.

The site historically formed part of a subdivision in 2004 PP210/03 for the land otherwise referred to as 30 Karlson St and 1 Skenes Creek Valley Rd as follows:





Naturally Progressive

TO MARK GRATWICK ARCHITECTS PTY LTD 290 LATROBE TERRACE NEWTOWN 3220

Assessment No. -

320103000

Permit No -

PP210/03

Planning Scheme -

Colac-Otway Scheme

Responsible Authority - COLAC OTWAY SHIRE

#### ADDRESS OF THE LAND:

30 KARLSON STREET & 1 SKENES CREEK VALLEY RD, SKENES CREEK LOTS 1 & 2 LP62670. PARISH OF KRAMBRUK

#### THE PERMIT ALLOWS:

Construction of two (2) dwellings (including excavation and retaining walls, driveways, carports, car parking bays, and removal of vegetation) and a three (3) lot subdivision in accordance with the endorsed plans and the details submitted.

#### THE FOLLOWING CONDITIONS APPLY TO THIS PERMIT

#### Colac Otway Shire Council Conditions:

#### Expiry:

This permit will expire if one of the following circumstances applies:

The development is not started within two (2) years of the date of this

(b) The development is not completed within four (4) years of the date of this permit.

(c) The relevant plan of subdivision is not certified within two (2) years of the date of this permit.

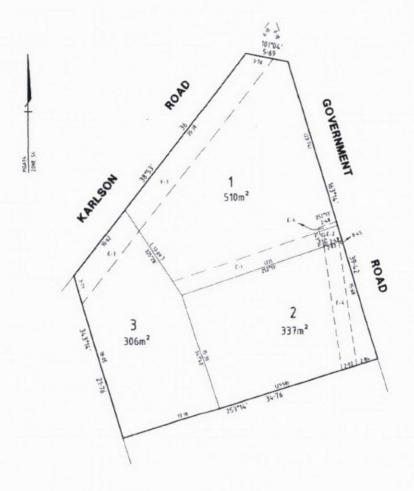
The Responsible Authority may extend the periods referred to if a request is made in writing before the permit expires, or within three months afterwards.

Pate Issued 06.01.2004

Signature for the Date Amended: 08.02.2005 Responsible Authority

ning and Erwironment Regulations 1998 Form 4

Page 1 of 5



The site had been subdivided into three (3) smaller lots prior to the introduction of the DDO4. The subject site was subdivided back in 2006 and the proposed lot is Lot 2 at 337m<sup>2</sup>. Lots 1 and 3 include an existing dwelling each.

#### 2.1.3 Vegetation

The site includes no existing vegetation and no vegetation is required to be removed. The application does not require the removal of any vegetation.

#### 2.1.4 Flooding

The site is not impacted by any flooding issues as it is elevated well above the requisite AHD levels.

#### 2.1.5 Soil Characteristics

There are no known adverse soil characteristics idenfified on the subject land.

## 2.2 Site Analysis

The site is located within an existing area of Skenes Creek and is adjacent to the Skenes Creek.

The site is accessed via Skenes Creek Valley Road which is a dirt road with no formal finishes.

The site is vacant land and includes a powerline easement along the frontage.

The subject site also includes Easement 4 which is in favour of a Sewerage infrastructure for Barwon Water. The easement is located within the front setback.

The land slopes down from top to bottom and benefits from views towards the ocean.

The site is not visible from the Great Ocean Road aside from some neighbouring existing dwelling roof tops.

The site is connected to all relevant infrastructure services.



## 3 Proposal

# 3.1 Summary of Proposed Use and Development of a Dwelling

The permit applicant seeks a permit for the use and construction of a dwelling.

The dwelling has been designed by Mark Gratwick Architects. The layout essentially includes the following:

#### Lower Ground Level:

- Carport
- Bedroom 2 with ensuite
- Bedroom 3 with ensuite and walk in robe
- Laundry
- Storage

#### Ground Floor:

- Living Room
- Dining
- Kitchen
- Bedroom 1 with ensuite
- Balcony

#### First Level:

- Roof Access
- Roof Terrace

The levels are linked via an internal stairwell.

## 4 Development Assessment

# 4.1 Compliance with Victorian Planning Policy (VPP's)

The proposed dwelling is supported from the following State and Local Planning Policies in summary.

#### Clause 12.02-1A Protection of coastal areas

Objective

To recognise the value of coastal areas to the community, conserve and enhance coastal areas and ensure sustainable use of natural coastal resources.

#### Clause 13.02-15 Bushfire Planning

Objective

To strengthen the resilience of settlements and communities to bushfire through riskbased planning that prioritises the protection of human life.

Strategies

Protection of human life

Give priority to the protection of human life by:

Prioritising the protection of human life over all other policy considerations.

Directing population growth and development to low risk locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire.

Reducing the vulnerability of communities to bushfire through the consideration of bushfire risk in decision making at all stages of the planning process.

#### Clause 13.04-25 Erosion and landslip

Objective

To protect areas prone to erosion, landslip or other land degradation processes. Strategies

Identify areas subject to erosion or instability in planning schemes and when considering the use and development of land.

Prevent inappropriate development in unstable areas or areas prone to erosion. Promote vegetation retention, planting and rehabilitation in areas prone to erosion and land instability.

#### Clause 15.01-15 Urban Design

Objective

To create urban environments that are safe, healthy, functional and enjoyable and that contribute to a sense of place and cultural identity.

Strategies

Require development to respond to its context in terms of character, cultural identity, natural features, surrounding landscape and climate.

Ensure development contributes to community and cultural life by improving the quality of living and working environments, facilitating accessibility and providing for inclusiveness.

Ensure the interface between the private and public realm protects and enhances personal safety.

Ensure development supports public realm amenity and safe access to walking and cycling environments and public transport.

Ensure that the design and location of publicly accessible private spaces, including car parking areas, forecourts and walkways, is of a high standard, creates a safe environment for users and enables easy and efficient use.

Ensure that development provides landscaping that supports the amenity, attractiveness and safety of the public realm.

Ensure that development, including signs, minimises detrimental impacts on amenity, on the natural and built environment and on the safety and efficiency of roads. Promote good urban design along and abutting transport corridors.

#### Clause 15.01-5S Neighbourhood Character

Objective

To recognise, support and protect neighbourhood character, cultural identity, and sense of place.

Strategies

Ensure development responds to cultural identity and contributes to existing or preferred neighbourhood character. Ensure development responds to its context and reinforces a sense of place and the valued features and characteristics of the local environment and place by emphasising the: Pattern of local urban structure and subdivision. Underlying natural landscape character and significant vegetation. Heritage values and built form that reflect community identity.

#### Clause 16.01-4 Housing diversity

The proposed development responds favourably to the housing diversity policy. It provides for a range of housing types to meet increasing diversity in the older area of Skenes Creek.

The proposal makes better use of existing infrastructure and improves energy efficiency of housing by infill development principles which assist with reducing urban sprawl.

#### Clause 21.03-5 Skenes Creek

Overview

Skenes Creek is a coastal hamlet set on rolling topography at the base of the Otway Ranges. There is a sense of openness to the town created by the spacious siting of buildings and expansive views to the coast and hillsides. A green wedge corridor through the centre of the township links the town with a vegetated hillside backdrop and is enhanced by regeneration of indigenous and appropriate coastal shrubs around dwellings and public areas. Objective To protect the nationally significant Great Ocean

Road Region landscape and the distinctive landscape qualities and coastal setting of Skenes Creek township. Strategies Ensure new development responds to the above key issues and achieves the following Preferred Character Statement for the Character Areas identified at Schedule 4 to Clause 43.02.

#### Skenes Creek Precinct 1 - Preferred Character Statement

This precinct provides a native 'green wedge' for the whole township, extending from the hill slopes behind the town to the Great Ocean Road. The character of the precinct will be strengthened by the planting and regeneration of indigenous and native vegetation. Dwellings will be set far enough apart to accommodate substantial native bush areas including canopy trees, and will be set substantially below the vegetation canopy. The semi-rural feel of the area will be retained by the lack of fencing and frequent unmade roads. Views to the dwellings will be softened by native vegetation in frontages to major roads and in the public domain along road verges.

#### Clause 21.06 Settlement and Housing

This policy notes that the majority of new housing development in the municipality will continue to be in the form of detached dwellings on conventionally sized blocks; however the demand for smaller dwelling types is expected to escalate. In order to meet these demands there is a need to provide for a range of housing typologies including unit, townhouse, etc.

This proposed meets the demand for infill development and provides for a range of housing types.

#### Clause 21.06-2 Urban Growth

This policy seeks to ensure that development occurs within designated settlement boundaries. This proposal limits urban grown by directing urban growth in designated urban growth areas.

#### 4.2 Compliance with Zoning

#### 4.2.1 Township Zone (TZ)

The subject site is located within the TZ. The purpose of the TZ is as follows:

#### **Purpose**

To implement the Municipal Planning Strategy and the Planning Policy Framework.

To provide for residential development and a range of commercial, industrial and other uses in small towns.

To encourage development that respects the neighbourhood character of the area.

To allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs in appropriate locations.

The permit applicant seeks a permit for the use and construction of a dwelling.

#### Clause 32.05-3 provides:

Use for a dwelling or a dependent person's unit

A lot may be used for a dwelling provided the following requirements are met:

• Each dwelling must be connected to reticulated sewerage, if available. If reticulated sewerage is not available, all wastewater from each dwelling must be treated and retained within the lot in accordance with the State Environment Protection Policy (Waters of Victoria) under the Environment Protection Act 1970.

RESPONSE: Complies as sewerage is located and connected to the site.

• Each dwelling must be connected to a reticulated potable water supply or have an alternative potable water supply, with appropriate storage capacity, to the satisfaction of the responsible authority.

RESPONSE: Complies as potable water is located and connected to the site.

• Each dwelling must be connected to a reticulated electricity supply or have an alternative energy supply to the satisfaction of the responsible authority. These requirements also apply to a dependent person's unit.

RESPONSE: Complies as electricity is located and connected to the site.

#### Clause 32.05-6 provides:

Construction and extension of one dwelling on a lot

Permit requirement

A permit is required to construct or extend one dwelling on:

- A lot of less than 300 square metres.
- A lot of between 300 square metres and 500 square metres if specified in a schedule to this zone.

RESPONSE: Permit trigger.

A permit is required to construct or extend a front fence within 3 metres of a street if:

The fence is associated with one dwelling on:

- A lot of less than 300 square metres, or
- A lot of between 300 and 500 square metres if specified in a schedule to this zone, and
   Page 4 of 10 The fence exceeds the maximum height specified in Clause 54.06-2.

A development must meet the requirements of Clause 54.

## 4.3 Compliance with Overlays

The subject site is located within a number of overlays including the Bushfire Management Overlay Schedule 1 (BMO1), Erosion Management Overlay Schedule 1 (EMO1), Design and Development Overlay Schedule 4 (DDO4), Neighbourhood Character Overlay Schedule 1 (NCO1) and Significance Landscape Overlay Schedule 2 (SLO2).

A response to the respective overlays includes the following.



#### 4.3.1 Bushfire Management Overlay (BMO1)

The subject site is located within the BMO1.

#### FORREST, SKENES CREEK BAL-12.5 AREAS

- 1.0 Statement of the bushfire management objectives to be achieved
  - To specify bushfire protection measures to construct or extend one dwelling on a lot.
  - To specify referral requirements for applications to construct or extend one dwelling on a lot.
- 3.0 Application requirements
  - o An application must be accompanied by a bushfire management plan that:
  - o Shows all of the required bushfire protection measures specified in this schedule,
  - o Includes written conditions that implement the required bushfire protection measures,
  - o Identifies water supply including the location of any fire hydrant within 120 metres of the rear of the building, and
  - o Details vehicle access.

The following BMP has been prepared by Luke Hynes of Beacon Ecological. The design responds to a BAL 29 and meets the BMO objectives as follows:

#### 1 Skenes Creek Valley Road, Skenes Creek. Bushfire Management Plan for a Proposed Dwelling



#### Requirements in response to the Bushfire Management Overlay Schedule 2

#### Construction Requirements

The proposed dwelling is to be built to Bushfire Attack Level (BAL) construction standards of 29 to all aspects.

#### Defendable Space Management

Defendable space is to be provided to the property boundary to all aspects.

Vegetation within the defendable space area must be managed to the following requirements:

- Grass must be short cropped and maintained during the declared fire danger period.
- All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
- Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.
- Plants greater than 10 centimetres in height must not be placed within 3 metres of a window or glass feature of the building.
- . Shrubs must not be located under the canopy of trees.
- Individual and alumps of shrubs must not exceed 5 square metres in area and must be separated by at least 5 metres.
- . The canopy of trees must be separated by at least 2 metres.
- Trees must not overhang or touch any elements of the building.
- There must be a clearance of at least 2 metres between the lowest tree branches and ground level.

#### Water Supply For Fire Fighting Purposes

As the property is less than 500 square metres, a static water supply of a minimum of 2,500 litres of effective water supply for fire flighting purposes is to be provided to the following requirements:

- Be stored in an above ground water tank constructed of concrete or metal.
- Have all fixed above ground water pipes and tittings required for firefighting purposes made of corrosive resistant metal.
- . Include a separate outlet for occupant use.

#### Access Requirements for CFA access

As the driveway is less than 30 metres, there are no CFA access requirements.

Version: V1, 21 February 2019

Beacon

Image: Extract from BMP dated February 2019.

#### 4.3.2 Erosion Management Overlay (EMO1)

The subject site is located within the EMO1.

An application must be accompanied by any information specified in a schedule to this overlay and information showing: The existing site conditions, including land gradient and the extent of any existing erosion, landslip or other land degradation.

The extent of any proposed earthworks.

The means proposed to stabilise disturbed areas.

Any other application requirements specified in a schedule to this overlay.

The proposed dwelling does trigger and EMO assessment. St Quentin has been engaged to prepare an LRA/LSA and this will be submitted upon receipt.

## 4.3.3 Design and Development Overlay – Schedule 4 (DDO4) Coastal Towns: Skenes Creek, Kennett River, Wye River and Separation Creek

The subject site is located within the DDO4.

#### **Design objectives**

To achieve the neighbourhood character

Vision for the townships and Preferred Character of each Precinct as identified in the Municipal Strategic Statement and in the Skenes Creek, Kennett River, Wye River and Separation Creek Neighbourhood Character Study, Planisphere, 2005.

To ensure that lot sizes are sufficient to accommodate adequate vegetation, including substantial trees, dwellings that meet the township's Visions and Preferred Character, and provide space for wildfire management requirements.

Clause 2.0 Buildings and works specifies: A permit is not required to construct a building or carry out works.

There are no permit triggers for the proposed dwelling under DDO4. DDO4 is fundamentally a subdivision control only therefore is not applicable.

#### 4.3.4 Neighbourhood Character Overlay - Schedule 1 (NCO1)

The subject site is located within the NCO1.

#### **Purpose**

To ensure that new buildings and works respect the nationally significant Great Ocean Road Region landscape.

To ensure that new buildings and works achieve the preferred character for the townships as stated above and in Clauses 21.03-5 (Skenes Creek), 21.03-6 (Kennett River, Wye River and Separation Creek).

To encourage the siting of buildings within the vegetation and landform, and below the predominant tree canopy height.

To ensure new buildings reflect and complement the scale, setback, siting, materials and overall form of existing buildings.

To ensure the townships retain an informal, open, spacious character created by the dominance of vegetation, low scale buildings and a lack of solid fencing.

To ensure that applications for more than one dwelling can be subdivided in accordance with the subdivision requirements of DD04.

The Clause 54 assessment has included the relevant modifications and all the provisions comply with the clause.

#### Decision guidelines

Before deciding on an application, the responsible authority must consider, as appropriate:

- The effect of the building or works on the nationally significant Great Ocean Road Region landscape.
- Whether the extension or modification to a building contributes to the township vision and preferred character of the area.
- Whether the siting, bulk, form and appearance of any building or works will contribute to the township vision and preferred character of the township.
- Whether the building is sited to provide large setbacks from front, side and rear boundaries.
- Whether the building respects the predominantly low scale forms in the area.
- Whether the building materials contribute to the preferred neighbourhood character.

The design response complies with the decision guidelines by being firstly architecturally design, secondly, staying with the restricted building envelope, thirdly, staying with the height restrictions and for providing a dwelling of visual interest and mixture of finishes to improve the streetscape.

#### 4.3.5 Significant Landscape Overlay - Schedule 2 (SLO2)

#### The subject site is located within the SLO2.

2.0 Landscape character objective to be achieved

The general landscape objectives to be achieved include:

To protect and enhance the valued characteristics of the nationally significant Great Ocean Road Region landscape.

To ensure that the dominance of vegetation over built form is retained as an element of township character by encouraging retention of existing trees and planting of new indigenous vegetation.

To increase the use of indigenous vegetation to highlight natural features within the precinct.

To retain the contrasts between landscape elements within the precinct.

To ensure that development that occurs on hill faces or in other prominent locations is not highly visible.

To minimise the visual impact of signage and other infrastructure, particularly in coastal areas, hill faces and ridges.

To protect the clear, sweeping views to the ocean available from the precinct.

To retain the dominance of an indigenous natural landscape in coastal areas, between townships, particularly from the Great Ocean Road.

To ensure that fence styles and heights reflect the predominant and preferred character of the townships.

NCO1 prescribes a number of variations to Rescode 54 which have been included in the Clause 54 assessment and include A3, A4, A5, A10, A11, A19 and A20.

#### Clause 5.0 Decision guidelines

Before deciding on an application, the responsible authority must consider, as appropriate:

The effect of the building or works on the nationally significant Great Ocean Road Region landscape.

RESPONSE: The propose dwelling is located within a township area and will sit down below other dwellings and will not be visually prominent from the Great Ocean Road.

Whether the extension or modification to a building contributes to the township vision and preferred character of the area.

RESPONSE: The proposed design response is a modest dwelling with split level in order to respond to the land slope. The dwelling is architecturally design and the built form will contribute positively to the character in the area.

Whether the siting, bulk, form and appearance of any building or works will contribute to the township vision and preferred character of the township.

RESPONSE: The design response includes substantial articulation. As the dwelling is set down into the site, the roof tops around on adjoining lots will provide a variation in roof lines that provide rhythm across the hill face. The dwelling will unlikely to be visually prominent from any road networks.

Whether the building is sited to provide large setbacks from front, side and rear boundaries.

RESPONSE: The site is heavily constrained by the lot size. However, the design response by architects Mark Gratwick have carefully considered these limitations and provided a well thought out design response that meets the site constraints and maintain substantial setbacks including side setback of 3m and rear of 5m.

Whether the building respects the predominantly low scale forms in the area. Whether the building materials contribute to the preferred neighbourhood character.

RESPONSE: Complies



Image: from Mark Gratwicks development plans.

## 4.4 Clause 54 One Dwelling on a Lot

A dwelling is proposed within the TZ and is required to meet the following controls Rescode clause 54 including:

PLANNING SCHEME REQUIREMENTS	RESPONSE
Cl.54.01-1	Neighbourhood Character: Respect the existing neighbourhood character or achieve a
Neighbourhood	preferred neighbourhood character consistent with any relevant neighbourhood character
Character & Site	objective, policy or statement set out in this scheme. Respond to and integrate with the
Description	surrounding urban environment. Protect significant vegetation and site features.
	The subject site is surrounded by a variety of lot sizes ranging from less than 300m <sup>2</sup> to around 1000m <sup>2</sup> . Whilst the subject site is one of the smaller sites it is of suitable size for
	the current design response, it also meets the adjoining neighbourhood character attributes
	of dwellings with smaller building envelopes. There are a number of smaller holiday cabins
	type dwellings that are older and likely finished in concrete sheeting materials with open
	yards. This era of dwelling is typical to the 70's beach shack and often found around Skenes
	Creek including directly abutting the site. There are however also many new contemporary
	dwellings that reflect modern but coastal themed design response mostly built to maximise
	views to the ocean. The proposed design response is small in building envelope however
	provides for a liveable dwelling with a two storey home with a roof top terrace opportunity
	to take in views to the water.
	The Skenes Creek Valley Road is also low key and informal. The road is a dirt finish with no
	curb nor channelling. The land slopes down from 106.5AHD down to 102AHD. Therefore, a
	difference of 4.5m from the highest to the lowest point on site.
	The mixed nature of the character provides opportunity for a variety of dwelling types. The
	design response includes various roof lines and articulation treatments. The design response
	sites the dwelling down into the site in order to meet the height limitations as well as provides
	a built form consistent with the open space nature in this area.

	Complies.
Cl.54.01-2 Design Response	The design response is architecturally designed.
Cl.54.02-1 Neighbourhood Character	As above and refer to the NCO1 response.
Objective CL 54.02.2	The site is leasted as Change Corel, Valley Dead. This word includes only approximately 5
CI.54.02-2 Integration with the Street Objective	The site is located on Skenes Creek Valley Road. This road includes only approximately 5 houses facing this street. The street itself is an informal secondary dirt road. The proposed dwelling is directed towards the street and includes a front door (to the north) and open glass finishes (front façade facing the street) that present well to the street frontage providing integration.
CI.54.03-1 Street	There is proposed 7m front setback to the front wall of the house.
setback NCO1 Min. 7m	Complies.
Cl.54.03-2 Building Height	The maximum height proposed from NGL is less than 8m. Refer to elevation plans with red line showing the 8m height area.
NCO1 Max. 8m	Complies.
Cl.54.03-3 Site coverage Max is 25%	24.9% Complies
Cl. 54.03-4	67%
Permeability	Complies
Cl.54.03-5 Energy Efficiency	TBA during Building Permit stage.
CI.54.03-6 Significant Trees	None
Cl. 54.03-7 Parking	A single carport is proposed on the lower ground level and a secondary space can be situated in tandem. Complies.
Cl.54.04-1 Side	Proposed 3m setback from both adjoining boundarys.
and rear setbacks	Rear setback of 5m.
Cl.54.04-2 Walls on boundaries	Not Applicable.
Cl.54.04-3	There are no adverse effects of daylight to existing windows. This is demonstrated in TP12
Daylight to	Complies.
existing windows	
Cl.54.04-4 North facing windows	The proposal includes substantial north facing windows, refer to elevations which north facing windows for demonstration at TP08.
Cl.54.04-5	There are no adverse overshadowing issues associated with this proposed. There is a slight
Overshadowing	overshadowing in the afternoon to the adjoining property south of the site however this is considered to not be unreasonable. Please refer to TP12.

	BH-ECON DAGGAN ASAL (1900)  Indicates supplied to the second seco				
CI.54.04-6	None considered,	please refer to page TP11 Overlooking plan. Whilst there is some			
Overlooking	overlooking, into both adjoining dwellings to the north and south, this is hard to avoid due to the land size and also the adjoining dwellings include alternative open space areas thus the overlooking is only partial.				
Cl.54.05-1 Daylight to new windows	The dwelling on th	ne north aspects include sufficient windows to daylight.			
CI.54.05-2 Private Open Space	The site includes both front, rear and side POS areas. It is noted the dwelling includes balcony's and a roof top deck area which also contributes to POS area.  Rear: 5x15m = 75m <sup>2</sup> in addition to side areas.				
Cl.54.05-3 Solar access to open space	The site includes various open space areas and solar access is ample to both the north, east and west areas include the balcony on the living room level and roof top.				
Cl.54.06-1 Design	The architecturlaly	designed dwelling provides for a well thought out design and the design			
detail	responds well to the site contraints.				
	The external finish	nes include the following:			
	EXTERNAL FINISHES SCHEDULE				
	(A) WALLS:	CUSTOM ORB CORRUGATED STEEL CLADDING, COLORBOND FINISH			
	B WALLS:	FEATURE STONE CLADDING			
	© WALLS:	RENDERED FINISH			
	D BALUSTRADE:	GLASS BALUSTRADE WITH BRUSHED STEEL UPRIGHTS AND RAIL			
	E WINDOWS:	POWDERCOATED ALUMINIUM FRAMED WINDOWS			
	F FASCIA:	VITRACORE ALUMINIUM CLADDING			
	G ROOF:	CUSTOM ORB CORRUGATED STEEL ROOF SHEETING. COLORBOND FINISH			
	H ROOF & WALL:	MAXLINE STANDING SEAM TRAY DECK ROOF& WALL CLADDING.			

The site is connected to all necessary infrastructure services to accommodate a dwelling on both lots. The feature level and survey plan identify a sewer main plotted from the Barwon Water

records. The application is very standard and relevant infrastructure conditions can apply via the Infrastructure Department to address any relevant issues.

# 4.5 Aboriginal Heritage issues

The requirements under the *Aboriginal Heritage Act 2007* have not been triggered. Whilst the site is not within an area of aboriginal cultural heritage, no significant ground disturbance has or will occur.

# 5 Conclusion & Recommendation

This planning report has been prepared for the permit applicant Anne and Greg Sherman. The application includes the use and development of a dwelling.

The planning report includes an assessment of the proposal against the relevant provisions of the planning scheme including the VPP, MSS, zoning controls, overlay and Rescode requirements of the Colac Otway Planning Scheme.

In summary, the planning application is considered to have addressed the relevant Planning Scheme considerations. We therefore recommend favourable consideration of the application based upon the assessment provided within this report.

# 6 Site Photographs

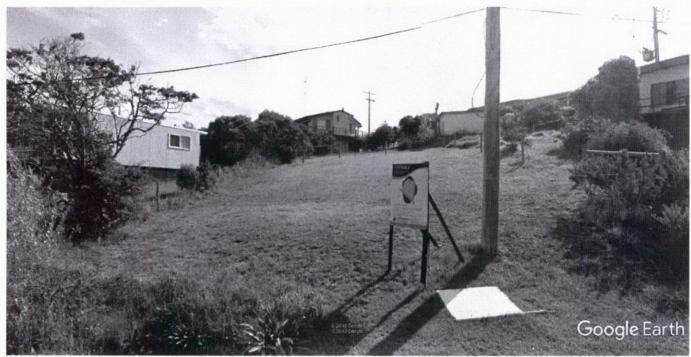


Photo 1: Subject Site include existing vehicle crossover off the Great Ocean Road

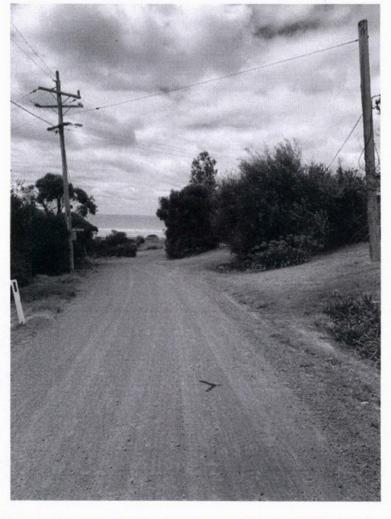


Photo 2: Skenes Creek Valley Road (facing south towards the beach)

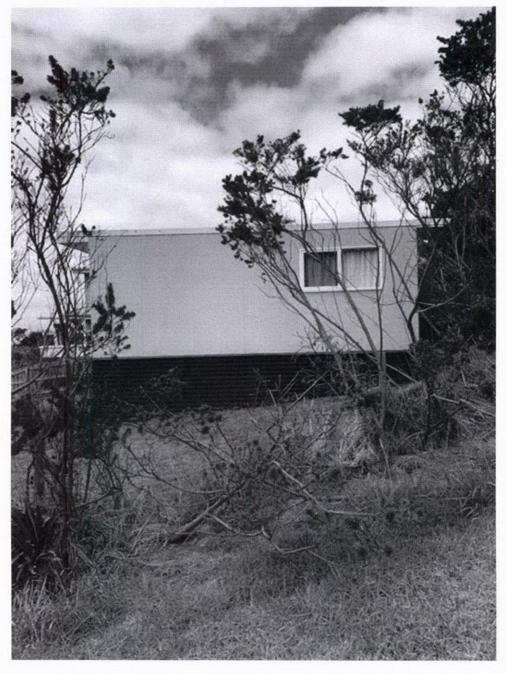


Photo 3: Existing fibro panelled dwelling adjoining the site to the south at 17-18.



Photo 4: Existing fibro panelled shed adjoining the site to the rear at 30 Karlson Street.

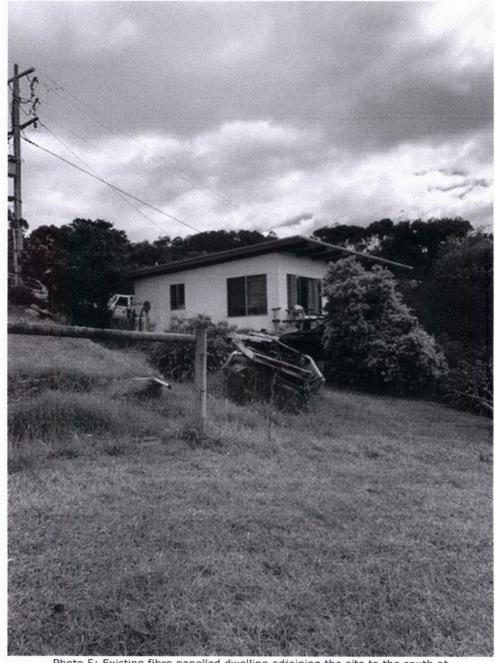


Photo 5: Existing fibro panelled dwelling adjoining the site to the south at 30A Karlson Street, Skenes Creek.



Photo 6: Existing site facing the ocean.

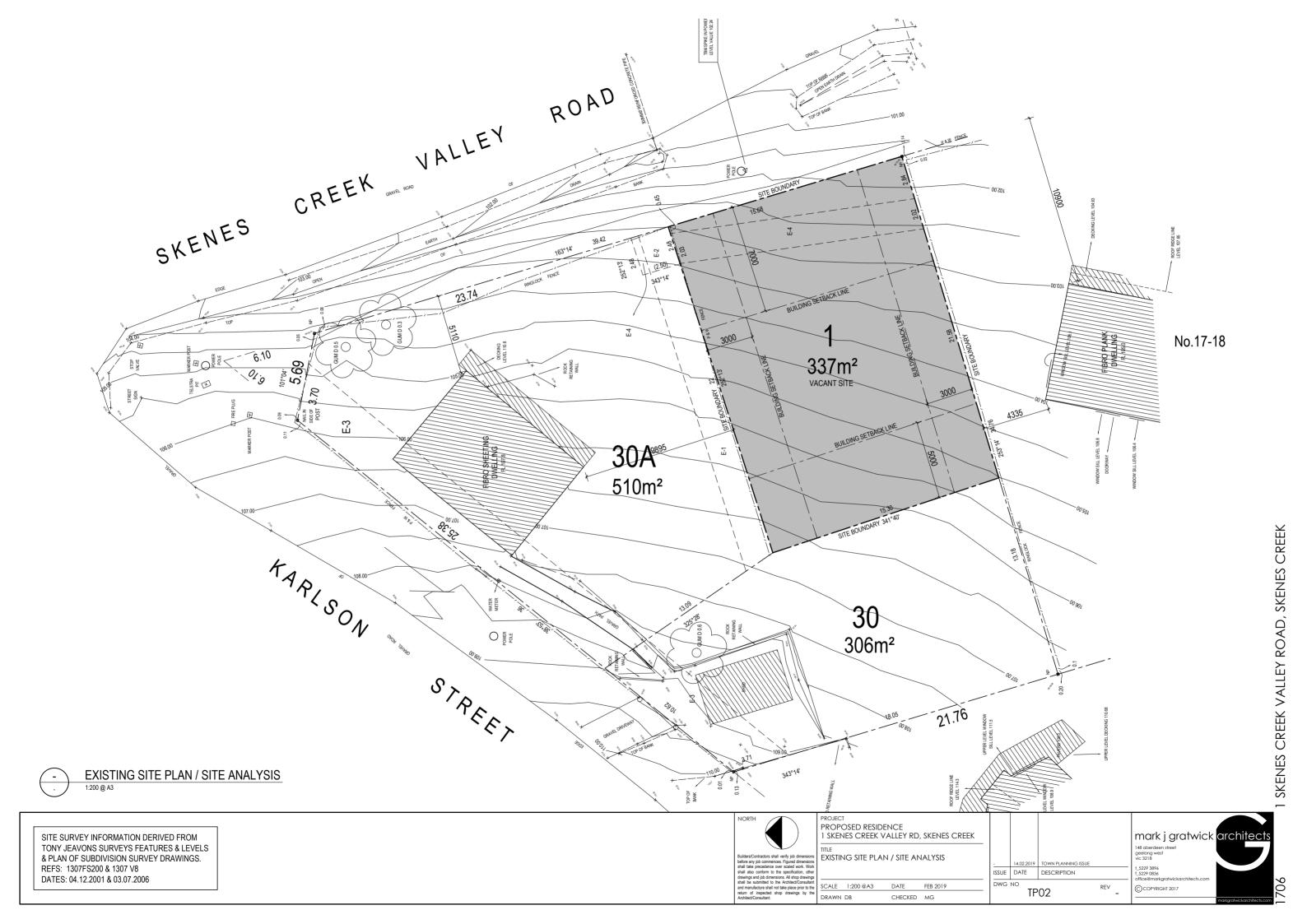
# PROPOSED RESIDENCE 1 SKENES CREEK VALLEY ROAD, SKENES CREEK

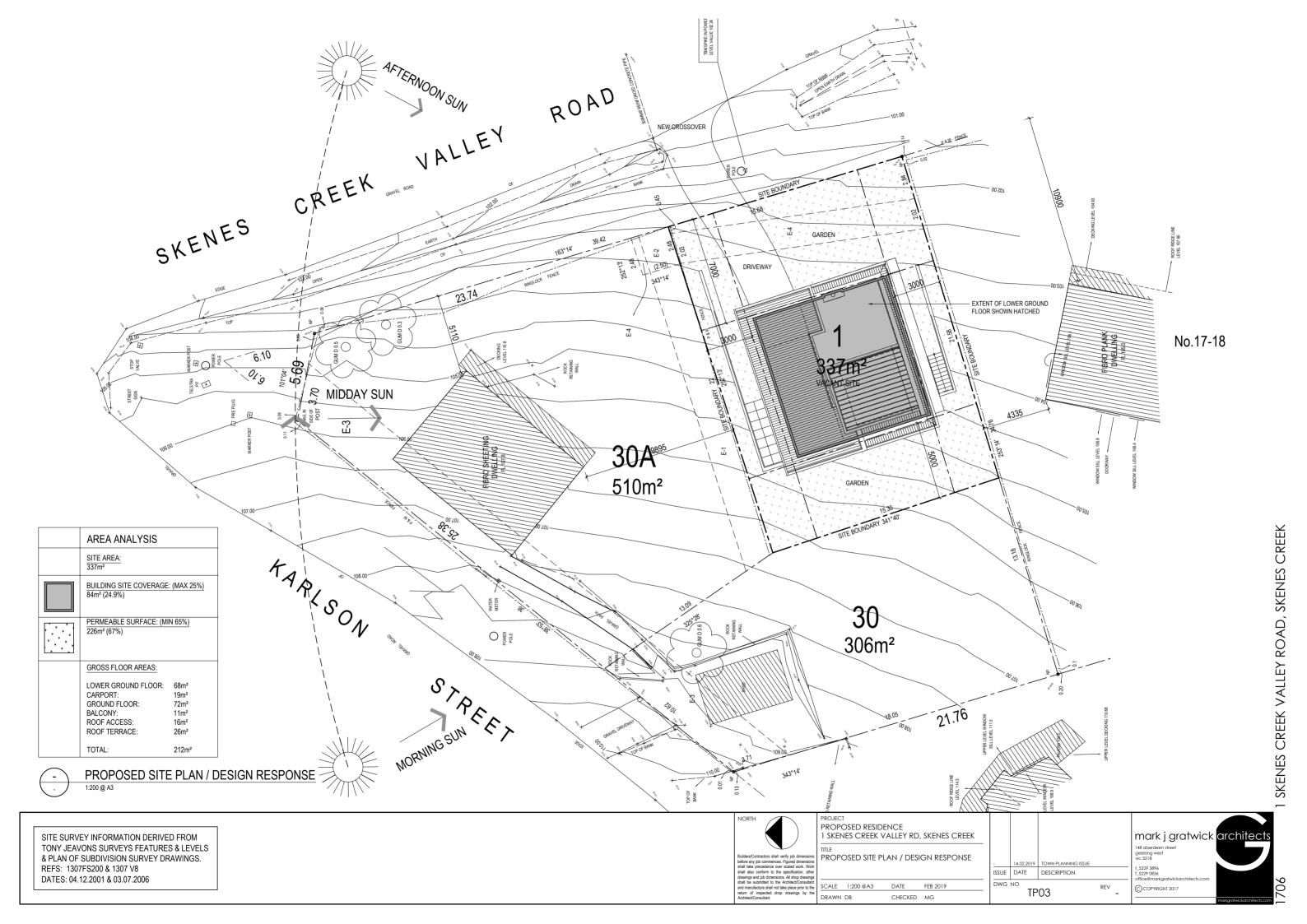
TP01 - SITE LOCATION / DRAWING SCHEDULE	1:200
TP02 - EXISTING SITE PLAN / SITE ANALYSIS	1:200
TP03 - PROPOSED SITE PLAN	1:200
TP04 - LOWER GROUND FLOOR PLAN	1:100
TP05 - GROUND FLOOR PLAN	1:100
TP06 - ROOF TERRACE PLAN	1:100
TP07 - ROOF PLAN	1:100
TP08 - ELEVATIONS	1:100
TP09 - ELEVATIONS	1:100
TP10 - SECTION A-A	1:100
TP11 - OVERLOOKING PLANS	1:200
TP12 - SHADOW DIAGRAMS	1:100

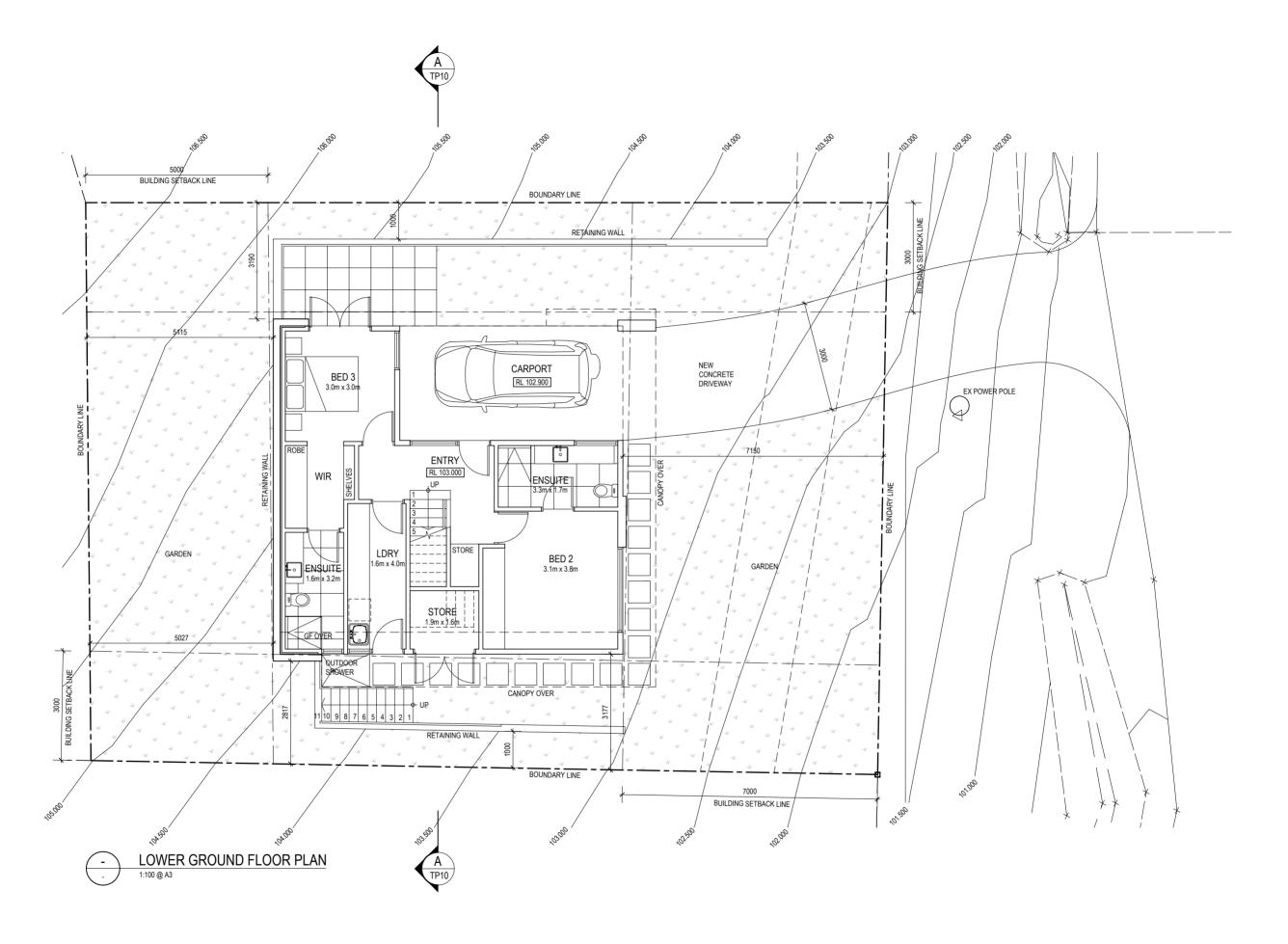














PROJECT
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1 SKENES CREEK VALLEY RD, SKENES CREEK

LOWER GROUND FLOOR PLAN

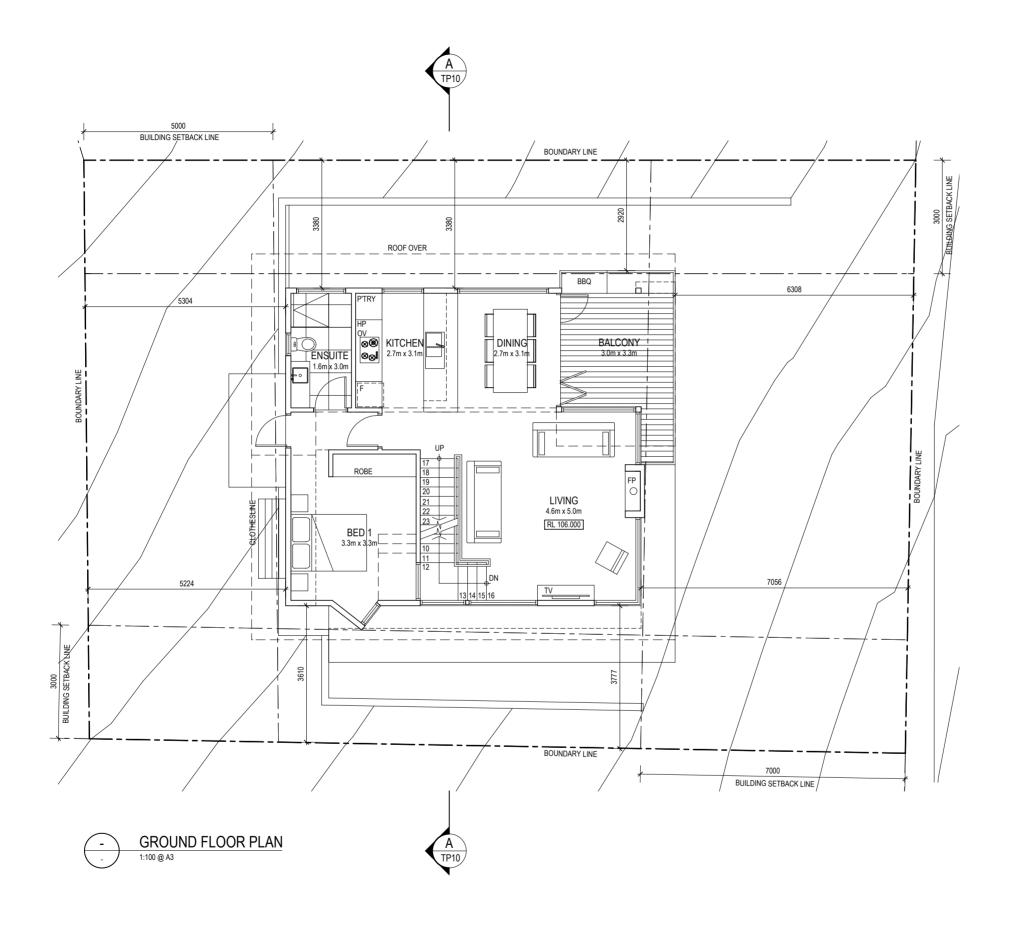
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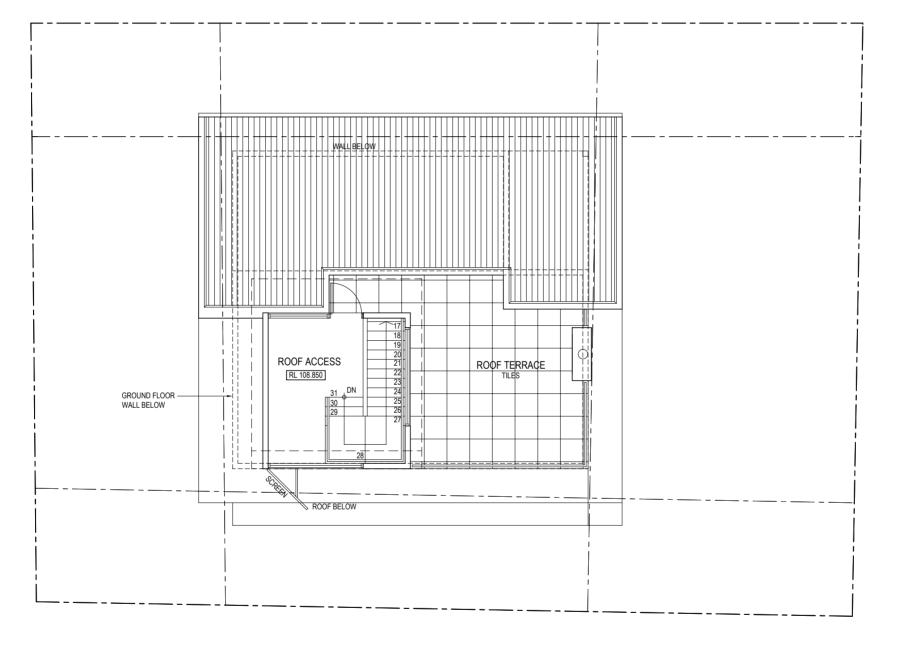
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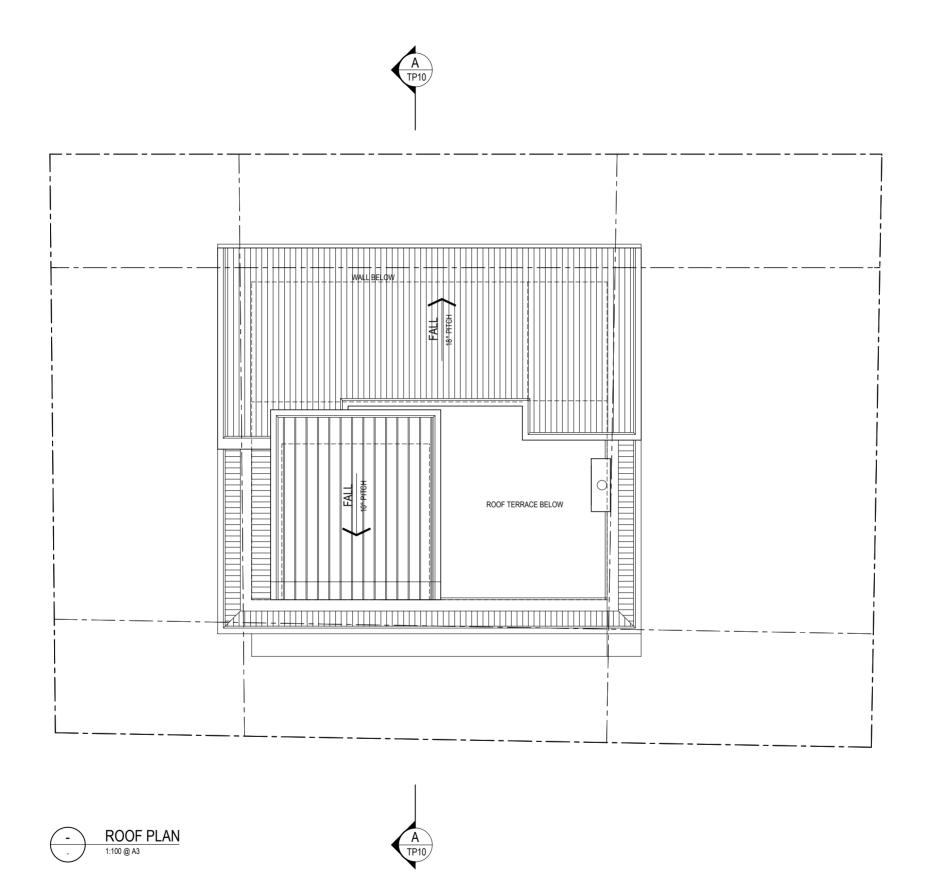
ROOF TERRACE PLAN

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- 14.02.2019 TOWN PLANNING ISSUE ISSUE DATE DESCRIPTION

TP06

mark j gratwick <mark>architects</mark> 148 aberdeen street geelong west vic 3218 t\_5229 3896 f\_5229 0836 office@markgr REV \_ ©COPYRIGHT 2017





Builders/Contractors shall verify job dimensions before any job commensors. Figured dimensions shall take precedence over scaled work. Work shall also conform to the specification, other dawings and job dimensions. All shop drawings shall be submitted to the Architect/Consultant and manufacture shall not last apice prior to the relation of largueded shop drawings by the Architect/Consultant and take packed shop drawings by the Architect/Consultant and the properties of the pr

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- SIDE BOUNDARY SETBACK & 8m HEIGHT LIMIT ABOVE NATURAL

GROUND LEVEL -SHOWN ON EAST BOUNDARY

EXTERNAL FINISHES SCHEDULE

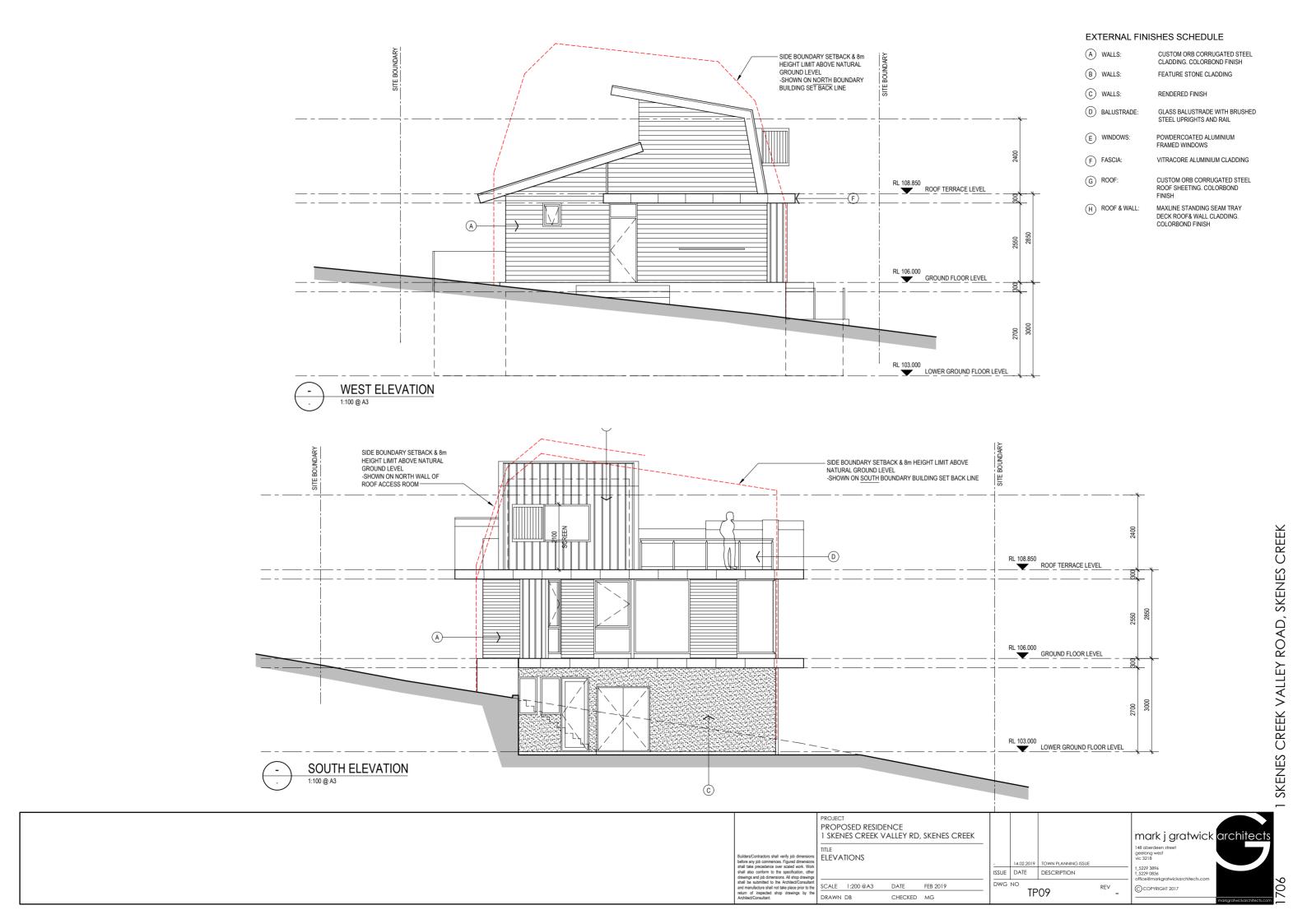
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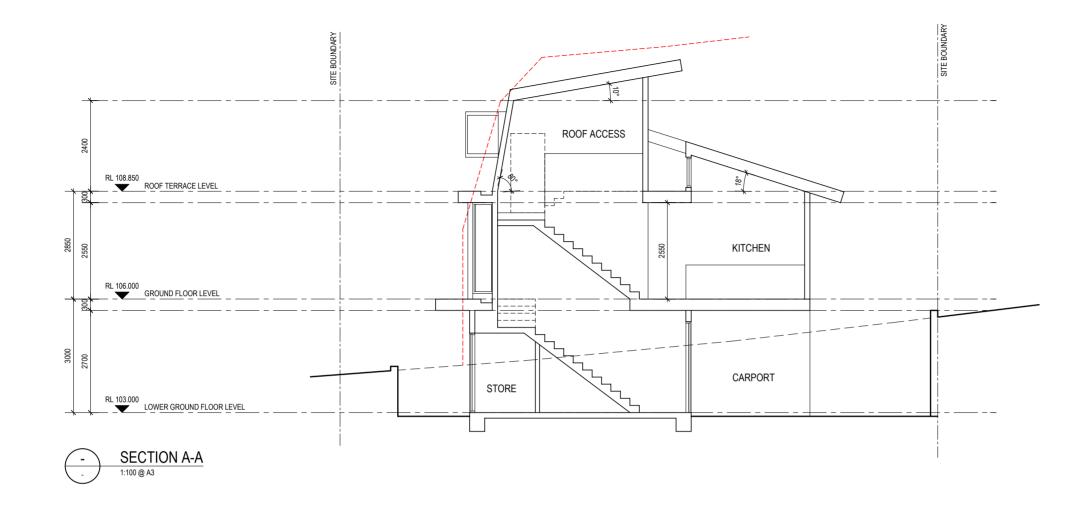
CUSTOM ORB CORRUGATED STEEL CLADDING. COLORBOND FINISH

FEATURE STONE CLADDING

SIDE BOUNDARY SETBACK & 8m HEIGHT LIMIT ABOVE NATURAL GROUND LEVEL

-SHOWN AT SECTION A-A





PROJECT
PROPOSED RESIDENCE
1 SKENES CREEK VALLEY RD, SKENES CREEK

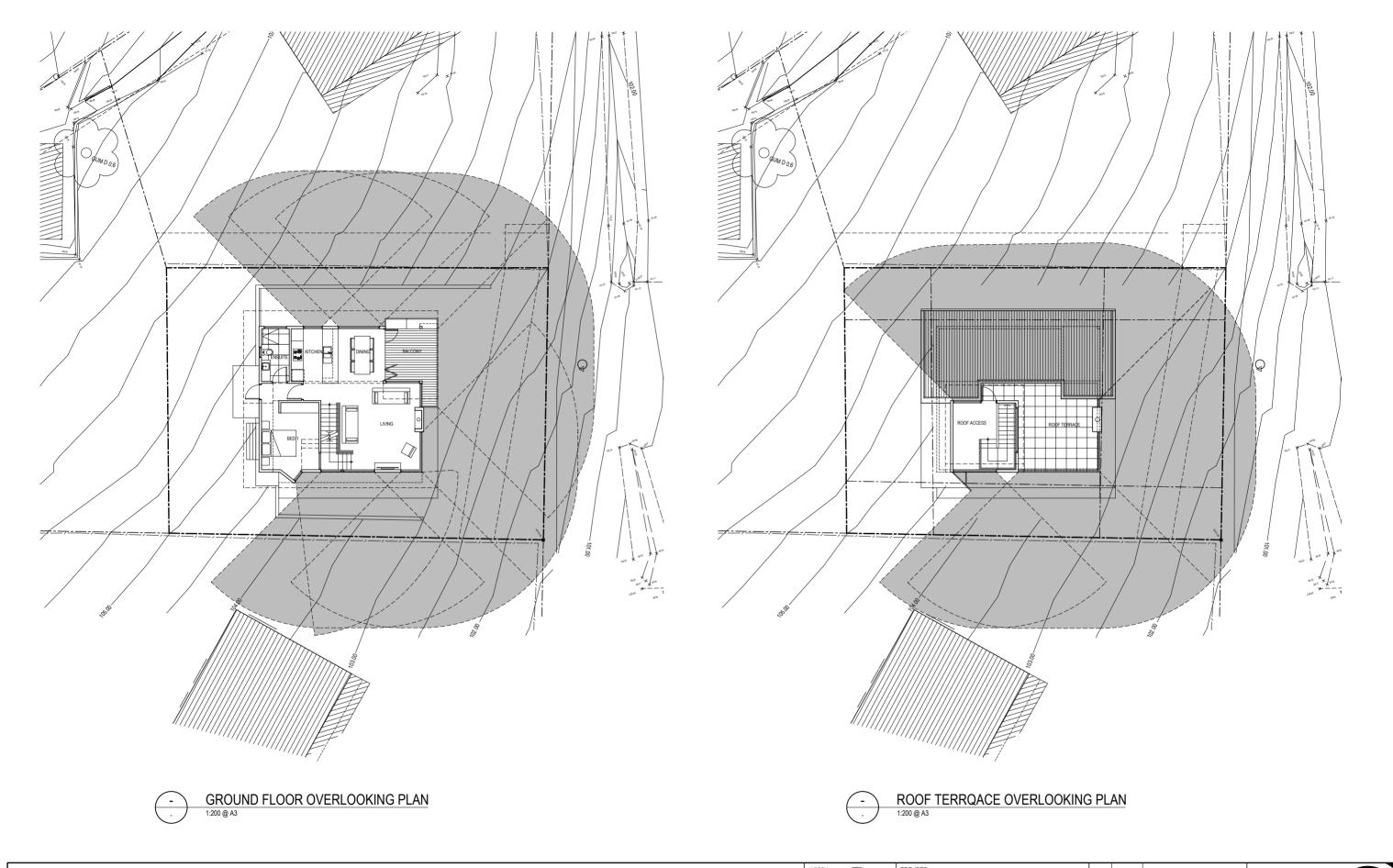
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PROJECT
PROPOSED RESIDENCE
1 SKENES CREEK VALLEY RD, SKENES CREEK

OVERLOOKING PLANS

DATE FEB 2019 CHECKED MG

148 aberdeen street geelong west vic 3218 - 14.02.2019 TOWN PLANNING ISSUE ISSUE DATE DESCRIPTION

TP11

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# **GEOTECHNICAL ASSESSMENT REPORT**

1 Skenes Creek Valley Road, Skenes Creek

Prepared for: Anne & Greg Sherman

Report No: 15943G-LRA



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### **EXECUTIVE SUMMARY**

We have been commissioned by the client Anne & Greg Sherman to investigate the site conditions at the address shown provide a geotechnical assessment report to meet the requirements of the Colac Otway Shire Planning Scheme Amendment C68: Schedule 1 to the Erosion Management Overlay (EMO).

Our geotechnical landslide risk assessment has found there are possible landslide events in the area, common to many sites in Otway region. However, subject to our recommendations and assessment of the risks, we conclude that there are no geotechnical reasons to prevent the issue of a permit to build the proposed residence on this site.

Following our geotechnical assessment for the proposed development and at the nominated location on this site, we have judged the landslide risk is "low" and that a landslide risk assessment in accordance with guidelines published by the Australian Geomechanics Society (AGS) journal Volume 42 No 1 of March 2007, entitled "Landslide Risk Management", is not required.

Due to evidence of prior drainage courses on site we recommend upslope cut-off drains be designed by a suitability qualified engineer and connected to the legal point of discharge to prevent surface runoff impacting the building envelope.

Due to the proposed site cut it is recommended that both temporary and permanent support is provided for the proposed excavations. All retaining walls/retention systems must be fully engineer designed.

### 1.0 INTRODUCTION

Colac Otway Shire have developed an erosion management overlay (EMO1) for certain geological areas where potential risk of erosion or landslide have been identified.

Landslides, erosion and other forms of earth / rock movements are common throughout the Otway Ranges and are a continual natural process of geomorphological shaping of the land. Developments of sites in geologically active areas are potentially at risk of damage from natural soil or rock movements.

Whilst the risks due to soil movement can usually be identified and steps often be taken to mitigate or reduce the risks to acceptable levels, it is not always feasible to entirely eliminate the risks of damage or personal injury entirely.

### 2.0 SCOPE OF THE REPORT

St. Quentin Consulting was commissioned by the client Anne & Greg Sherman to provide a geotechnical assessment on the property to meet the requirements of the Colac Otway Shire: EMO1.

The purpose of the assessment is to identify possible landslide hazards on the subject site near the proposed development location and to provide guidance and options for possible risk mitigation.

### 3.0 DEVELOPMENT DESCRIPTION

The proposed development is the construction of a residential dwelling, with approximate footprint dimensions of about 9m x 9.5m. We have provided recommendations for a clad frame two storey dwelling with roof terrace with pad footings. Elevations indicate the site will have a maximum site cut of about 2.7m.



Plans and elevations prepared by the designer are considered to be an accurate representation of the proposed works. Refer to the proposed plans (referenced in our geotechnical declaration) and our attached photos.

NOTE: If the building type is changed this report may be inappropriate.

### 4.0 TESTING PROGRAM AND FINDINGS

### 4.1 Data gathering – desk top studies and previous investigations

There have been many of private and published landslide risk assessment reports conducted in the Otway Ranges (refer references). These reports suggest that landslide hazards are evident in particular areas and that inappropriate development can result in and contribute to slope failure.

In preparation of our field investigation of the site, preliminary data was gathered from the following sources:

- Colac Otway Shire landslide details and website information: inventory of known major landslides within the Shire developed by A.S. Miner Geotechnical and Dahlhaus Environmental Geology Pty Ltd.
- Corangamite Catchment Management Authority 'CCMA' published landslide details, susceptibility mapping, field guide and information on its website.
- Department of Primary Industries GeoVic website: details on geological features and mapping and the Victorian Resources Online website: information about soil properties.
- Federation University- UB Spatial: digital database of landslide, erosion features.
- Aerial photos and maps published by Nearmap.com & Googlemaps.com.
- Previous investigations and reports by us and other consultants, published and unpublished.
- Plans and elevations prepared by the designer.
- Previous site classification report prepared by others.

### 4.2 Field Investigation

### 4.2.1 Site inspection and mapping

A thorough geomorphological appraisal of the site was conducted, identifying the main features of the site and the surrounding area to identify evidence of slope instability and past slope failures. Slope angles were measured with an inclinometer.

A plan showing the approximate borehole location and plan showing main geomorphic features is presented in Appendix A

### 4.2.2 Site description and geomorphology

The proposed development site is currently a vacant lot. The subject site is on the west side of the Skenes Creek Valley Road on a waxing divergent hillside, sloping to the east. The overall natural slope of the land is relatively uniform over the development area at an angle of about 11°. Review of aerial imagery indicates a drainage course was present at the site, we suspect this drainage course was backfilled as part of a previous development in adjacent sites. We have judged the geomorphology of the local area (at the base of high hillslopes) suggest "colluvium" formation of soils has occurred, similar to many areas in Skenes Creek.

### 4.2.3 Sub-surface conditions

Two (2) boreholes were drilled to a maximum depth of 3.00m at the locations nominated on the site plan. Disturbed soil samples were collected, logged and hand classified by an experienced and qualified geologist or geotechnical engineer. A description of the soil types observed in the boreholes is shown in Appendix B.



Our investigation has revealed that the soil profile comprises mainly "colluvial" silts and clays predominately derived from prolonged sheetwash and related creep and weathering of Cretaceous age sediments known as Eumeralia Formation.

Site geology mapping is presented in Figure 1.

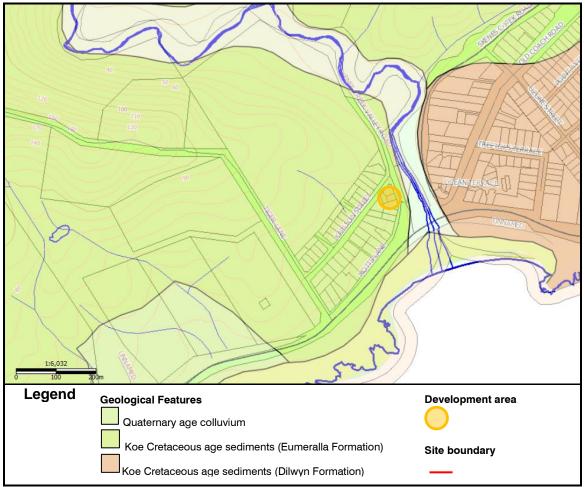


Figure 1: Site geology, Derived from Colac 1:50,000 geological map (Second Edition). Department of Manufacturing & Industry Development, Victoria

### 4.2.4 Groundwater conditions

There is limited published bore data available on permanent / transient water table for this area of Skenes Creek. No permanent or perched water table was encountered during testing however a transient perched water table may develop in very wet conditions above the clay layer. Such a perched water table may prove problematic if construction is commenced after wet periods and deep excavations may collapse without warning.

### 4.3 Previous landslide movements

There are several large landslide features in the Skenes Creek locality, however no <u>significant</u> landslide features were identified on the subject site. We are aware of a large mapped landside features however the appearance of the soil profile suggests that. Inventory Mapping (collated by A.S. Miner Geotechnical and Dahlhaus Environmental Geology Pty Ltd), refer Figure 1. Roberts (2006-2004) suggests there is a a large landslide feature encompassing the site that is inferred to emanate from an incised gully the north-west. We acknowledge the local geomorphology could be interpreted as a possible ancient 'fossil' landslide however we have judged the boundaries this feature is not accurate and suggest a large and sudden landslide event is unlikely to have impacted the site.



It is more likely the prolonged creep has occurred on the site, common to many parts of Skenes Creek. Recent creep that has occurred within the Skenes Creek township has been known to affect open excavations and existing dwellings, resulting is slow but sometimes significant movement that has resulted in structural damage. Similar and ongoing creep could impact areas of the site, particularly open excavations or unsupported cuts exist.

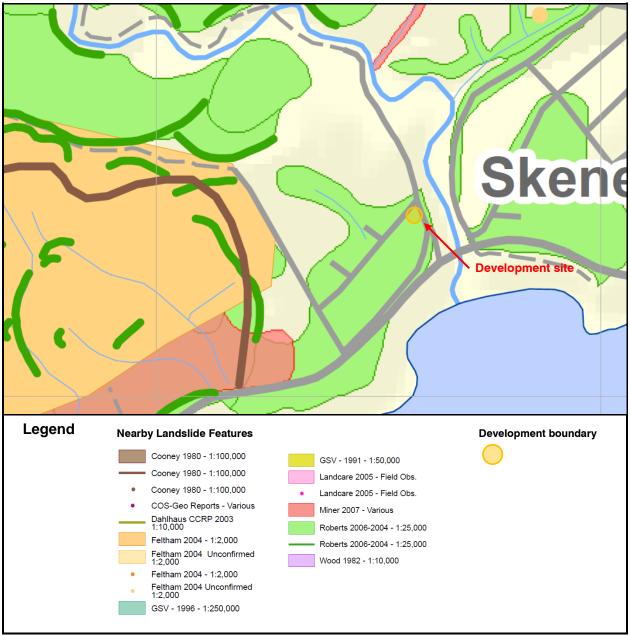


Figure 2: Department of Primary Industries Skenes Creek Colac-Otway Shire Landslide Inventory Mapping (A.S. Miner Geotechnical and Dahlhaus Environmental Geology Pty Ltd)

### 5.0 GEOTECHNICAL STATEMENT REQUIRED BY EMO SCHEDULE 1

In accordance with Colac Otway Shire Planning Scheme, Erosion Management Overlay (EMO)\_44.01 we provide the following information.

### 5.1 Practitioner details

Cameron Farrar who is a professional geotechnical engineer with a Bachelor of Engineering degree and registered member of Engineers Australia and Australian Geomechanics Society. The author has more than 20 years of experience in geotechnical engineering and management of slope instability issues and landslip risk management.



### 5.2 Currency

This report is based on field measurements made less than 12 months ago.

### 5.3 Site description

Refer to section 4.2.2.

### 5.4 Site assessment plans

Appendix A show slope details of the development site area.

### 5.5 Sub-surface conditions

Borehole logs presented in Appendix B and section 4.2.3 describe the site's subsurface features.

### 5.6 Natural slope failure

Past failures were identified on and near the site. Refer to section 4.3.

### 5.7 Site investigations

A site investigation was conducted to examine and sample the soil profile in order to assess the geotechnical/geological model. Details of the soil conditions revealed are included in this report (Appendix B) and are described in item 4.2.3 above.

### 5.8 Sub-surface investigation

Geological soil and rock samples were recovered from test boreholes for examination by a professional geotechnical engineer.

### 5.9 Landslide risk

The risks for slope instability hazards identified are of an acceptable risk level and will remain so over the design life of the proposed development (as presented in development plans).

### 5.10 Development suitability

The subject lot is suitable for the proposed development and the proposed development can meet the acceptable risk criteria, as defined in the EMO schedule.

In our opinion the development can be carried out in a manner which will not adversely increase the landslip risk to life or property affecting the subject lot or adjoining or nearby land.

The subject lot is suitable for the proposed development and the proposed development can meet the tolerable risk criteria, as defined in the EMO schedule.

### 5.11 Special conditions and inspections

In our opinion and subject to our recommendations, no other special geotechnical conditions are required for approval of the development and a program of periodic inspections is not required.

### 5.12 Time frame

If the proposed works are not completed within 12 months of the date of this report this report may need to be re-evaluated.

### 6.0 SUMMARY OF RISKS AND CONCLUSION

Our geotechnical assessment has not identified significant risks of loss of life and damage to property on the site. We have determined the risks associated with building on the proposed site are "low" and that a landslide risk assessment is not warranted for the proposed development.



### 7.0 RECOMMENDATIONS

### 7.1 Site recommendations

We have no geotechnical objections to the construction of an appropriately designed development. The proposed development is considered appropriate for the site.

Note that an increase in slope failure and erosion can be expected if an inappropriate development is undertaken or if site maintenance is neglected. Maintaining the site drainage and monitoring the site and buildings for any evidence of soil or slope movement are very important aspects of the ongoing site maintenance requirements.

### 7.2 Drainage management

Due to evidence of prior drainage courses on site we recommend upslope cut-off drains be designed by a suitability qualified engineer and connected to the legal point of discharge to prevent surface run-off impacting the building envelope. Note that moisture inundation at the building edge is known to cause foundation movement and can affect the long-term serviceability of the structure. Careful attention to drainage is also essential to reduce the slope failure and erosion.

Particular care must be taken to slope the soil surface away from the building and to install adequate and effective site drains, both surface and sub-surface to prevent excessive soil moisture variations. Upslope cut-off drains should be installed upslope from the dwelling and positioned and constructed with sufficient fall to discharge completely to prevent water from accumulating in the soil anywhere near the buildings. Any blockages must be cleared and repaired promptly.

Care must also be taken to ensure that all levelled areas (vehicle parking bays, recreation areas etc.) have a slight fall ( $\geq 2^{\circ}$ ) to prevent surface water from ponding or seeping into the ground and diverted away from the buildings.

### 7.3 Site vegetation

Suitable vegetation significantly improves the stability of a site by reducing the soil moisture content, minimising soil erosion and binding the soil structure together. Large trees should be retained wherever possible. Where large tree removal is necessary to accommodate the proposed building, they should be cut off at ground level with the root structures left intact.

On reactive sites care must be taken to ensure adequate drainage and sufficient offset to trees to ensure low and constant moisture content is achieved around the building perimeter. The owner is reminded to pay close attention to site drainage. Moisture ingress into the footing area is known to cause edge heave (lifting) or settlement depending on the footing type.

### 7.4 Site excavations and fill batters

Cut areas must have a slight fall ( $\geq 2^{\circ}$ ) away from cut interface to prevent surface water from ponding or seeping into the near the base of any site cut.

The construction of appropriately designed walls or battered slopes will reduce the risk of soil movement and the collapse of any proposed site excavations.

### 7.5 Site classification

Australian Standard AS2870-2011 provides the following system of site classification for residential footing designs:



Table 1: Site Classification Classes

Site Classification	Foundation Type
Α	Most sand and rock sites with negligible ground movement from moisture change
S	Slightly reactive clay sites subject to slight ground movement from moisture change
М	Moderately reactive clay sites subject to moderate ground movement from moisture change
H1/H2	Highly reactive
Е	Extremely reactive
P	Sites with environmental factors that may affect the performance of the building including trees, deep fill, recently removed building, abnormal moisture conditions, soft soils, landslide risk or erosion.

NOTE 1: AS2870-2011 recommends a site inspection during excavation to confirm the soil profile.

NOTE 2: The above classification is made assuming that the site will not change significantly before construction of the proposed building. Site cuts greater than 500mm or the placement of addition uncontrolled fill is considered a significant change and the site may need to be re-classified.

The site has been classified  $\underline{M}$  in accordance with Section 2 of AS2870-2011 which suggests moderately reactive soil conditions. We estimate the characteristic surface movement to range between 20-40mm, for climate category 1, where depth of suction change (Hs) is 1.5m. However, given the proposed site cut, we recommend footings for this site to be engineer designed.

We recommend that an experienced structural engineer be commissioned to design footings and any retaining structures higher than 1m.

### 7.6 Strip / pad footing recommendations

The use of strip / pad footing for a Class  $\underline{M}$  classification is considered appropriate. The footings should be detailed as specified in Section 3 and constructed in accordance with Section 4, 5 & 6 of AS2870-2011.

During our investigation a suitable founding depth for strip / pad footings was found as follows:

Table 2: Minimum founding depths for strip / pad footing systems

Borehole	Minimum Founding Depth	Founding Stratum	Minimum Allowable Bearing Capacity
1	1000 mm	Stiff Silty Clay	150 kPa
2	1000 mm	Stiff Silty Clay	150 kPa

NOTE: The above quoted depths were determined from surface level at the time of testing and may vary across the site or if the site is cut and/or filled. We recommend the footings penetrate the recommended "Founding Material" by at least 100mm.

Due to possible creep, known to occur in the area, we recommend a gridded strip footing be considered to allow for possible lateral movement.

### 7.7 In-fill floor recommendations

In-fill type floor slabs for garages, verandahs, etc., be separated from walls and footings by a compressible strip and contain regular saw cuts or groove joints to control cracking. Such slabs are not considered to be a structural part of the building and minor cracking or movement may occur.

### 7.8 Site excavations/retaining wall recommendations

Excavations with slope angles up to 30° will be stable without support, but those steeper than 30° will require netting or other retaining structures to minimise surface erosion and fretting. Observations of nearby roads in the same soil conditions have revealed that cut batters in clay or extremely weathered



rock appear to have long term stability at angles up to 30° from horizontal however exfoliation and more significant failure is more likely during intense or prolonged rainfall events. Construction of appropriately designed walls or battered slopes is therefore essential to reduce the risk of soil movement and the collapse of any proposed site excavations.

It is recommended that both temporary and permanent support is provided for the proposed excavations, particularly near boundaries to ensure adjacent properties are not impacted. It is recommended that shoring is left in place, where applicable with the permanent retaining structure installed directly adjacent.

All retaining walls/retention systems must be fully engineer designed. The engineer may use the following approximate soil parameters in the design. These values have been derived from our field test results and from published tables. We have not carried out specific testing to determine these values.

The following soil parameters, presented in Table 3 may be used for design purposes.

Soil parameter	Approx. value for clayey silt	Approx. value for clay
Wet density (γ)	1.70 t/m <sup>3</sup>	1.90 t/m <sup>3</sup>
Drained cohesion (c')	1 kPa	2 kPa
Angle of internal friction (φ')	24°	25°

Table 3: Soil parameters for retaining structures

### 7.9 Differential movements

Please note that significant differential heave is expected from significant site cuts or placing of reactive clay fill as part of the preparation works. Where site cuts over 500 mm are proposed, the cracked zone of the soil is effectively removed and exposed soils are highly susceptible to moisture variations and therefore potential for heave on these areas. Filling of reactive clay sites can potentially result in surface movements due to cracks in the natural soils being filled resulting in vertical movements.

### 7.10 General recommendations

The satisfactory performance of buildings on this site depends on good engineering and building practice. This includes:

- a) Design of an appropriate development for the site;
- b) Use of flexible construction materials whenever possible which are "movement tolerant" (e.g. clad frame is preferable to brick and articulated brick or stone walls are preferable to non-articulated);
- c) Minimisation of site excavations wherever possible and the provision of adequate retaining structures and drainage for cut faces (or batter at an appropriate angle);
- d) A re-vegetation program including planting suitable trees and shrubs (preferably indigenous) at an appropriate distance from the buildings to help support the soil and minimise erosion;
- e) Appropriate site drainage to ensure surface water, excess roof water and household effluent (where relevant) does not pond or seep into the ground near building envelope;
- f) Diversion on uncontained water around the building envelope area and be widely dispersed laterally well below the house site;
- g) regular maintenance by the owner, including clearing of surface drains, sub-surface drains, repair of leaking plumbing, monitoring the site and buildings for any evidence of soil or slope movement and seeking immediate advice should any building distress become apparent.



Refer also to the attached Appendices for more general advice.

Prepared by:

C. Farrar B.Eng, MIE Aust (Reg No 4367740)

Geotechnical Manager

St. Quentin Consulting Pty Ltd



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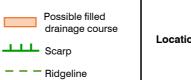
# Appendix A

**Borehole Location Plan** 

# Site Plan







Site Plan

Location: 1 Skenes Creek Valley Road

Skenes Creek, Victoria

Source: Nearmap.com - Jan-2005

Project No: 15943G-LRA

Inv. date: 1/03/2019

Drawing No: 1

Scale: NOT TO SCALE

Drawn by: O.R

Date: 1/04/2019

Approved by: C.F.

Date: 1/04/2019





Appendix B

**Borehole Logs** 

# **BOREHOLE LOG**



			k Greg Sherman	-				15943G-LRA				Sheet:	1 of 1
Locat	tion:		es Creek Valley Road				ole No:			-	Logged by:		S.L
		Skenes	s Creek, Victoria			In	v. Date:	1/03/201	9	<b>.</b>	Chec	ked by:	C.F.
Depth (metres)		Graphic Log	Material Description  Type, Plasticity, Colour, Particle characteristics	Soil Classification		Consistency / Density	Moisture	Degree of Weathering	Sample / Test	Test Results	Geol	ogy and a observati	
0.3	0.60		Clayey SILT Grey to brown Medium plasticity Firm, slightly moist	CI		F	SM	RS				Pretaceous Formation (	age sediments Koe)
0.9			Silty CLAY Mottled orange and grey Medium plasticity Stiff, moist	CI		St	M	RS					
2.4	2.50		Trace of rock fragments										
3.3			Borehole 1 terminated at 3m										
moistur			Degree of Weathering			y/density:			Structure		Method:		
D SM M W Sat	Dry Slightl Moist Wet Satura	y Moist	RS Residual Soil  XW Extremely Weathered Rock  HW Highly Weathered Rock  MW Moderately Weathered Rock  SW Slightly Weathered Rock	S s F f St s VSt v	very so soft firm stiff very st	tiff	L loose	loose e um dense e	Ma Massi SG Single We Weak Mo Mode Str Stron	e grained rate		Hand Auger Auger Drilling Roller/Tricone Washbore Non Destructi	

# **BOREHOLE LOG**



			Anne & Greg Sherman					t No.: 15943G-LRA				Sheet:	1 of 1
Locat	ion:		es Creek Valley Road	_			ole No:				Logg	ged by: _	S.L
		Skene	s Creek, Victoria	-		Inv. Date: 1/03/2019		9		Chec	ked by:	C.F.	
Depth (metres)		Graphic Log	Material Description Type, Plasticity, Colour, Particle characteristics	Soil Classification		Consistency / Density	Moisture	Degree of Weathering	Sample / Test	Test Results		ogy and a observati	ons
0.3	0.60		Clayey SILT Grey to brown Medium plasticity Firm, slightly moist	CI		F	SM	RS				Cretaceous Formation (	age sediments Koe)
0.9			Silty CLAY Mottled orange and grey Medium plasticity Stiff, moist	CI		St	M	RS					
2.1			Trace of rock fragments										
3.0	3.00		Borehole 2 terminated at 3m										
	Dry	y Moist	Degree of Weathering RS Residual Soil XW Extremely Weathered Rock HW Highly Weathered Rock MW Moderately Weathered Rock SW Slightly Weathered Rock FR Fresh Rock	VS von S S S S S S S S S S S S S S S S S S S	ery so soft irm stiff	iff	Fb friable VL very L loose	loose e um dense e	Structure  Ma Massi SG Single We Weak Mo Mode Str Strong	grained		Hand Auger Auger Drilling Roller/Tricone Washbore Non Destructi	•



# Appendix C

# Site Photographs

### 1 Skenes Creek Valley Road - Photographs



Photo 1: Existing site conditions, view west from borehole 1.



Photo 2: Existing site conditions, view east from borehole 1.



Title: Photographs

Locality: 1 Skenes Creek Valley Road

Skenes Creek, Victoria

Project No: 15943G-LRA

Prepared by: O.R

**Date:** 2/04/2019

### 1 Skenes Creek Valley Road - Photographs



Photo 3: Existing site conditions, view north from borehole 2.



Photo 4: Existing site conditions, view south from borehole 2.



Title: Photographs

Locality: 1 Skenes Creek Valley Road

Skenes Creek, Victoria

Project No: 15943G-LRA

Prepared by: O.R

**Date:** 2/04/2019

### 1 Skenes Creek Valley Road - Photographs



Photo 5: Borehole drilling being carried out.



Photo 6: Existing soil profile, brown clayey silt overlying yellow silty clays.



Title: Photographs

Locality: 1 Skenes Creek Valley Road

Skenes Creek, Victoria

Project No: 15943G-LRA

Prepared by: O.R

Date: 2/04/2019



Appendix D

**Geotechnical Declaration: Form A** 

FORM	A	Geotechnical Declaration and V Development Application	Page 1 of 2 erification		
Office Only	Use				
Risk Asse Assessm	essment. Ti ent has bee	n planning application. It must accompany the Geotechnical his form is essential to verify that the Geotechnical Assessmen prepared in accordance with Cl 44.01 of the Colac Otway sment/s is a geotechnical engineer or engineering geologist a	ent and/or Landslip Risk Planning Scheme and that the		
Sectio	n 1 R	elated Application			
Planning Application Number (	if known)				
DA Site		No.1 Skenes Creek Valley Road, Skenes	Creek		
DA App	olicant	Anne & Greg Sherman			
Sectio	n 2 G	eotechnical Assessment and /or Landslip	Risk Assessment		
		Title: Geotechnical Assessment at No.1 Skene Skenes Creek	s Creek Valley Road,		
Details		Author's Company/Organisation Name: St Quentin Consulting	Report Reference No: 15943G-LRA		
		Author: Cameron Farrar	Dated: April 2019		
Sectio	n 3 C	hecklist			
Requir	chnical ements opropriate) <b>No</b>	Assessment and/or Landslip Risk Assessment. The additional matters required by Clause 44.01. This che report. Each item is to be cross-referenced to the Geotechnical Assessment and/or Landslip Risk Assessitem.	cklist must accompany each he section or page of the		
✓		A review of readily available history of slope instability in the site or related	land as per: Section 4.1 and 4.3		
✓		An assessment of the risk posed by all reasonably identifiable geotechnical	hazards as per: Section 5.0		
✓		Plans and sections of the site and related land as per: Section 4.2.2 and A	ppendix A & B		
✓		Presentation of a geological model as per: Section 4.2.3 and Appendix A	& B		
<b>√</b>		Photographs and/or drawings of the site as per: Appendix A & C			
✓		A conclusion as to whether the site is suitable for the development propose	d to be carried out as per: Section 6.0		
		If any items above are ticked No, an explanation is to be included in the rep	port to justify why.		
Subject to recommendations and conditions relevant to:					
Selection and construction of footing systems  Earthworks					
· /					
<b>V</b> ✓		Surface and sub surface drainage  Recommendations for the selection of structural systems consistent with the	e gentechnical assessment of the risk		
Recommendations for the selection of structural systems consistent with the geotechnical assessment of the Any conditions that may be required for the ongoing mitigation and maintenance of the site					
Highlighting and detailing the inspection regime to provide adequate notification for all necessary inspections  State Design life adopted: 50 years					
		,			

Australian Geomechanics Vol 42 No 1 March 2007

Page 2 of 2

FORM

Α

# **Geotechnical Declaration and Verification Development Application**

Section 4 List of pertinent drawings and documents referenced in
Geotechnical Report

God to chimoun it open t							
Document	Description	Reference	Date				
TP01	Site location and drawing schedule	1706-1	14/02/2019				
TP02	Existing site plan and site analysis	1706-1	14/02/2019				
TP03	Proposed site plan	1706-1	14/02/2019				
TP04, TP05 & TP06	Lower ground, ground floor and roof terrace plans	1706-1	14/02/2019				
TP07	Roof plan	1706-1	14/02/2019				
TP08 & TP09	Elevations	1706-1	14/02/2019				
TP10	Section A - A	1706-1	14/02/2019				
TP11	Overlooking plans	1706-1	14/02/2019				
TP12	Shadow diagrams	1706-1	14/02/2019				
		1706-1	14/02/2019				

## Section 5 Declaration

Declaration (Tick all that apply)		I am a geotechnical practitioner as defined by the Schedule 1 to the Erosion Management Overlay and on behalf of the company below:			
Yes	✓	No	I am a geotechnical engineer or engineering geologist as defined by the Colac Otway Planning Scheme and on behalf of the company below		
Yes	<b>✓</b>	N/A	I am aware that the Geotechnical Assessment and/or Landslip Risk Assessment I have either prepared or am technically verifying (referenced above) is to be submitted in support of a planning application for the proposed development site (referenced above) and its findings will be relied upon by the Colac Otway Shire Council in determining the planning application		
Yes		N/A	✓	I prepared the Geotechnical Assessment and/or Landslip Risk Assessment referenced above in accordance with the Colac Otway Planning Scheme and the AGS Guidelines 2007as defined in the planning scheme.	
Yes	<b>✓</b>	No		I technically verify that the Geotechnical Assessment and/or Landslip Risk Assessment referenced above has been prepared in accordance with the Colac Otway Planning Scheme and the AGS Guidelines 2007 as appropriate.	
Yes	✓	No		I technically verify that the Geotechnical Assessment prepared for the planning application for the site confirms the land can meet the acceptable risk criteria specified in the schedule to Clause 44.01 of the Colac Otway Planning Scheme taking into account the total development and site disturbance proposed.	
Yes		N/A	✓	I technically verify that the Landslip Risk Assessment prepared for the planning application for the site confirms the land can meet the tolerable risk criteria specified in the schedule to Clause 44.01 of the Colac Otway Planning Scheme taking into account the total development and site disturbance proposed	

# Section 6 Geotechnical Engineer or Engineering Geologist Details

Company/ Organisation Name	St Quentin Consulting	
	Surname:	Mr /Mrs /Other:
	Cameron	Mr
Name (Company	Given Names:	
Representative)	Farrar	
	Chartered Professional Status:	Registration No:
	Member Institute of Engineers	4367740
Signature	4-7	Dated: 02/04/2019



### St. Quentin Consulting Pty Ltd

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### **GEOTECHNICAL INVESTIGATION ADDENDUM**

### **TESTING PROGRAMME & REPORT**

- 1. Report has been prepared by qualified persons and based on current available standards.
- 2. Recommendations are based on the assumption that limited test positions are representative of the sub-surface profile.
- 3. Whilst care has been taken to accurately report on the sub-surface conditions across the site it is not possible to anticipate unexpected sub-surface variations given the limited testing performed.
- 4. Changes in legislative policy may require report update or additional testing.

The purpose of this report is to conduct a limited and preliminary geotechnical investigation. Where any variation or anomalies are encountered, we recommend additional investigation and reporting by us to resolve any potential issues.

### **GENERAL COMMENTS**

St Quentin Consulting does not accept responsibility for our report where it has been altered or not reproduced in full, including addendum.

Dimensions, slope, test locations are approximate only and must not be used for calculation of positioning.

Recommendations are based on information regarding the site and development type provided by the client or agent. If information supplied is not accurate or if significant changes are required our report may be inappropriate. We cannot accept responsibility for significant changes and anticipate additional fees should further tests or report update be required.

Offset distance to any subsurface excavations must not exceed the minimum angle of repose for the in-situ naturally occurring soil. We estimate the maximum angle of repose for sand is 30 and 45 for clay soils. We do not recommend steeper angles unless competent rock is encountered.



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